2006-2008

AGRICULTURE & FORESTRY AWARENESS STUDY COMMISSION

MINUTES

NC AG & FORESTRY AWARENESS
STUDY COMMISSION
2006

Pro Temp's Appointments

Sen. Charlie W. Albertson, Co-chair
136 Henry Dunn Pickett Rd.
Beulaville, NC 285189
910-298-4923

Kendall Hill
2574 Hugo Rd.
Grifton, NC 28530
252-523-9233

JoAnn Stroud
640 E. NC Hwy 24
Kenansville, NC 28349
910-296-1947

Gerald Warren
80 Creekside Dr.
Newton Grove, NC 28366

Speaker's Appointments

Rep. Dewey Hill, Co-chair
P. O. Box 130
Lake Waccamaw, NC 28450
910-642-6044

Rep. Phil Haire
P. O. Box 727
Sylva, NC 28779
828-631-3124

Rep. Roger West
P. O. Box 160
Marble, NC 28905
828-837-5246

Rep. Arthur Williams
74 Canal Lane
Washington, NC 27889
252-946-2576

Governor's Appointments

David L. Burns
1204 Shepherd Ave.
Laurinburg, NC 28352

Robert E. Harrell
1144 San Souci Rd.
Windsor, NC 27983

David "Warren" Hepler
310 W. Main St.
Wallace, NC 28466
910-296-2193 Ext. 2

Dept. of Ag Appointee

Maurice K. Berry, Jr.
1157 Double Bridge Rd.
Elizabeth City, NC 27909

Ex-Officio Members

Mr. David McLeod (Comm. Troxler's Designee)
Department of Agriculture
1001 Mail Service Center
Raleigh, NC 27699
919-733-7125

Mr. Robert Slocum, Jr.
Executive Vice President
NC Forestry Association
1600 Glenwood Ave., Suite 1
Raleigh, NC 27608
919-834-3943

Mr. Steve Woodson (Designee)
NC Farm Bureau Federation
P. O. Box 27766
Raleigh, NC 27611
919-782-1705

Mr. Jimmy Gentry
NC State Grange
1734 Wilkesboro Hwy.
Statesville, NC 28625
1-800-432-4857

Mr. Jerry Doresett (Sec. Ross' Designee)
DEHNR
512 N. Salisbury St.
Raleigh, NC 27604
919-715-4102

Staff

Barbara Riley, Staff Attorney
Research Division – 919-733-2578

Cindy Brooks Davis
Commission Clerk – 919-733-5705

ATTENDANCE

Committee: NC Ag & Forestry Awareness

DATES / NAMES	1-19-06	3-2-06	11-13-06
Sen. Charlie Albertson, Co-chair	✓	✓	✓
Rep. Dewey Hill, Co-chair	✓	✓	✓
Mr. Kendall Hill		✓	
Ms. JoAnn Stroud	✓	✓	✓
Mr. Gerald Warren			
~~Rep. Phil Haire~~ Warren Hepler			✓
Rep. Roger West			
Rep. Arthur Williams	✓	✓	
Mr. David Burns	✓	✓	✓
Mr. Robert Harrell			✓
Mr. David McLeod – Ex-Officio Dept. of Ag. Commissioner Troxler	✓	✓	✓
Mr. Bob Slocum – Ex-Officio NC Forestry Assoc.	✓		Designee
Mr. Steve Woodson – Ex-Officio NC Farm Bureau	✓	✓	
Mr. ~~Jimmy Gentry~~ Ned Hudson – Ex-Officio NC State Grange	✓		
Jerry Dorsett – Ex-Officio DENR	✓	✓	✓
Barbara Riley, Staff Counsel	✓	✓	✓
Cindy B. Davis, Comm. Clerk	✓	✓	✓
	Kannapolis		Whiteville

ATTENDANCE

Committee: NC Ag & Forestry Awareness 2008

DATES / NAMES		9/19/08														
Sen. Charlie Albertson, Co-chair		✓														
Rep. Dewey Hill, Co-chair		✓														
Mr. Kendall Hill																
Ms. JoAnn Stroud		✓														
Mr. Gerald Warren																
Mrs. Martha Warren		✓														
Rep. Roger West																
Rep. Arthur Williams		✓														
Mr. David Burns		✓														
Mr. Phillip Lee Hudson		✓														
Mr. David McLeod – Ex-Officio Dept. of Ag.		✓														
Mr. Bob Slocum – Ex-Officio NC Forestry Assoc.		✓														
Mr. Steve Woodson – Ex-Officio NC Farm Bureau		✓														
Mr. Jimmy Gentry – Ex-Officio NC State Grange		✓														
Jerry Dorsett – Ex-Officio DENR		✓														
Barbara Riley, Staff Counsel		✓														
Cindy B. Davis, Comm. Clerk		✓														

AGRICULTURE & FORESTRY AWARENESS STUDY COMMISSION

MINUTES

JANUARY 19, 2006

The Agriculture & Forestry Awareness Study Commission met on Thursday, January 19, 2006 at the Cannon Village Visitors Center in Kannapolis, North Carolina at 9:00 a.m. Members present were: Senator Charlie Albertson and Representatives Dewey Hill and Arthur Williams. Public Members: JoAnn Stroud, David Burns. Ex-Officio members: Commissioner of Ag. Steve Troxler, Bob Slocum, NC Forestry Assoc., Steve Woodson, NC Farm Bureau, Ned Hudson, NC State Grange, and Jerry Dorsett, DENR. Staff counsel Barbara Riley and commission clerk, Cindy J. Davis. Visiting legislators were: Sens. Holloman, Dannelly, Tillman, Bingham, Webster, Brock, East, Hartsell, and Snow. Reps. Coats, Langdon, Underhill, Barnhart, Johnson, Walker and Steen.

I. OPENING REMARKS

Cochairman Charlie Albertson called the meeting to order and welcomed members and guests. Cochairman Hill also welcomed everyone. Kannapolis is Sen. Hartsell's district and he thanked everyone for being there. He advised that our meeting today was the room where two years ago that the mill would be closing and how this community was facing a change in the economy. Today he welcomed new opportunities to this community thanks to Dole Foods and the NC Research Campus. Congressman Robin Hayes spoke next and again thanked and welcomed everyone to Kannapolis. He feels the heritage, spirit, hard work and encouragement is wonderful for the future of this community and North Carolina. Cochairman Albertson asked each visiting legislator to introduce himself or herself. He also shared that Sen. Bingham drives a VW that is powered by soybean oil and not diesel fuel.

II. THE DOLE FOOD COMPANY COMMITMENT TO NORTH CAROLINA

Mr. Sanjeev Tandon, VP & Chief Finance Officer gave a power point presentation introducing their plant in California. (Attachment A). Dole produces healthy foods and educates the public about healthier eating. Their fresh fruit division has grown and today it is the most prominent brand. Schools are using packaged fruit cups. Packaged salads have grown and now strawberries are in large demand along with grapes, bananas and blueberries. International markets in Japan and North America produce 50% of their revenue. They are very diversified worldwide. Some fruits come from Latin America. Bananas are the largest sellers. Some consumers prefer organics and they are working to make some operations/farms more organic. Pineapples are another large seller. Commodity vegetables are grown mostly in California and the Yuma dessert in Arizona. Some farmlands are leased as they work with farmers, but they do grow some of their own products. Strawberries are the second largest commodities with iceberg lettuce as number one. Berries provide good health antioxidants and that's their third largest

commodity. They are looking to North Carolina to produce more berries for them. North America is the largest market in strawberries right now. A new plant will be built in Bessemer City, NC. The NC salad plant is now under construction. The foundations have put in and they are looking to employ about 350 people in the first year, with continued growth each year. They will use raw vegetables produced in NC and hope to be open for production in December 2006. They have signed on with Wal-Mart stores and we should see more Dole products in all Wal-Mart's after December. Dole has now entered into frozen packaging of fruits and vegetables. There will be significant growth in this category by using products from NC. The 2004 acquisition with J. R. Wood has brought them more into the frozen food area. They also have a fresh flower business in Florida. They are the only company to produce flowers and bring them in. Healthy life styles and health eating is their goal. Research is significant focus to their business. They are advanced with growing in different areas of the world. Their scientist work on various items to achieve the healthy aspects. Sen. Snow questioned how they approach production through farmers. Mr. Tandon explained how they work with local farmers and how they become involved with farmers for their production.

Mr. David H. Murdock, Chairman & Chief Executive Officer, Dole Food Company addressed members. He has been coming to NC for over 20 years. He feels NC is a warm and friendly state, unlike California. He is most excited about building in Kannapolis. This will be the most outstanding scientific facility in the world. He has made a new foundation of one hundred million dollars ($100,000,000,000) of his own money for this project. This is not money from any state or county government. Massive scientific equipment will go into this facility. NC is going to teach our citizens how to eat and live healthy lives. This Research Campus will work with all university systems in our state. They will rebuild downtown Kannapolis and he anticipates 100 new biogenetic companies. There is an additional $1,000,000,000 to help start labs for scientific studies. Studies will be done on how to grow with less pesticides and how to make the food we eat more nutritious without heaving to take a daily vitamin. New homes will be constructed which will be a great economic boost for this county and our state. There is a new world experience going on where the old Cannon Village mill facility was once housed. Some help will be needed from the city of Kannapolis for sidewalks, water, etc., but within five (5) years $5,000,000,000 (5 billion) will be put into this area and they should be able to benefit from the tax base after we get going with this construction and new facility. There will be a beautiful town with as much hidden parking as possible. His dream is to see and create one of the most spectacular villages in the world, right here in Kannapolis, NC. This will be classic elegance with the people and visitors in mind. He will work with NC contractors as they build and design, however, they will accept some out-of-state bids to build this massive facility. There will be an all girls university be built here. This will be a high-scale school for young ladies that will coordinate with our other universities and will be even better than Yale. His closing comment was, "Let's work together and create something that will be world famous."

Ms. Lynn Safrit, President, Castle & Cooke Charlotte Area Operations, President, Atlantic American Properties, introduced Mr. Justin Murdock, son of David Murdock and Dr. Conrad, the scientific mind behind this project. After a 15-minute break, Ms. Safrit reiterated how thrilled everyone in this community is to have such a project of this magnitude in Kannapolis. She has followed the demolition of the old mill buildings and everything is on schedule. They have

demolished over 6,000,000 feet of old buildings. Soon they will begin accepting bids on the new foundations.

III. TOUR OF THE NORTH CAROLINA RESEARCH CAMPUS SITE

Vans were provided for members to view the demolition process.

IV. THE TOBACCO BUY OUT & THE FUTURE OF THE NC AGRICULTURAL ECONOMY

Dr. Blake Brown, Distinguished Professor, NC State University, Agricultural & Life Sciences, gave his power-point presentation on the tobacco buyout program (Attachment B). He advised that quota owners have started receiving payments. Producers received and additional 3% of the product. NC is the largest tobacco producing state even though we have reduced production. Brazil is number one. Burly tobacco is an alternative commodity coming in. It has moved from other states to our NC mountains and is now moving to the piedmont. There will be in the future fewer farmers but they will grow more tobacco. Cash receipts have declined but cash flow will be rising again. Companies want to contract with NC to grow more flu cured and burly tobacco. That's what ties this into why we are fortunate enough to resources to produce fruit and vegetables for the Dole production center. Livestock has grown in cash receipts and is 57% in NC. Some grown has increased over the years, but with this new facility we will see this grow more. NC is a diverse agriculture state. We have specialty crops and there will be a new web site launched on this by NCSU. Ag enterprise is a high value crop. They have high values due to management technology. This can be high-risk enterprise due to weather conditions from time-to-time, but they are "value added".

V. NORTH CAROLINA STATE INSTITUTE FOR ADVANCE FRUIT & VEGETABLE SCIENCE

Dr. Steven Leah, Director & Associate Dean, NCSU College of Agriculture & Life Sciences, spoke. He explained their position and role in the transition with the Dole plant. Goals will be achieved and a balance will continue with the school and the processing plant. This is an exciting partnership with this plant and the university systems of NCSU, UNC, Duke and A&T. North Carolina is third in diversity of an agricultural state. The proposed research campus space is 80,344 net square feet for study and technology in the Kannapolis facility. They are working with the out of state Dole plan to compliment each other as they pull together teams for scientific study while looking at ways to enhance growing seasons and extend harvest seasons. Irrigation is important to producing some crops in NC. A core lab is vital to this processing plant. This is a tremendous opportunity for NC and the world in becoming more health conscience.

Chairman Albertson told members how fortunate we are to have this opportunity in NC and people like Mr. Murdock to help make this dream a reality.

VI. WORKING LUNCH

Castle & Cooke, Inc graciously provided boxed lunches.

Department of Agriculture Commissioner Steve Troxler addressed members during lunch. He shared his enjoyment and excitement of traveling with Mr. Murdock. He has shown him crops from the coast to the mountains of NC. Due to our diverse climate and crops, we have a tremendous market to grow and produce food for this plant. Our opportunity for agriculture will be unmatched with this Dole plant and research campus. Education will be a big process and we will re-educate our farmers if necessary in order to provide products for Dole. NC is out front due to the opportunity for Kannapolis. The Dept. of Ag, the university systems, the Governor, the Legislature and the citizens will put this together and make a wonder production plant. Sen. Albertson added that the legislature is going to have to assist with this wonderful effort.

VII. THE DOLE OPPORTUNITY FOR NORTH CAROLINA AGRICULTURE

Ms. Deborah Hamrick, Director-Specialty Crops, NC Farm Bureau told how she has enjoyed traveling around the state to meet farmers and producers of grapes, Christmas trees, blueberries, corn, etc. A group was formed to go to California to see their lettuce production. 75% of lettuce is grown there. Since that trip some small networks have been put together to being lettuce production in NC. She explained the different type of lettuce. She also explained how food safety is critical for the salad processing plant, which runs three (3) shifts per day. Protocol is mandatory for plant production. Her slide presentation is also attached. (Attachment C).

Mr. Tom Melton, Associate Program Leader, College of Ag & Life Sciences, NCSU gave an overview of where lettuce production is more profitable due to climate. NC can only produce lettuce for 8-9 weeks a year. Though we don't have the best climate, we can still produce lettuce and when the Research Center is up and running, we will study the possibilities of harvesting lettuce longer in NC. Rain and moisture is critical to lettuce production. After lettuce is harvested it must be in a cooling process within four (4) hours. It must go through the washing process within twenty-four (24) hours. Safety measures are most critical. Strict regulations must be met. The frozen fruit facility coming to NC is a great opportunity. Harvesting and laboring is also critical. Certain equipment will be necessary. Mr. Woodson asked about what needs will come from the Research Center. Ms. Hamrick explained how much of a product (lettuce) will be necessary in order to keep the plant from shutting down for temporary periods. This plant will need to run non-stop. Growers will be educated as to how and when to produce the lettuce. Sen. Bingham asked how much will our NC producers make. Mr. Melton explained that our land rent is less in NC than in CA and that our yield will also be less. It may take a few years for larger and smaller farms to get a good feel of production. Sen. Bingham asked about profitability per farm sizes. Mr. Melton couldn't answer that exactly until they talk to farmers from other states to see how much they are yielding according to their field sizes. A gentleman in the audience asked what crops could NC produce for the "mom and pop" farms with 100 acres. Mr. Melton explained that Dole is looking for lettuces for their salad plant, iceberg, romaine, Batavia, butter and escarole. Ms. Riley, staff counsel inquired about other products that are not bagged items. Mr. Melton said it would only be the bagged items.

VIII. THE DOLE INITIATIVE: A SMALL FARM PERSPECTIVE

Dr. Alton Thompson, Dean-School of Agriculture & Environmental Resources, NC A & T State University addressed members and guests. He echoed how blessed we are to have Dole coming to NC. The small farms are important to us. There are land grants for only two (2) universities in NC. Small farmers own 70% of our assets. Dole is looking for foods to eat that taste good and are good for our body's...bottom line is being healthier. A & T has a food chemistry lab and a microbiology lab. This new Research Center will offer many opportunities for our university system. This will also help the small entrepreneurs become a part of NC success.

Dr. Keith Baldwin, Horticultural Specialist, NC A & T, gave a power point presentation. (Attachment D). He told members that alternative crops are a focus in NC. They have members that produce for A & T that may be interested in cooperatives. They have a 560-acre farm in Greensboro that works with small farmers. They are in the process of building a new dairy and also upgrading their facility. They have received grants that have enabled them to educate and modernize some farmland technology through workshops. They have a lot of experience in growing lettuce and seeing how their crop holds up in hot weather. Research will continue on growing climates for other regions in NC, perhaps in our mountains. He is pleased to hear of our interest in alternative fuels. They are currently working on these efforts at A & T. A & T has a great interest and experience in helping growers and looking forward to working with this new processing plant and research facility.

IX. DISCUSSION & ADJOURNMENT

Cochairman Albertson thanked everyone for their presentations and their excitement and achievements for NC.

Ms. Stroud spoke and she feels it is important to re-train our farmers. They are used to doing things their way and this will be important in order to produce quality products. Another gentleman from the audience spoke and he feels that co-ops will need to be formed.

Cochairman Hill also thanked everyone for their attention and their efforts to help NC improve economically.

Having no further discussion, the meeting adjourned at 1:15 p.m.

Sen. Charlie W. Albertson, Co-chair

Rep. Dewey Hill, Co-chair

Cindy J. Davis, Commission Clerk

General Assembly of North Carolina

AG & FORESTRY AWARENESS
State Legislative Building
Raleigh, North Carolina

NATOR CHARLES W. ALBERTSON
-CHAIR
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BEULAVILLE, NORTH CAROLINA 28518

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COMMISSION COUNSEL
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300 NORTH SALISBURY STREET
RALEIGH, NORTH CAROLINA 27603
(919) 733-2578
FAX: (919) 715-5460

REPRESENTATIVE DEWEY HILL
CO-CHAIR
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LAKE WACCAMAW NORTH CAROLINA 28450

CINDY J. DAVIS
COMMISSION CLERK
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January 11, 2006

TO: Members of the Senate Ag/Env/Nat. Resources Committee; House Agriculture Committee and Delegates from Cabarrus, Gaston, Iredell, Mecklenburg and Rowan Counties

FROM: Senator Charlie Albertson, CoChair
Representative Dewey Hill, CoChair

RE: January 19, 2006 Meeting

The Agriculture and Forestry Awareness Study Commission will meet on Thursday, January 19, 2006 in Kannapolis, NC. We will meet at the Cannon Village Visitors Center, from 9:00 AM to 1:00 PM. The meeting will focus on the NC Research Campus and the Dole Foods Processing Facilities (salad bagging plant) as well as the proposed fruit-freezing unit to be built in the eastern region of the State. There will be a number of presentations and a tour of the Kannapolis building site. A formal agenda will be available at the meeting.

If you need to travel up the evening of January 18th, you may contact the Holiday Inn Express, Kannapolis, at 704-743-1080 for accommodations. Be sure to mention that you are with the NC General Assembly and the Ag & Forestry Awareness Study Commission in order to receive the state rate of $59.75. The hotel is located at Exit 60 off I-85 and approximately 1 to 11/2 miles from the Visitors Center.

Authorization has been approved by Sen. Basnight and Speaker Black if you wish to attend this important meeting. For planning purposes, please RSVP to Cindy Davis 919-733-5705 by Tuesday, January 17th if you will be able to attend.

We look forward to seeing each of you in Kannapolis. If you have additional questions, please feel free to contact either of us, or Cindy Davis, Commission Clerk at 919-733-5705.

Thank you.

NORTH CAROLINA AGRICULTURE AND FORESTRY AWARENESS STUDY COMMISSION

Cannon Village Visitors Center
Kannapolis, North Carolina
January 19, 2006
9AM

Opening Remarks
Senator Charles W. Albertson, CoChair
Representative Dewey L. Hill, CoChair
Congressman Robin Hayes

Welcome
David H. Murdock
Chairman and Chief Executive Officer
Castle & Cooke, Inc.
And
Dole Food Company, Inc.

Lynn Scott Safrit
President, Castle & Cooke Charlotte Area Operations
President, Atlantic American Properties
Subsidiary of Castle & Cooke, Inc.

Tour of North Carolina Research Campus Site

The Dole Food Company Commitment to North Carolina
Sanjeev Tandon
Vice President and Chief Financial Officer
Dole Fresh Vegetables

The Tobacco Buy Out and the Future of the NC Agricultural Economy
Dr. Blake B. Brown
Hugh C. Kiger Distinguished Professor
Agricultural and Resource Economics
College of Agriculture and Life Sciences
North Carolina State University

North Carolina State Institute for Advanced Fruit And Vegetable Science
Dr. Steven Leath
Director and Associate Dean
North Carolina Agricultural Research Service
College of Agriculture and Life Sciences
North Carolina State University

***** Working Lunch*****
(Lunch is being graciously provided by Castle & Cooke, Inc.)

The Dole Opportunity for North Carolina Agriculture
Deborah Hamrick
Director
Specialty Crops
North Carolina Farm Bureau

Tom Melton
Associate State Program Leader
Agriculture and Natural Resources/Community & Rural Development
Extension Administration
College of Agriculture and Life Sciences
North Carolina State University

Ross Williams
Assistant Director of Marketing
NC Department of Agriculture and Consumer Services

The Dole Initiative: A Small Farm Perspective
Dr. Alton Thompson
Dean
School of Agriculture and Environmental Resources
North Carolina A & T State University

Dr. Keith Baldwin
Horticultural Specialist
North Carolina A & T State University

Committee Discussion
Instructions to Staff

The Dole Opportunity for North Carolina Agriculture

On the Road to California

Debbie Hamrick

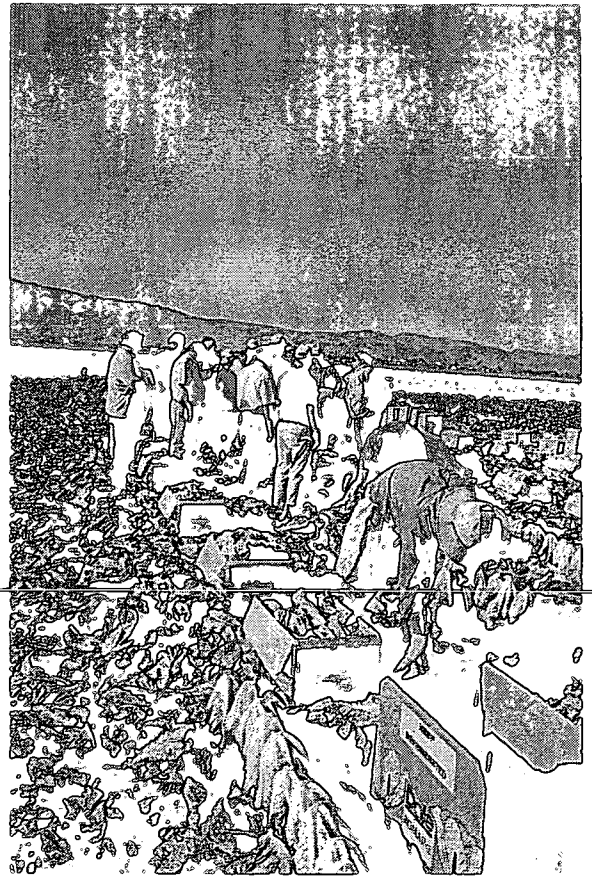
North Carolina Farm Bureau

Key Influencers: 11 Growers

4 NC State University, 1 NCDA&CS

Goals:
- **Learn about California Lettuce Production**
- **Determine the Right Questions**
- **Create a "Living Network"**

California Lettuce Production



Rotates between:

- Salinas
- San Joaquin Valley
- Yuma, Arizona

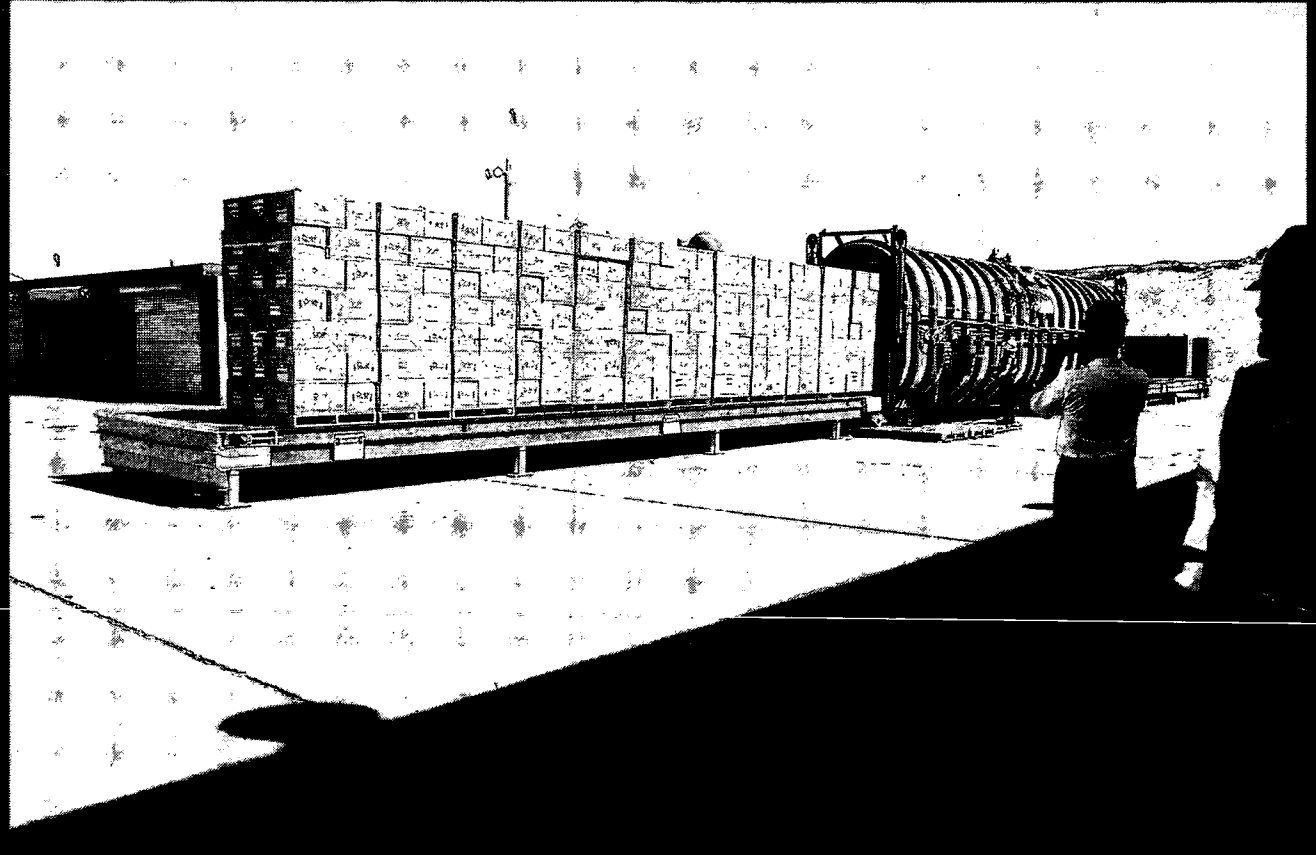
- High Land Rents:
  $1500-$3000/acre
- #1 Iceberg (trend down)
  #2 Romaine (trend up)

New Paradigm: □ Manufacturing
□ The Field=My Dinner Plate

Protocol
Monitoring
Food Safety Key

Cold Chain=Shelf Life

Vacuum tube: $1.5 million investment



Soledad Lettuce Plant

Key Points

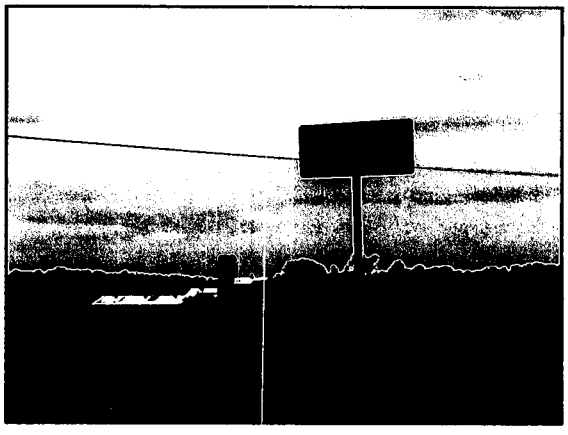
- New Mentality Required
  - Food Safety and In-Field Safety > Production
    - Harvesting is Precise, Timing Critical
    - Protocol Adherence Not Optional
    - Management Intensive
- "It's a Pennies Business"
- California Producers are Under Tremendous Economic and Environmental Pressures that May Indicate Long Term Opportunity for NC
  - (provided that imports do not increase for some products and depending on fuel costs)

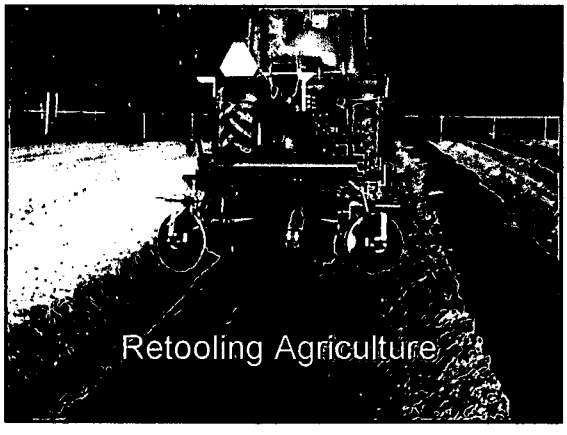
Assets at A&T

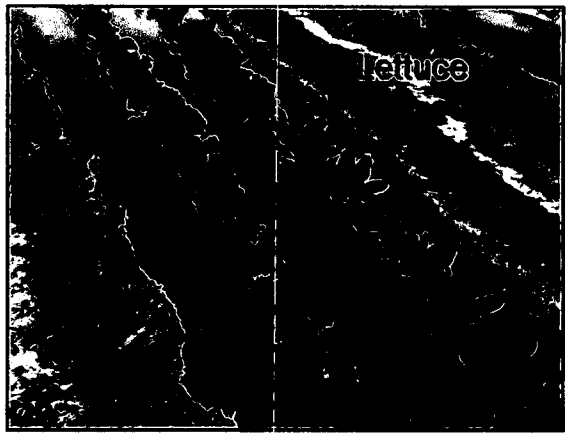
Keith R. Baldwin
NC A&T State University

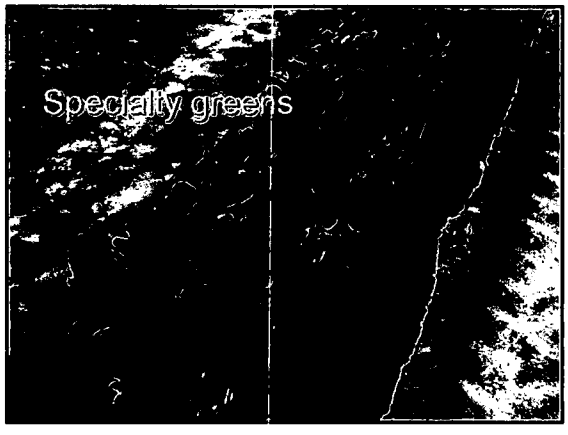
Assets

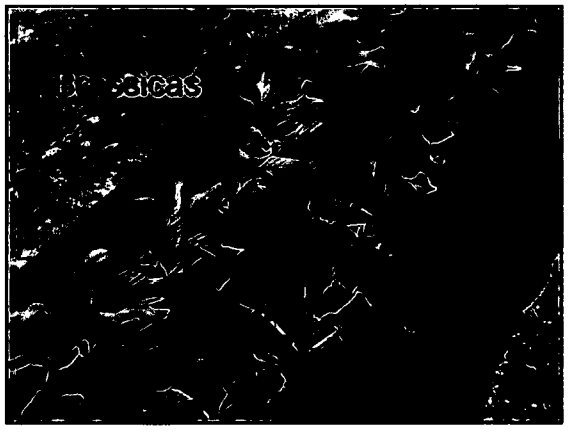
- A&T Farm
- Special Projects with Small Farmers
- Experience with Salad
- Partner Cooperatives (Prize of the Harvest, ECO, Coalition)

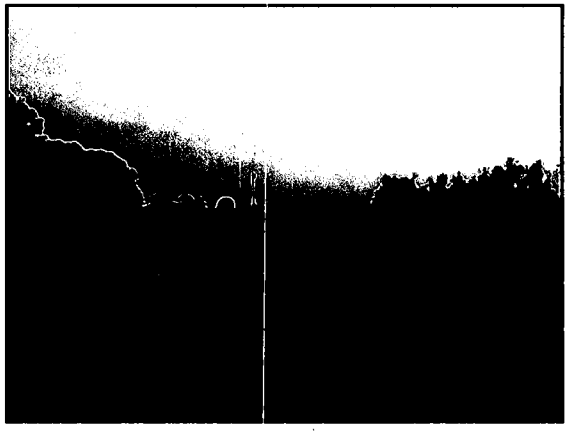





lettuce


Specialty greens





The Tobacco Buyout and the Future of the NC Agricultural Economy

Blake Brown
Hugh C. Kiger Professor
Agricultural & Resource Economics
College of Agriculture & Life Sciences
NC STATE UNIVERSITY

Buyout Impacts

- $9.6 Billion over 10 years
- North Carolina will receive about $3.9 billion
- After netting out Phase II payments **Total Economic Activity** for North Carolina from Buyout:
  $3.2 billion to $4.3 billion

Quota Owner Payments

- $7 per pound of quota.
- Based on the basic quota amount in 2002
- Paid in equal annual payments over 10 years beginning 2005

Producer Payments

- Based on the 2002 effective amount of a particular quota
- If a producer produced the quota for 2002, 2003 and 2004, the producer receives $7 per pound of effective 2002 quota
- Payment is spread over 10 years in equal annual payments

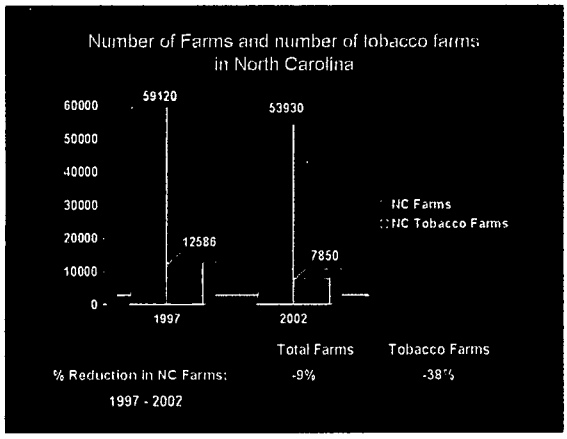
Flue-Cured Supply: (million pounds)

	2004	2005
US	519[1]	384[1]
NC	**344[1]**	**272[1]**
Brazil	1,545[2]	1,543[2]

USDA-NASS Crop Estimate

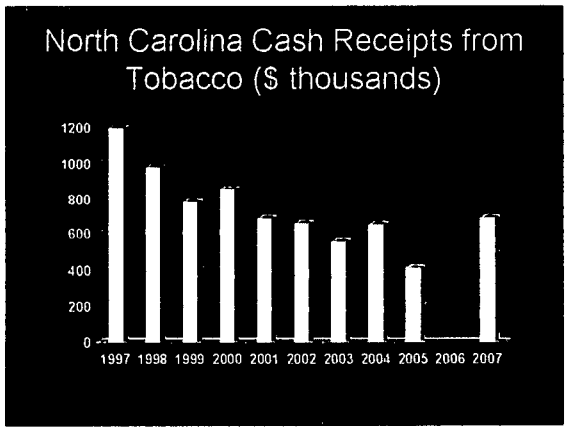
Adjusted Simulation
5 Increase in cost of production. GA/FL Remains at 2005 Level

	2003 Quantity	Adjusted Forecast	Implied % Change in Quantity
US	470.9	635	+36%
NC	292.9	460	+36%
VA	36.5	53	+31%
SC	67.0	87	+23%
GA/FL	74.6	34	-54%



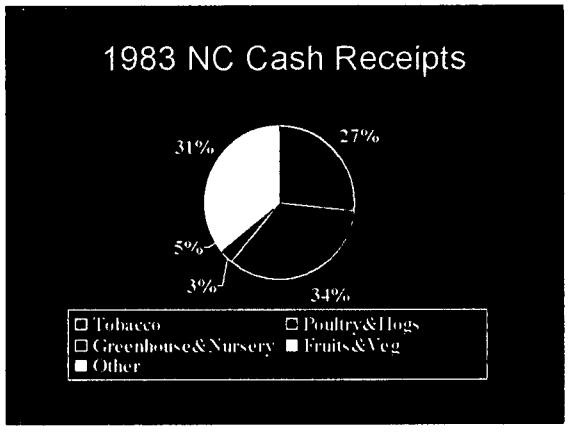
Future Number of NC Flue-Cured Producers. What if NC grows 460 million pounds of flue-cured?

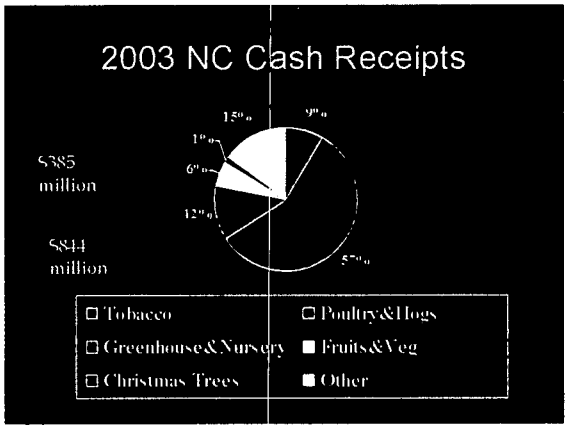
Size	75 acres	100 acres	125 acres	150 acres
Yield 2600 lbs/acre	2453	1840	1472	1227



So...

- Probably less than 2000 growers will be left in NC
- For the next 9 years tobacco farm families have substantial financial resources from the buyout
- **How can these resources be used to replace tobacco income?**



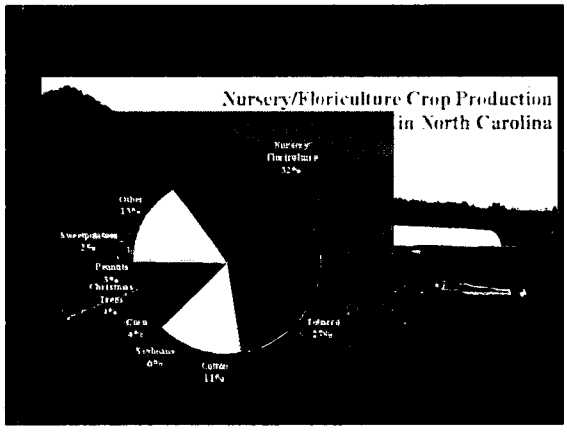


Commodity Crops (Cotton, Peanuts, Corn, Soybeans, etc.)

- Outlook: very dependent on Farm Bill
- Commodity Programs will likely be de-emphasized in 2008 Farm Bill
- Farm Bill will likely place greater emphasis on Community and Rural Development

Value Added Agriculture:

1. A process that adds or retains value in agriculture for a particular geographic region.
2. A process that helps the producer capture a larger share of consumer expenditures on agricultural products or products derived from agricultural products.



NC Viticulture

- Ranked 10th nationally in grapes production
- Ranked 12th nationally in wine production
- Grape value at farm gate $3.4 Million
- Wine value estimated at $34 Million

Speciality Crops (2004 Value)

Heirloom Vegetables: $96,500

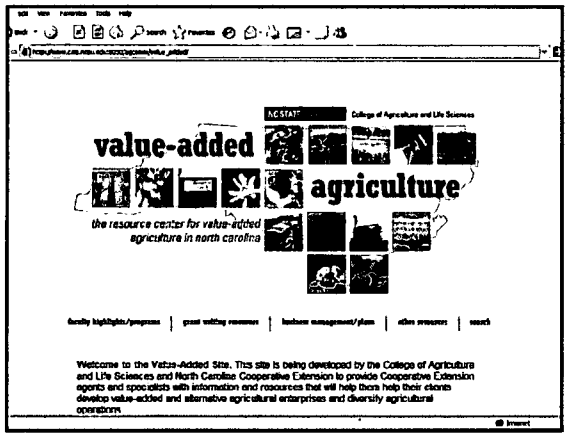
Organic Fruits and Vegetables: $844,000

Cut or Edible Flowers: $724,500

Ethic Vegetables: $887,500

Medicinal Herbs: $1,783,375

Speciality Melons $2.5 million in 2004.



Most Profitable Farming Areas (*Farm Futures* Sept, 2005)

- 21 of the top 100 counties in the U.S. are in North Carolina
- 5 of the top 10 counties in the U.S. are in North Carolina
- Sampson and Duplin are rated first and second, respectively.

Rankings were based on:
(USDA Census of Agriculture 1987-2002)

- Return on Assets (weighted heaviest)
- Net profits per farm
- Sales growth
- Asset growth
- Profit growth
- Asset turnover

Characteristics of NC Farms

- **High Value Enterprises**

Characteristics of NC Farms

- High Value Enterprises
- **Management Intensive**
  - Technologically
  - Labor use

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- **Often Participants in Vertically Coordinated Industries**

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Characteristics of NC Farms

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- **Accustomed to Change**

Characteristics of NC Farms

- **High Value Enterprises**
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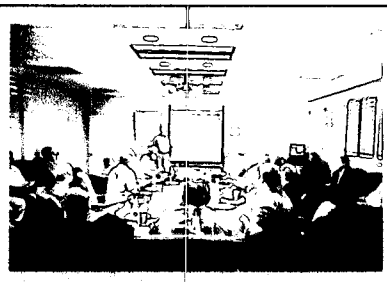
  - Technologically
  - Labor use
- **Often High Risk Enterprises**
- **Diversified**
- **Often Participants in Vertically Coordinated Industries**
- **Increasingly Value-Added**
- **Accustomed to Change**

The Dole Opportunity for North Carolina Agriculture

On the Road to California



Key Influencers: 11 Growers
NC State University, NCDACS

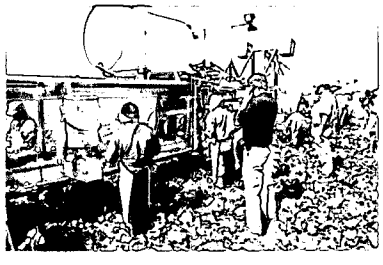
Goals: Learn about California Lettuce Production
Determine the Right Questions
Create a "Living Network"

California Lettuce Production

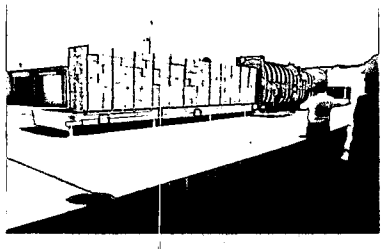
Roles between

New Paradigm: Manufacturing The Field-To Dinner Plate

Protocol Monitoring Food Safety Key



Cold Chain=Shelf Life



Soledad Lettuce Plant

Key Points

- New Mentality Required
  - Food Safety and In-Field Safety > Production
    - Harvesting is Precise, Timing Critical
    - Protocol Adherence Not Optional
    - Management Intensive
- "It's a Pennies Business"
- California Producers are Under Tremendous Economic and Environmental Pressures that May Indicate Long Term Opportunity for NC
  - (provided that imports do not increase for some products and depending on fuel costs)

NC STATE College of Agriculture and Life Sciences

Dole Foods - NC State

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NC STATE UNIVERSITY

Research at a Land-Grant College of Agriculture and Life Sciences

Dr. Steven Leath

NC STATE College of Agriculture and Life Sciences

Research Goals - NCARS

- Basic discovery research in Life Sciences and Agriculture
- Continue to support commodity programs in North Carolina and serve traditional agricultural clientele
- Develop value-added and product agriculture for North Carolina

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NCARS Maintains Balance

- Applied & Basic Research
- Agriculture & Life Sciences
- Plants & Animals (Crops and Livestock)
- Production agriculture & Environmental impacts
- Support balanced Academic Programs and Extension efforts

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Priority Research Areas

- Specialty crops
- Alternative crops
- Plant breeding and genomics
- Proteomics
- Metabolomics
- Fish and livestock biology
- Animal nutrition
- Food quality and safety
- Bioprocessing
- Biofuels
- Ornamentals & turf
- Environmental issues
- Systems biology

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NC Agricultural Research Service

- Principal state agency for agriculture, life sciences and forestry research
- 350 faculty
  187 FTE
- 280 grad students, research assistants
- 445 technicians
- 130 support staff

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NC STATE College of Agriculture and Life Sciences

North Carolina Agriculture

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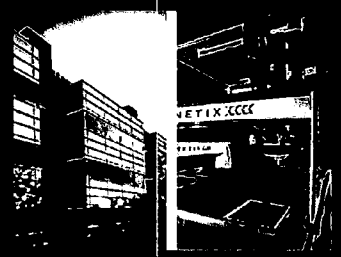
Genome Research



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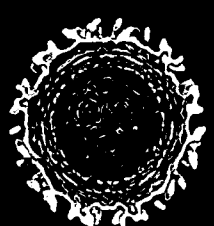
Alphavirus structure



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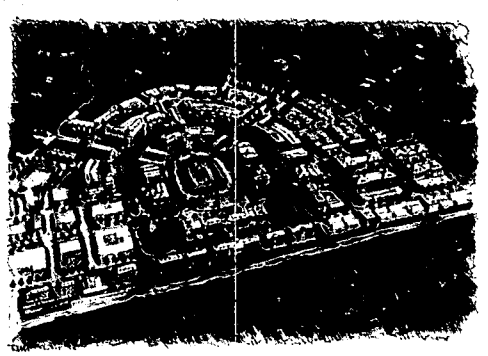
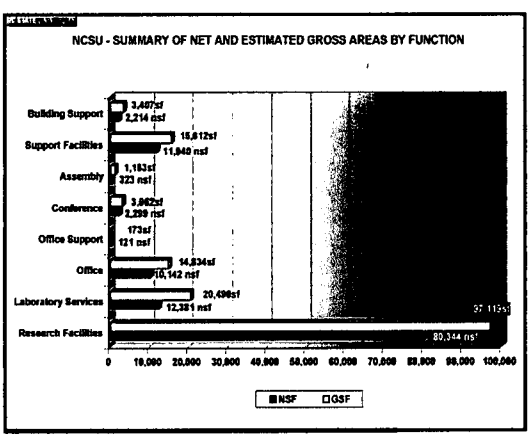


Perspective View

North Carolina Research Campus
Kannapolis, North Carolina



NC STATE College of Agriculture and Life Sciences

NC State Personnel Plans for NCSU Laboratory Bldg

- Director 1 Ph.D senior level
- Ph.D. faculty 12
- Administrative support 3
- Post-Doctoral Associates 24
- Graduate Students 12
- Technicians 24
- Clerical - 3

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NC STATE UNIVERSITY College of Agriculture and Life Sciences

Plans for NC State Greenhouse Facility

- Research Facilities
  - QA QC lab
  - Greenhouses (68,500 sf)
  - Potting room
  - Food Processing Pilot Plant (4,000 sf)
- Education Service
  - Controlled environment
  - Seed storage
  - Decontamination room
  - Pesticide storage
  - Warehouse
  - Specialized equipment storage
  - Shop

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NC STATE UNIVERSITY College of Agriculture and Life Sciences

Plans for NC State Greenhouse Facility

- Greenhouse manager - 1
- Greenhouse assistant - 2
- Graduate Students - 2
- Technicians - 1
- Clerical - 1

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NC STATE UNIVERSITY College of Agriculture and Life Sciences

NC State Personnel Plans for NCSU Laboratory Bldg

- Fruit and vegetable breeders
- Plant genomics personnel
- Proteomics personnel
- Plant pathologist
- Horticulture production
- Phytochemistry, metabolomics, wide-crossing, post harvest, soil fertility

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NC STATE UNIVERSITY College of Agriculture and Life Sciences

NC State researchers at the institute will be devoted to:

- improving quality traits of crops, including nutritional value, flavor, shelf life
- discovering new and faster ways to grow fruits and vegetables, including enhancing flavor
- extending the harvest to meet year-round consumer demand
- improving resistance to disease and developing modern disease control strategies
- managing irrigation in the humid southeast to provide maximum productivity and quality of fruits at a low cost
- extending preservation and shelf life

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NC STATE UNIVERSITY College of Agriculture and Life Sciences

Dole Core Lab

Personnel

- Scientists - 10
- Supervisors - 8
- Technicians - 20
- Clerical - 2

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NC STATE UNIVERSITY College of Agriculture and Life Sciences

Dole Core Lab

- DNA sequencing
- High pressure liquid chromatography (HPLC)
- Mass spectrometry
- X-ray diffraction
- Analytical chemistry
- Gas analysis
- Heavy metals
- Advanced imaging
- Nuclear magnetic resonance imaging
- Analytical sample prep
- Bio-Specimen prep

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Dole Core Lab

Laboratory Services

- Biovestibule Air Lock
- DNA amplification lab
- mDNA processing lab
- Machine room
- Weighing lab
- Dark room
- Microscopy lab
- Freezer room
- Controlled environment lab
- Glass wash room
- Sterilization room
- Reagent prep lab
- Media prep lab

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Industry partnerships

- Philip Morris
- SAS
- Monsanto
- DuPont
- Dole Foods

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Opportunities For NC Agriculture With Dole Fresh Fruits and Vegetables

Tom Melton
North Carolina State University
College of Agriculture and Life Sciences
North Carolina Cooperative Extension

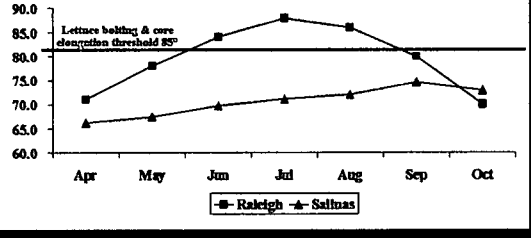
North Carolina Regional Sourcing Products/ Volumes

(000's lbs)
Weekly Sourcing

	Year 1	Year 10
Iceberg	1,656	6,072
Romaine	1,146	4,201
Cabbage	451	1,654
Batavia	46	167
Butter	12	43
Escarole	15	54

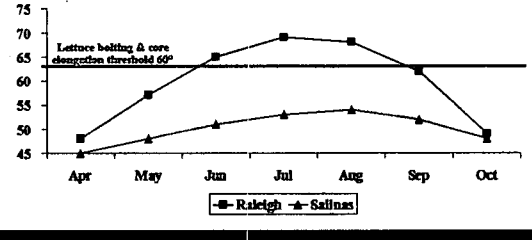
AVERAGE MAXIMUM TEMPERATURE (30 YEAR PERIOD)

GROWING SEASONS

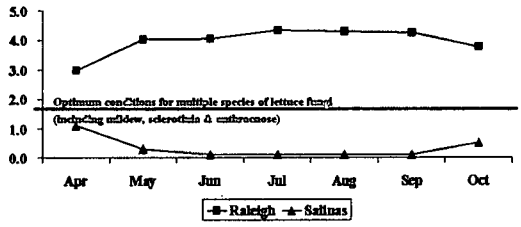


AVERAGE LOW TEMPERATURE (30 YEAR PERIOD)

GROWING SEASONS



AVERAGE RAINFALL (30 YEAR PERIOD)



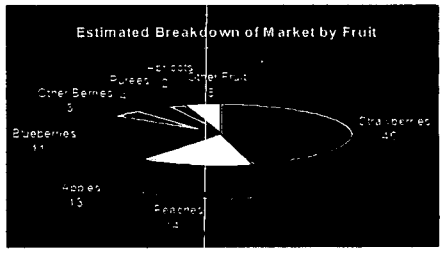
Raw Materials General Specifications

- Pre-Cooled 34° - 36° within four hours of harvest
- Delivered to Bessemer Plant within 24 hours without breaking cold chain
- GAP certification
- GMP certification
- Traceability - Coding of bins by crew/day/lot

NC State Enhances the Dole Opportunity

- County-based horticultural faculty (agents) to help growers:
  - make contracting decisions and select locations
  - make production, harvest, cooling, transportation and financial decisions
  - meet certification and other Dole requirements
  - diagnose and manage problems
- Campus-based faculty provide support to county agents by:
  - offering specialized training for agents and growers
  - developing educational and decision-making tools
  - providing research-based resources
  - providing back-up support to agents
- On-farm and research station demonstrations and applied research to help growers be more productive and profitable

Industry Revenue by Fruit



Blueberries

Blueberries

State	Acreage Acres	Production Lbs	Fresh lbs	Processed lbs
US				
MI	17,400	90,000,000	46,000,000	44,000,000
NJ	7,500	39,000,000	33,000,000	6,000,000
OR	3,500	34,000,000	13,400,000	20,600,000
NC	4,400	22,900,000	16,400,000	6,500,000
GA	4,800	21,000,000	10,000,000	11,000,000
WA	2,400	18,000,000	5,000,000	13,000,000
FL	2,500	5,600,000	5,600,000	0
*CA		4,900,000	4,600,000	3,000,000
IN	800	3,000,000	1,500,000	1,500,000
AR	530	1,800,000	1,800,000	0
NY	700	1,700,000	1,400,000	300,000
AL	300	980,000	570,000	0
MA	n/a	n/a	n/a	n/a
MS	n/a	n/a	n/a	n/a
NH	n/a	n/a	n/a	n/a
RI	n/a	n/a	n/a	n/a
VT	n/a	n/a	n/a	n/a
MS	**-2000	n/a	n/a	n/a
US Total	44,430	227,570,000	124,550,000	103,020,000
CANADA	108,679	174,520,000	n/a	n/a

Strawberries

Strawberries

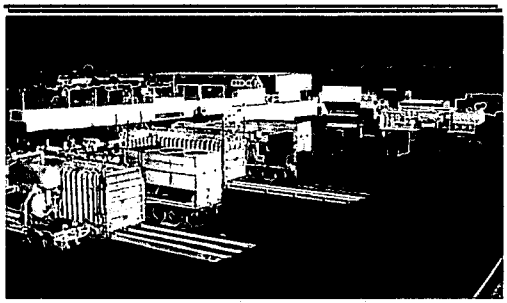
		Acres Planted	Production Lbs	Fresh Lbs	Processed Lbs
U.S.	CA	33,200	1,956,800,000	1,483,000,000	475,800,000
	FL	7,100	163,300,000	163,300,000	0
	NC	1,500	17,600,000	17,600,000	0
	OR	5,300	32,400,000	2,900,000	29,500,000
	WA	1,900	15,200,000	1,700,000	13,500,000
	PA	1,300	7,900,000	7,900,000	0
	WI	1,000	4,100,000	4,100,000	0
	**NJ	300	1,200,000	1,200,000	0
	NY	1,700	6,500,000	6,500,000	0
	OH	1,000	3,800,000	3,800,000	0
	MI	1,100	4,100,000	3,600,000	800,000
	*MA	n/a	n/a	n/a	n/a
	*ME	n/a	n/a	n/a	n/a
	*NH	na	na	na	na
	*RI	n/a	n/a	n/a	n/a
	*VT	n/a	n/a	n/a	n/a
	US Total	53,300	2,213,700,000	1,694,400,000	519,300,000
CANADA		11,922	54,276,000	n/a	n/a
MEXICO		13,373	330,574,200	n/a	n/a

Needed Infrastructure

- Labor
- Harvesting
- Cooling
- Transportation
- Knowledge/experience

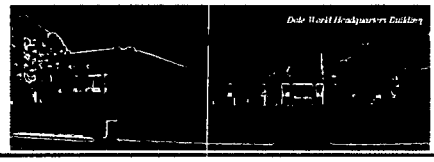
Romaine Lettuce Harvest

Cooling Operations



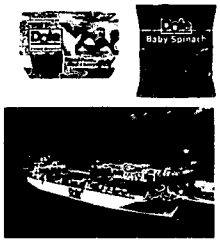
Dole Company Highlights

- Dole is the world's largest producer of fresh fruit, fresh vegetables and fresh-cut flowers, and markets a growing line of value-added products
- For the fiscal year 2004, Dole generated revenues of $5.3 billion
- Exceptional brand recognition and leading market shares
  - The DOLE brand was introduced in 1933 and is one of the most recognized for fresh and packaged produce in the United States
- Dole sources or sells over 200 products in more than 90 countries
- Dole's fully integrated operations include sourcing, growing, processing, distributing and marketing its products



Dole Strategy

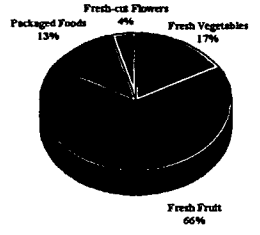
- Leverage our Strong Brand and Market Leadership Position
  - Dole's most significant products hold number one or number two market positions
- Focus on Value-Added Products
  - Dole has successfully shifted its product mix toward value-added food categories and away from commodity fruits and vegetables
- Leverage Dole's State-of-the-Art Infrastructure
  - Dole owns or operates 120,000 acres of land, over 50 processing, ripening and distribution centers, and the largest dedicated refrigerated containerized shipping fleet in the world, comprising 22 ships and approximately 11,500 refrigerated containers
- Educate Consumers on Nutrition and Healthy Lifestyles
- Focus on Operating Efficiency and Cash Flow

Dole's Business Segments

- Fresh Fruit
  - Bananas, fresh pineapple, deciduous fruit, and tropical fruits
- Fresh Vegetables
  - Lettuce, strawberries, celery, cauliflower, broccoli, fresh packaged vegetables and ready-to-eat salads
- Packaged Foods
  - Processed pineapple, pineapple juice, snack foods, FRUIT BOWLS®, FRUIT BOWLS in Gel, frozen fruit products
- Fresh-cut Flowers
  - Roses, carnations, alstroemeria, freesia, delphinium, bouquets, over 800 varieties of fresh-cut flowers

2004 Revenues by Product



Exceptional Brand Recognition


Dole

The DOLE brand is one of the most recognized for fresh and packaged produce in the United States with a 57% unaided consumer brand awareness – almost three times that of Dole's nearest competitor, according to a major global research company (TNS NFO).



Leading Market Shares

■ Fresh Fruit		
–	Bananas	#1 U.S. & Japan
–	Chilean winter fruits	#1 Global
–	Fresh pineapple	#2 Global
■ Fresh Vegetables		
–	Ready-to-eat salads	#1 U.S.
–	Iceberg lettuce	#1 U.S.
–	Celery	#1 U.S.
–	Cauliflower	#1 U.S.
–	Broccoli	#2 U.S.
–	Strawberries	#3 U.S.
■ Packaged Foods		
–	Canned pineapple	#1 U.S.
–	Canned pineapple juice	#1 U.S.
–	Plastic fruit cups	#1 U.S.
–	Branded frozen fruit	#1 U.S.
■ Flowers		
–	Supermarkets	#1 U.S.

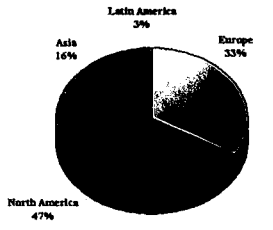



Broad Diversification of Supply Sources and Markets

Sources of Supply

- Bananas
  - Guatemala, Honduras, Costa Rica, Colombia, Ecuador, Peru, Philippines, Cameroon, Canary Islands, Martinique, Guadeloupe, Ivory Coast, Jamaica
- Pineapples
  - Honduras, Costa Rica, Ecuador, Hawaii, Philippines, Thailand, Ivory Coast
- Deciduous/Citrus Fruits
  - Chile, South Africa, New Zealand
- Vegetables
  - USA, China, Japan, Philippines, Mexico
- Flowers
  - Colombia, Ecuador

2004 Revenues by Region

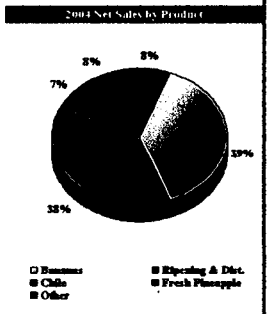


Dole sources and distributes in over 90 countries around the world

Dole Fresh Fruit

Dole Fresh Fruit

- Bananas
  - Dole sells more than 127 million boxes of bananas annually
- Fresh Pineapple
  - Dole sells more than 25 million boxes of fresh pineapple annually
- Deciduous Fruit
  - Dole markets a wide variety of grapes and treefruit from Chile, South Africa and the United States
- Ripening & Distribution
  - In Europe and Japan, Dole has forward integrated its operations by offering banana ripening services and produce distribution capabilities to its customers

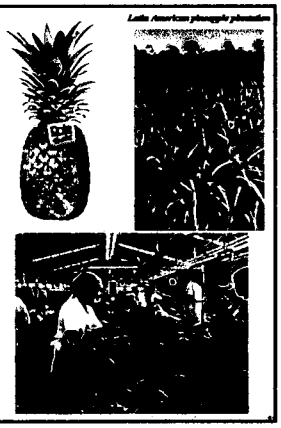


Bananas

- Bananas
  - Dole is the number one selling brand in North America and Japan, and the number two brand in Europe and Korea
    - North America market share of 35%
    - Japan market share of 29%
  - Grown in Latin America for the North American and European markets, and in the Philippines for the Asian Markets
- Specialty Bananas
  - Plantains, red bananas, baby bananas
  - Premium bananas
    - DOLE Sweetio® (Japan and Korea)
- Organic Bananas
  - In 2001, Dole became the first major banana company to offer organic bananas

Fresh Pineapple

- Super-sweet yellow pineapple
  - Primarily marketed under the TROPICAL GOLD® label
  - Market shares
    - North America – 22%
    - Japan – 60%
- Traditional greener-shelled pineapple (champaka)
  - Primarily utilized in food service
- Sourced in Hawaii, Costa Rica, Ecuador, Guatemala, Honduras, the Philippines, Thailand and Ivory Coast



Dole Fresh Vegetables

Dole Fresh Vegetables

- Sourced from North America, Asia, Europe, Australia, New Zealand and Mexico
- North America
  - One of the leading brands of packaged salads, with unit market share of 40%
  - Number one in iceberg lettuce, celery and cauliflower
- Asia
  - Provider of commodity vegetables to Japan, Korea, Hong Kong and the Philippines
  - Leading provider of fresh-cut vegetables and salads in Japan
- Europe
  - Marketer of 23 varieties of vegetables and an extensive line of fresh-cut products
  - Saba Trading AB, Sweden, is one of the leading distributors of fresh vegetables in Scandinavia

Commodity Vegetables

- Dole sources, harvests, cools, distributes and markets more than 30 different varieties of fresh vegetables in North America, Asia and Europe
- Products are grown on both company-owned and contracted farms
- Many of Dole's commodity vegetables are packed in the field, reducing handling and increasing product quality
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  - Iceberg lettuce
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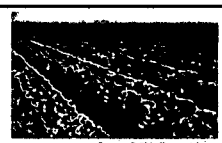
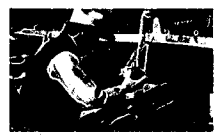
  - Romaine lettuce
  - Butter lettuce
  - Celery, cauliflower, broccoli, carrots, asparagus, artichokes



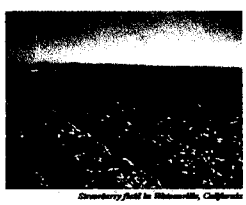
Lettuce field in Yuma, Arizona



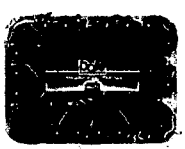
Field packing of iceberg lettuce in Yuma, Arizona

Fresh Berries

- Acquired Coastal Berry Company in October 2004
- Dole is the third largest producer and marketer of fresh strawberries in North America
  - 15 million cases in 2005
- Dole also grows and markets raspberries
  - 150,000 cases in 2005
- Dole is committed to growing the size of its blueberry and raspberry programs by sourcing from new regions, including North Carolina



Strawberry field in Watsonville, California



Value-Added Vegetables

- Dole produces and markets a growing line of ready-to-eat salads and fresh-cut vegetables
- North America
  - Salads fall into three categories
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    - Fresh Favorites
    - Fresh Organics
- Japan
  - Dole offers salads and cut vegetables, available in both bags and containers
- Europe
  - Fresh-cut vegetables and salads are sold to both retail and food service channels

Soledad, California plant

Springfield, Ohio plant

Production Facilities

- Dole's North American fresh vegetable processing facilities are equipped with state-of-the-art equipment and designed to meet or exceed USDA standards
  - Soledad, California
  - Yuma, Arizona
  - Springfield, Ohio
  - Gaston County, North Carolina (2006)
- Dole's Soledad, California facility was named "Plant of the Year" in the fruit and vegetable category by *Refrigerated & Frozen Foods* magazine and "New Plant of the Year" by *Food Engineering Magazine*
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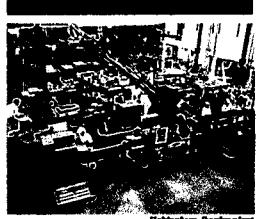

Helsingborg, Sweden plant

North Carolina Salad Plant

- Plant Highlights
  - Location - Bessemer City, Southridge Business Park
  - Initial Investment - $54 million
  - Size - 275,000 square feet
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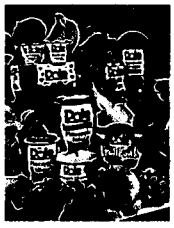
North Carolina plant site – January 2006

Dole Packaged Foods



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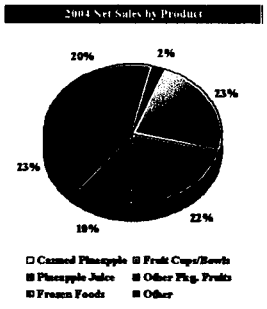

- Sourced and packed in Thailand, the Philippines and the United States
- #1 branded market position in North America
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- Acquired J.R. Wood, a producer and market of frozen fruit products in June, 2004

Packaged Fruits

- Canned Products
  - Dole's canned pineapple products maintain #1 market share in North America
    - Canned pineapple share of 58%
    - Canned pineapple juice share of 54%
- Fruit Bowls
  - Introduced in 1998
  - Attained #1 market position in 2001
  - Maintains #1 position today with 45% market share
- Plastic Jars
  - Dole introduced fruit in 24.5 oz. plastic jars in 2003 and has achieved a 44% market share
  - Multi-portion option for fruit which can be stored in the refrigerator

Frozen Fruits

- Dole purchased J.R. Wood for $172 million in June, 2004
  - Attractive niche business for Dole, with no strong branded competitor
  - Fits with Dole's "value-added" strategy
  - Natural extension of fresh fruit business
- Fruit is sourced from 1,600 company-owned acres (predominately peach orchards) as well as through an extensive network of growers
- Fruit is processed at the company's facilities in Atwater, California
- Name subsequently changed to Dole Packaged Frozen Foods, Inc.
- Dole is now the #1 frozen fruit brand in the U.S.
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Production Facilities

- Philippines
  - 750,000 square foot cannery
  - Juice concentrate plant
  - Box forming plant
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- Thailand
  - Two multi-fruit canneries
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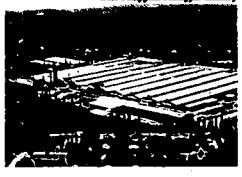
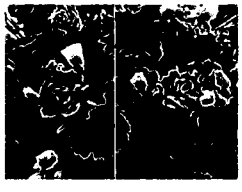
  - Two raw fruit processing and freezing plants of approximately 560,000 square feet

Dole Philippines Pineapple Cannery



Dole Thailand Cannery

Dole Fresh-cut Flowers



Dole Fresh Flowers

- Dole is the largest importer and marketer of flowers in North America
- Largest producer of fresh flowers in Latin America
- Dole offers its customers roses, bouquets, and over 800 varieties of high quality fresh-cut flowers
- Dole is the only importer with its own chartered daily deliveries
- Dole's strategy has been to shift away from the wholesale market to mass-market

Dole Fresh Flowers Headquarter Building

Nutrition and Research

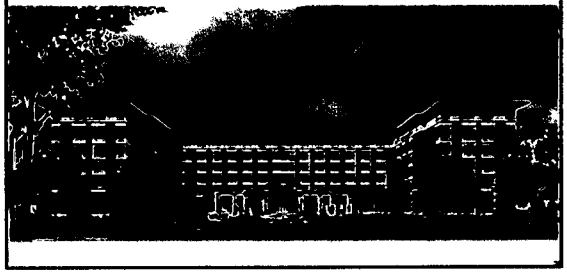
The Dole Nutrition Institute

- "Feeding the world with knowledge"
  - The Dole Nutrition Institute (DNI) was founded by David H. Murdock to provide the public with easily accessible information on nutrition and health
- Education
  - DNI provides nutrition information to the public via published articles, brochures, a bi-monthly newsletter, a website, educational videos, television programming and the new *Dole Fresh Choices* magazine
- Research
  - State-of-the art phytochemical laboratory explores the antioxidant values of fruits and vegetables
  - DNI funded university nutrition research

Dole Research

- Dole is committed to researching and communicating the nutritional benefits of its products
- Dole employs over 40 senior scientists
  - 30 Ph.D's in disciplines ranging from soil science and agronomy to chemistry and genetics
- Dole scientists have developed advanced, environmentally aware, sustainable practices in irrigation, pest control and organic farming
  - Dole has begun using such techniques as deep plowing in its banana cultivation, which reaches down as much as three feet, rejuvenating the soil and producing healthier, more productive plants

The Wellness Center, Spa & Hotel



The Wellness Center

- Four Seasons Westlake Village
  - Five-star hotel, 270 rooms
  - Conference center, including a grand ballroom, meeting rooms and state-of the art conferencing capabilities
- Medi-spa
  - 26 treatment rooms, each with outdoor private gardens and spa bath amenities
  - State-of-the-art fitness center
- Arcus Enterprises, Inc., a new business development company owned by WellPoint Health Networks, will develop and manage a high-tech, innovative well-being center
- California Health and Longevity Institute will provide medical services

Summary

- Dole is the world leader in producing, marketing and delivering fresh fruits, fresh vegetables, packaged foods and fresh-cut flowers
- Dole's strong global logistics capabilities create a natural barrier to entry and ensure fresh delivery of the highest quality products
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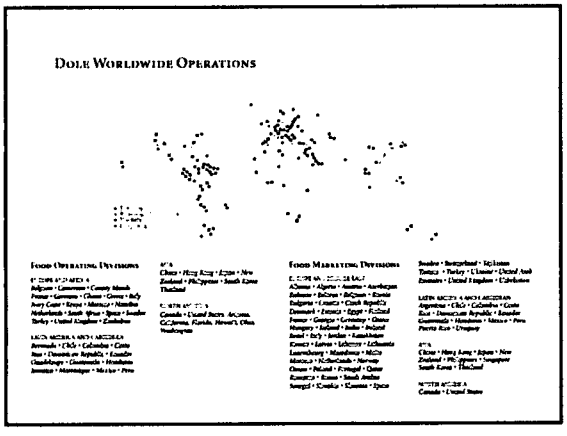
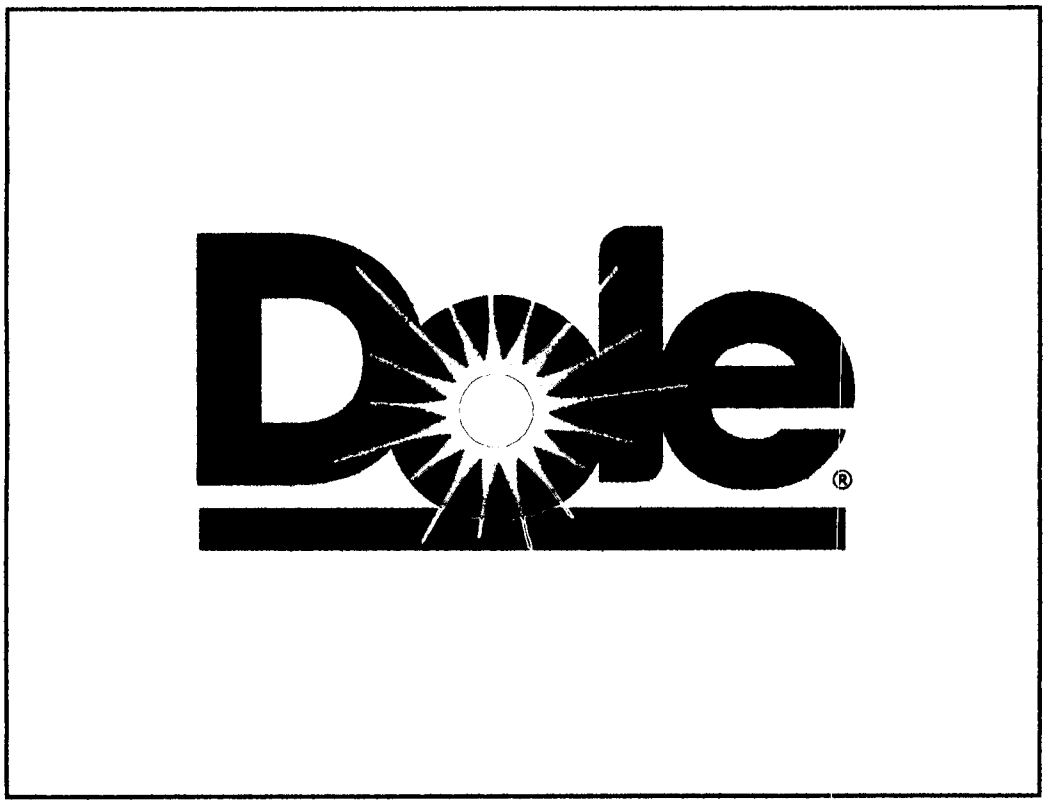
Dole Food Company, Inc. is committed to supplying its customers with the highest quality products including safe, nutritious food products and to leading the industry in nutritional education.

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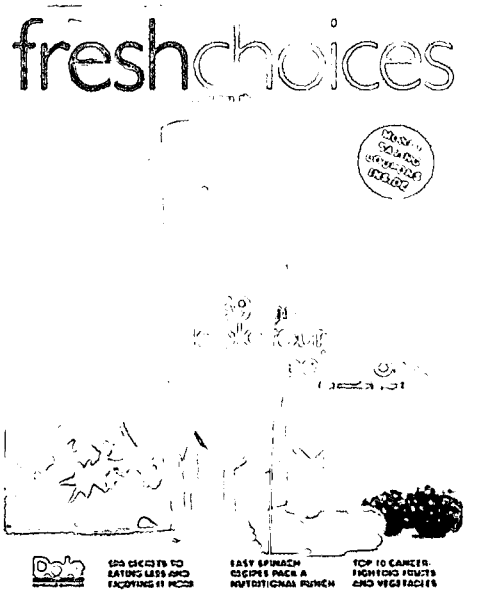

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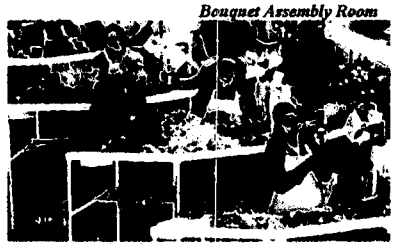
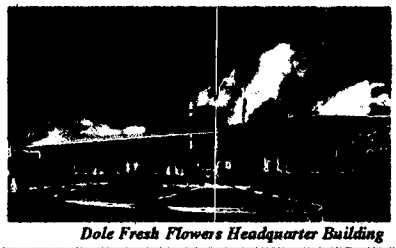
Greenhouse in Colombia

Bouquet Assembly Room





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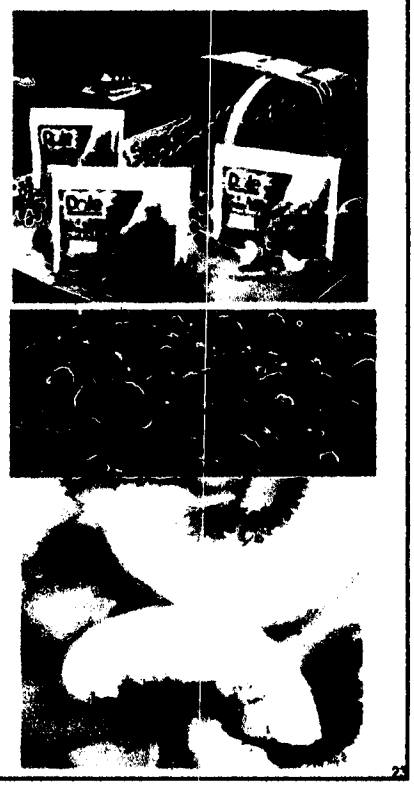

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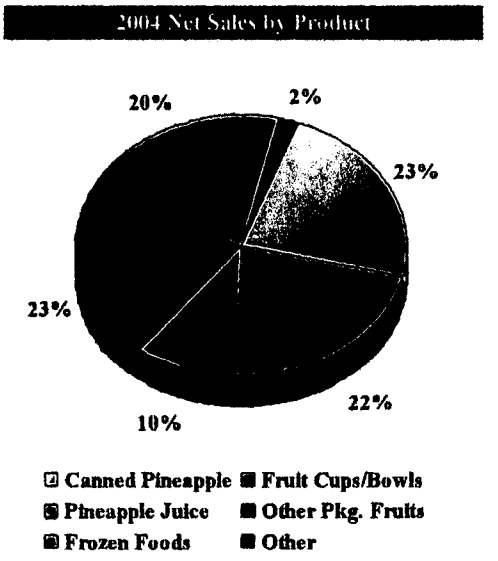
Dole Packaged Foods



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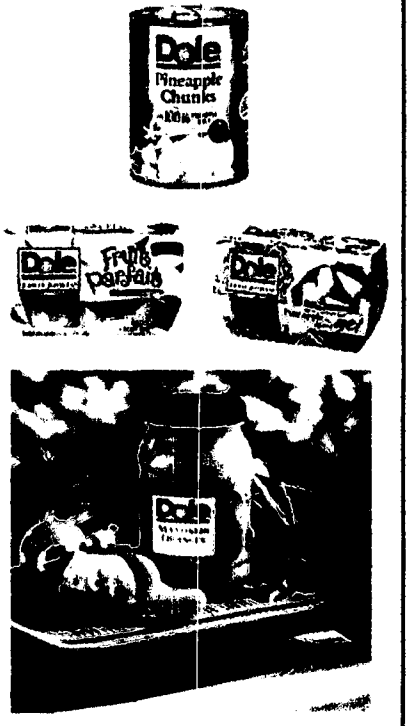

North Carolina Salad Plant

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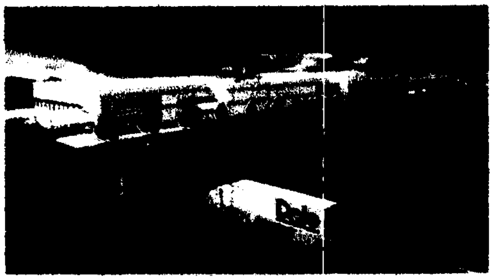
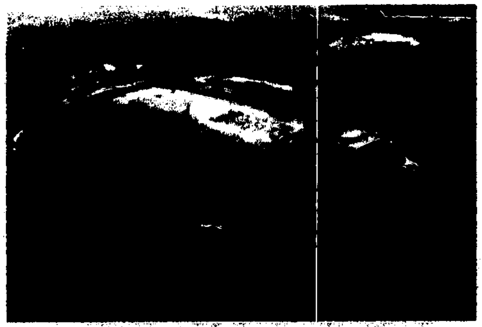


Artist's rendering of North Carolina plant



Aerial photograph of North Carolina plant site

Dole Packaged Foods

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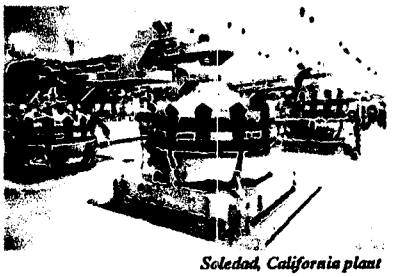
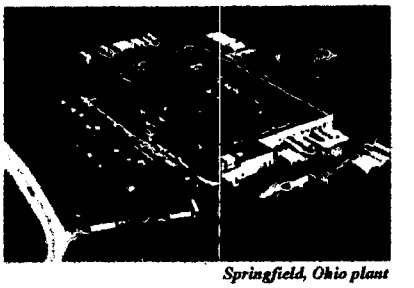


Soledad, California plant



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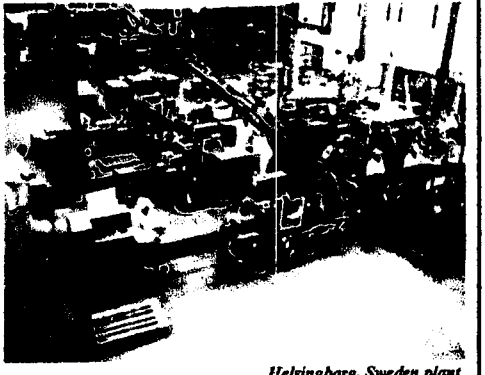

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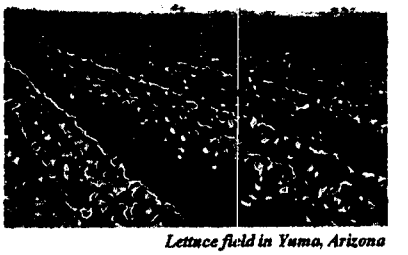
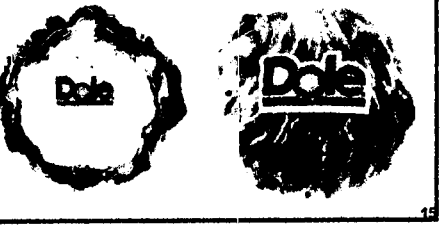


Lettuce field in Yuma, Arizona

Field packing of iceberg lettuce in Yuma, Arizona



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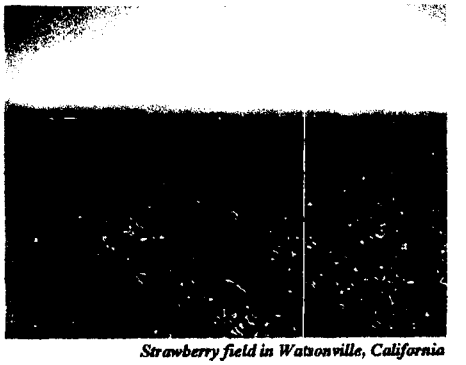
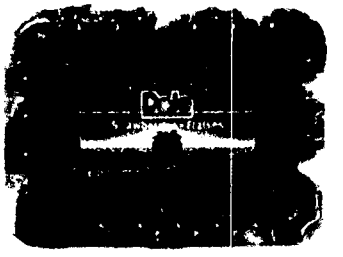
- Dole is committed to growing its berry program by increasing its sourcing from new regions, including North Carolina



Strawberry field in Watsonville, California



Dole Fresh Vegetables

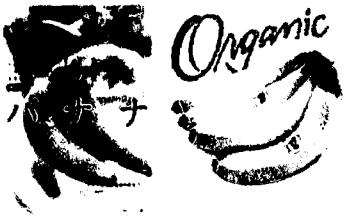
Dole Fresh Vegetables

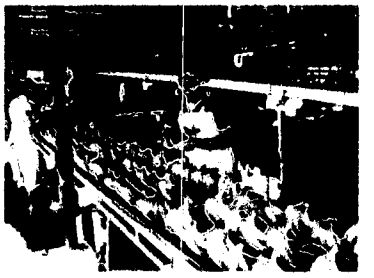
- Sourced from North America, Asia, Europe, Australia, New Zealand and Mexico
- North America
  - One of the leading brands of packaged salads, with unit market share of 40%
  - Number one in iceberg lettuce, celery and cauliflower
- Asia
  - Provider of commodity vegetables to Japan, Korea, Hong Kong and the Philippines
  - Leading provider of fresh-cut vegetables and salads in Japan
- Europe
  - Marketer of 23 varieties of vegetables and an extensive line of fresh-cut products
  - Saba Trading AB, Sweden, is one of the leading distributors of fresh vegetables in Scandinavia

Bananas

- Bananas
  - Dole is the number one selling brand in North America and Japan, and the number two brand in Europe and Korea
    - North America market share of 35%
    - Japan market share of 29%
  - Grown in Latin America for the North American and European markets, and in the Philippines for the Asian Markets
- Specialty Bananas
  - Plantains, red bananas, baby bananas
  - Premium bananas
    - DOLE Sweetio® (Japan and Korea)
- Organic Bananas
  - In 2001, Dole became the first major banana company to offer organic bananas

Latin American banana plantation

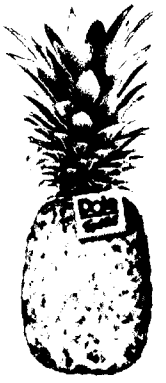




Fresh Pineapple

- Super-sweet yellow pineapple
  - Primarily marketed under the TROPICAL GOLD® label
  - Market shares
    - North America – 22%
    - Japan – 60%
- Traditional greener-shelled pineapple (champaka)
  - Primarily utilized in food service
- Sourced in Hawaii, Costa Rica, Ecuador, Guatemala, Honduras, the Philippines, Thailand and Ivory Coast

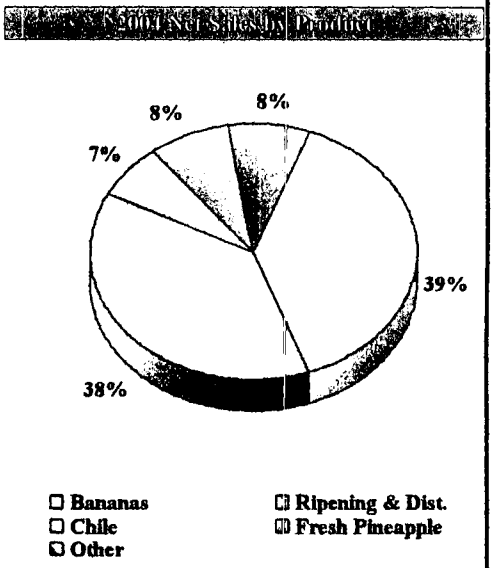
Latin American pineapple plantation



Dole Fresh Fruit

Dole Fresh Fruit

- Bananas
  - Dole sells more than 127 million boxes of bananas annually
- Fresh Pineapple
  - Dole sells more than 25 million boxes of fresh pineapple annually
- Deciduous Fruit
  - Dole markets a wide variety of grapes and treefruit from Chile, South Africa and the United States
- Ripening & Distribution
  - In Europe and Japan, Dole has forward integrated its operations by offering banana ripening services and produce distribution capabilities to its customers



DOLE WORLDWIDE OPERATIONS

FOOD OPERATING DIVISIONS

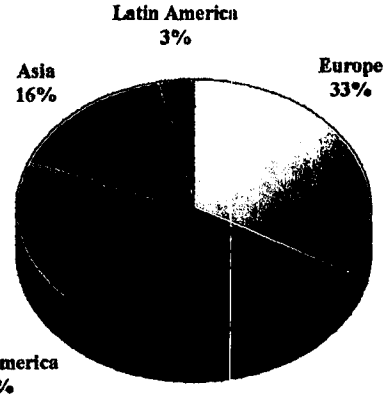
FOOD MARKETING DIVISIONS

Broad Diversification of Supply Sources and Markets

Sources of Supply

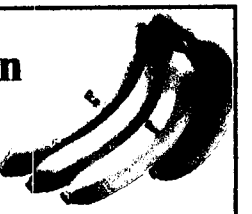
- Bananas
  - Guatemala, Honduras, Costa Rica, Colombia, Ecuador, Peru, Philippines, Cameroon, Canary Islands, Martinique, Guadeloupe, Ivory Coast, Jamaica
- Pineapples
  - Honduras, Costa Rica, Ecuador, Hawaii, Philippines, Thailand, Ivory Coast
- Deciduous/Citrus Fruits
  - Chile, South Africa, New Zealand
- Vegetables
  - USA, China, Japan, Philippines, Mexico
- Flowers
  - Colombia, Ecuador

2004 Revenues by Region

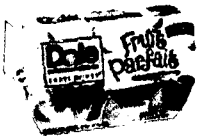


Dole sources and distributes in over 90 countries around the world

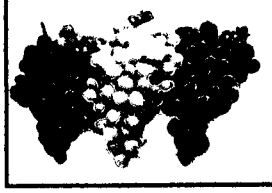
Exceptional Brand Recognition



Dole®

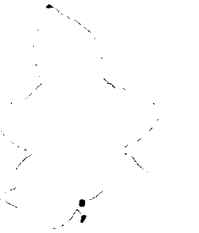


The DOLE brand is one of the most recognized for fresh and packaged produce in the United States with a 57% unaided consumer brand awareness – almost three times that of Dole's nearest competitor, according to a major global research company (TNS/NFO).



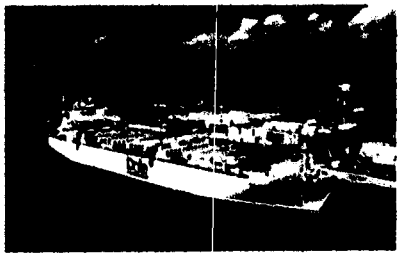
Leading Market Shares

- Fresh Fruit
  - Bananas — #1 U.S. & Japan
  - Chilean winter fruits — #1 Global
  - Fresh pineapple — #2 Global
- Fresh Vegetables
  - Ready-to-eat salads — #1 U.S.
  - Iceberg lettuce — #1 U.S.
  - Celery — #1 U.S.
  - Cauliflower — #1 U.S.
  - Broccoli — #2 U.S.
  - Strawberries — #3 U.S.
- Packaged Foods
  - Canned pineapple — #1 U.S.
  - Canned pineapple juice — #1 U.S.
  - Plastic fruit cups — #1 U.S.
  - Branded frozen fruit — #1 U.S.
- Flowers
  - Supermarkets — #1 U.S.



Dole Strategy

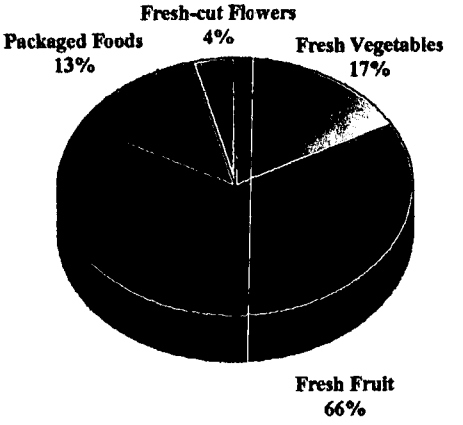
- Leverage our Strong Brand and Market Leadership Position
  - Dole's most significant products hold number one or number two market positions
- Focus on Value-Added Products
  - Dole has successfully shifted its product mix toward value-added food categories and away from commodity fruits and vegetables
- Leverage Dole's State-of-the-Art Infrastructure
  - Dole owns or operates 120,000 acres of land, over 50 processing, ripening and distribution centers, and the largest dedicated refrigerated containerized shipping fleet in the world, comprising 22 ships and approximately 11,500 refrigerated containers
- Educate Consumers on Nutrition and Healthy Lifestyles
- Focus on Operating Efficiency and Cash Flow



Dole's Business Segments

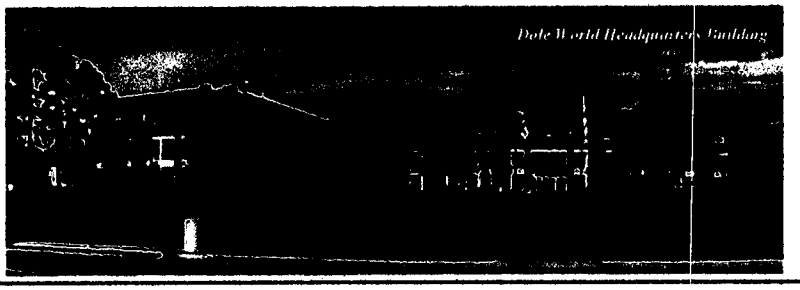
- Fresh Fruit
  - Bananas, fresh pineapple, deciduous fruit, and tropical fruits
- Fresh Vegetables
  - Lettuce, celery, cauliflower, broccoli, fresh packaged vegetables and ready-to-eat salads
- Packaged Foods
  - Processed pineapple, pineapple juice, snack foods, FRUIT BOWLS®, FRUIT BOWLS in Gel, frozen fruit products
- Fresh-cut Flowers
  - Roses, carnations, alstroemeria, freesia, delphinium, bouquets, over 800 varieties of fresh-cut flowers

2004 Revenues by Product



Dole Company Highlights

- Dole is the world's largest producer of fresh fruit, fresh vegetables and fresh-cut flowers, and markets a growing line of value-added products
- For the fiscal year 2004, Dole generated revenues of $5.3 billion
- Exceptional brand recognition and leading market shares
  - The DOLE brand was introduced in 1933 and is one of the most recognized for fresh and packaged produce in the United States
- Dole sources or sells over 200 products in more than 90 countries
- Dole's fully integrated operations include sourcing, growing, processing, distributing and marketing its products



David H. Murdock
Biographical Sketch

David H. Murdock is Chairman, CEO and sole owner of Dole Food Company, Inc., (http://www.dole.com), a Fortune 500 company, and Castle & Cooke, Inc., (http://www.castlecooke.net/) both of which were listed on the New York Stock Exchange before being privatized by Mr. Murdock.

Dole Food Company, Inc. is the worldís largest producer and marketer of high-quality fresh fruit, fresh vegetables, and fresh-cut flowers. Dole markets a growing line of packaged and frozen foods and is a produce industry leader in nutrition education and research. Castle & Cooke's business activities include the development and ownership of real estate, leasing of transportation equipment and manufacture of brick. His combined companies employ more than 68,000 people in over 90 countries and rank as one of the largest privately held entities in America.

Mr. Murdock's vast land holdings perpetuate development and ownership of manufacturing and processing plants, office, retail, hotel, resort and industrial projects throughout the world. Through Flexi-Van Leasing, he is one of the nationís leading lessor of chassis. In the United States, major master-planned residential communities are developed in California, Florida, Hawaii (Hawaii's largest homebuilder) and Arizona.

Mr. Murdock is an advocate of eating healthy to live a longer, more vital life. He organized the collaborative efforts of medical and nutrition experts at Mayo Clinic, University of California, Los Angeles and Dole Food Company, Inc. to write *The Encyclopedia of Foods, A Guide to Healthy Nutrition*. This 500-page book is the definitive guide to a healthier lifestyle through improved nutrition, exercise and disease prevention. Mr. Murdock established the Dole Nutrition Institute to "Feed the World with Knowledge". The Institute focuses on education and research regarding the potential of a plant-based diet to promote health and prevent disease. Opening in July 2006, a wellness complex is under construction across the street from Dole worldwide headquarters in Westlake Village, California. The complex will be a Four Seasons Hotel & Spa and house the California Wellbeing Institute which will include a healthy lifestyle teaching center, medical facilities with complete diagnostic capabilities and a television production studio.

Mr. Murdock is active in civic affairs and very supportive of educational, medical, and cultural programs, particularly within the communities in which he lives and works. One such program, which is scheduled for completion in 2005, is Casa de Esperanza in Ventura County, California. It is a 45-unit transitional housing project for mentally disordered persons which Mr. Murdock will donate to the County of Ventura upon completion.

Mr. Murdock has been a Regentís Professor of Creativity in Business at UCLA's Andersen Graduate School of Management. He is the recipient of an honorary Doctorate of Law degree from Pepperdine University and honorary Doctorate of Humane Letters degrees from the University of Nebraska-Lincoln and Hawaii Loa College.

His hobbies include reading, the arts, poetry, and horticulture. He is a breeder of more than 200 prized Arabian horses, has an orchid collection consisting of more than 16,500 plants, and is an avid art and antique furniture collector.

Mr. Murdock resides in California with residences in New York, Kannapolis, North Carolina and Lana'i, Hawaii. He has a son who is also active in the family businesses.

WHAT: North Carolina Ag & Forestry Awareness Study Commission Meeting
WHEN: Thursday, January 19
TIME: 9:30 AM 1:30 PM
WHERE: Cannon Village Visitors Center
LOCATION: 200 West Avenue
PHONE NUMBER: 704-938-3200
DIRECTIONS: I-85 – Exit 60 Dale Earnhardt Boulevard 3.3 miles to Vance Street. Right on Vance, two short block to West Avenue, left on West Avenue. Cannon Village Visitors Center is last building or left in the first block. Parking available on street and between Visitors Center and SunTrust Bank.

LUNCH PROVIDED BY CASTLE COOKE:

Do you have an approximate number of attendees?

COMPLIMENTARY GIFT BAG CONTENTS:
Souvenir brick from Plant 1 with plaque denoting quote from David Murdock's September 12th announcement of North Carolina Research Campus.
Information Sheet
Media Kit with DVD concerning the Research Campus
Our State Magazine, private label water, and Cannon Village Coupon Book, etc,

Thoughts on your agenda from our end:

SPEAKERS FROM CASTLE COOKE:
Lynne Scott Safrit
David Murdock
Representative from Dole:
Tour of Site approximately 30 minutes – Vans/transportation will be provided
NCRC DVD Presentation 15 minutes

Lynne Safrit asked me to find out what information you think will be of most value to the commission members. She would like to be sure the right person is here from Dole to provide information specific to this commission. Could you send me possible questions that are of concern to this commission? We want to be sure all attendees go away with enough information garnered to make the event well worth everyone's time, travel and expense. Mr. Murdock's time is so consumed with this project we want to make sure this face to face contact is time well spent for him also.

Could we get a list of members of the General Assembly who will be attending? We would like to have Speaker Black invited since he is just down the road plus any other legislators who are nearby. Folks such as Senator Pittenger, Linda Johnson, Jeff Barnhardt, Andrew Brock, Fred Steen, Fletcher Hartsell and any others from this area seem to appreciate having face to face time with Mr. Murdock and having him available for questions. If I can do any phoning on this end to help invite or confirm folks you would like to invite, I will be glad to do that.

North Carolina Research Campus and Biotechnology Information

The City of Kannapolis
246 Oak Avenue
PO Box 1199
Kannapolis, NC 28082-1199

KANNAPOLIS

North Carolina Research Campus

The North Carolina Research Campus is a joint venture between Dole Foods and the University of North Carolina that will be built over the next five to seven years on the former Plant 1 site in downtown Kannapolis. Projected to cost $1 billion, the project is being funded primarily by an investment from David H. Murdock, owner of Dole Foods and Castle & Cooke, Inc.

City Involvement

The City of Kannapolis is exploring the use of self-financing bonds to pay for infrastructure and corridor improvements related to the project. NCDOT has agreed to widen NC Highway 3 into the campus. Plans are being developed now for the project, which likely be a four-lane urban section with a narrow planted median. The city plans to rewrite its land use plan taking into account the need for more business/office parks and different housing types. As part of this process, Kannapolis is also exploring a second city business park to ensure there is space available for new businesses to locate. The city is working with RCCC on the issue of worker training.

Campus Partners

The research campus will house the University of North Carolina at Chapel Hill's Nutrition Institute, a Dole- NC State Institute for Advanced Fruit and Vegetable Science, a campus of Rowan Cabarrus Community College, and a science and mathematics school for girls. The development plans also include residential, office and retail components.

The Dole-NC State Institute for Advanced Fruit and Vegetable Science will research plant genomics, metabolic profiling and cell biology. The goal of the research is to develop practical applications that will broaden the horticultural potential for fruit and vegetables by enhancing their nutritional content and increasing growing and harvesting options. The result will be the improvement of the sustainable food supply.

The University of North Carolina at Chapel Hill's North Carolina Institute for Excellence in Nutrition will work to unlock the links between nutrition and the brain, obesity and cancer. They will focus on causes, treatment, prevention and related genetic, biological and behavioral issues.

The University of North Carolina at Charlotte will support the development of the girls' school for science and mathematics. UNCC will also use the applications generated from their growing bioinformatics program, which is the use of computer software to analyzing biotechnology data.

North Carolina Research Campus

Construction Overview

Current plans for the North Carolina Research Campus call for a two-phase building process with the demolition of Plant 1 and construction of the campus occurring simultaneously during Phase I.

The top three priorities for construction are the Core Laboratory, the LabCorp facility and biotech office space. These buildings will be completed in Phase I. Once the Core Laboratory is completed in 18 months, the UNC System components of the project will occupy space in the Core Lab building until their facilities can be completed.

When completed, the North Carolina Research Campus will include more than one million square feet of office and laboratory space, 350,000 square feet of new retail and commercial space and approximately 700 new residential units.

The following components will be constructed during Phase I, which is scheduled to last until 2007:

Core Laboratory

Projected to be 311,000 square feet, including an underground parking deck, the Core Laboratory will include a state-of-the-art contract manufacturing biogenic facility as well as the Dole Research Institute. During construction of the campus, this building will also house temporary facilities for the University research institutes. Once the campus is completed, the Core Lab will provide more than 75,000 square feet of multi-tenant space. The building is estimated to cost $100 to $125 million including the equipment to construct.

The lab will include a DNA sequencing facility, micro-array facilities, mass spectrometry facilities and other analytical tools. It will be available for use by companies located on the campus.

The contract manufacturing biogenic fermentation facility will encompass roughly 30,000 square feet of sterile environment and will provide a place where small to medium sized technology companies can produce single runs of biological products.

Dole Research Institute

This 10,000 square foot facility, which will be housed in the Core Laboratory, will focus on scientific research relating to nutrition and fruits and vegetables. The Dole Research Institute will collaborate with both UNC-Chapel Hill and North Carolina State University.

North Carolina Research Campus

Cabarrus Family Medicine

The Cabarrus Family Medicine facility will be 75,000 square feet. This organization plans to partner with UNC-Chapel Hill in several areas of research, including wellness, obesity and illness prevention. This facility will also provide primary care for the employees of the new companies that will locate to the campus.

NorthEast Medical Center

NorthEast, which is consistently a member of the Top 100 Hospitals listing, will focus largely on providing specialty and integrative medicine and alternative healthcare services. NorthEast will also work directly with the research centers on campus to determine future collaborative work.

Phase II of the North Carolina Research Campus will include the UNC System buildings, the Civic Building and auditorium, the retail area with a movie theatre, a hotel, and the girl's school. These buildings will likely break ground in 2008 and be completed by 2010.

Venture Capital Fund

In order to attract biotech start-up firms to the North Carolina Research Campus, David Murdock has announced his intent to start a venture capital fund with an initial investment of $100 million to help with start-up costs for these companies. Other investors have expressed interest in joining the fund, and it is expected to grow over the course of the next few years.

During the course of the next several months, the details for the structure, requirements and distribution of this fund will be determined. Castle & Cooke is working with Mr. Murdock's chief technical advisor, Dr. Andrew Conrad to put together a scientific committee to review all applications.

About Biotechnology

Biotechnology is defined by the NC Biotechnology Center as the "collection of technologies that use living cells and/or biological molecules to solve problems and make useful products."

Biotechnology encompasses most forms of science including biology, chemistry, computers, math and pharmacology.

North Carolina is third in the nation behind Massachusetts and California in the field of biotechnology.

According to the NC Biotechnology Center, North Carolina biotechnology companies, some of which are in Charlotte, are a $3 billion a year industry. This is a fraction of the $40 billion global industry.

Worldwide, biotechnology is estimated to grow to a market worth $120 billion in the next decade.

The biotechnology sector has grown by an average of 10 percent per year for the last several years.

Biotechnology Training
Specific biotechnology training programs are available through the community college system. Rowan Cabarrus Community College (RCCC) is in the planning stages for a local biotechnology training program.

With at least two years before biotechnology jobs arrive in Kannapolis, the best course of action is to pursue additional education. For example, those without a high school education may want to obtain a GED. People with a high school education, a four-year degree or graduate degree, may want to take refresher courses in science and math.

RCCC offers a free assessment that can help determine appropriate courses.

Career and Business Opportunities
A 2004 report by the NC Biotechnology Center entitled *New Jobs Across North Carolina* noted that for every biotechnology job, six other jobs are created.

The Research Campus is expected to employ several thousand people in various types of jobs and support as many as 35,000 jobs regionally.

About Biotechnology

Supporting the researchers are technicians, administrative personnel, human resource professionals, security personnel, buildings, groundskeepers, business managers, public relations professionals and others.

Services such as heating and air, electrical, plumbing, catering and offices supplies will be needed on the Research Campus.

The campus will include and spur the growth of retail, restaurant and service industries throughout the city.

Jobs in Biotechnology
The average salary range for a biotechnology worker with a two-year AAS degree (available from a community college) is $22,250 to $38,500. The median wage is $29,875.

Examples of Entry Level Jobs:
Manufacturing Support Technician
Starting Salary Range: $27,500 to $38,500
Education Level: AAS two-year degree to BS four-year degree

Process Technician
Starting Salary Range: $22,250 to $30,000
Education Level: High School to AAS two-year degree

Quality Assurance Assistant/Associate
Starting Salary Range: $26,000 to $35,000
Education Level: AAS two-year degree to BS four-year degree

According to the NC Biotechnology Center, in the research and development field most employees have a Bachelor of Science or post-graduate degree.

In biomanufacturing, which is expected to be attracted by or spin-off from the Research Campus, 67 percent of the workers in North Carolina have a high school diploma and some additional community college training. Only three percent hold a PhD and another six percent a Master of Science or Bachelor of Science in Engineering.

Resources

To learn more about biotechnology, visit these websites:

North Carolina Center for Biotechnology
www.ncbiotech.org

New Jobs Across North Carolina, a study by the NC Center for Biotechnology
www.ncbiotech.org/strategicplan

Windows in the Workplace, a study by the NC Center for Biotechnology
www.ncbiotech.org/ouractivities/spproj/workplace03.cfm

National Center for the Biotechnology Workforce
www.BiotechWorkforce.org

Please send inquiries concerning the North Carolina Research Campus and jobs, construction, vendor requests, the girl's school of science and math or other questions to:
Castle & Cooke
PO Box 28
Kannapolis, NC 28083

Resources

Subscribe to City of Kannapolis E-Communications!

For more news about the North Carolina Research Campus, biotechnology, and news and events in Kannapolis, subscribe to our e-communications.

E-Kannapolis is the city's electronic newsletter sent bi-monthly with updates on City Council decisions, events and other news and information.

Breaking New Ground is the city's economic development newsletter sent quarterly with the latest information on new business and investment in Kannapolis.

If you'd like to subscribe to these newsletters, go online to www.cityofkannapolis.com or return this form to the City of Kannapolis, attn: Community Relations Director, PO Box 1199, Kannapolis, NC 28082-1199.

Name: _____

E-mail Address: _____
(Please write clearly.)

Phone Number: _____

For Immediate Release

Contacts: Lynne Scott Safrit, Castle & Cooke, Inc.
(704) 938-5400

Joni Worthington, University of North Carolina
(919) 962-4629

September 12, 2005

KANNAPOLIS, NC -- David H. Murdock, owner of Castle & Cooke, Inc. and Dole Food Company, Inc., and Molly Corbett Broad, president of the 16-campus University of North Carolina, unveiled plans today for the North Carolina Research Campus, a massive scientific and economic revitalization project that encompasses the former Cannon Mills plant and entire downtown area of Kannapolis, North Carolina. They were joined by Governor Mike Easley, Senator Elizabeth Dole, Senator Richard Burr, Congressman Robin Hayes, President Pro Tempore of the Senate Marc Basnight, Speaker of the House James Black, State Senator Fletcher Hartsell and other regional, state, and University officials.

"I would like to personally thank Governor Easley, Senator Dole, Senator Burr, Congressman Hayes, Senator Basnight, Speaker Black, Senator Hartsell and other members of our legislative delegation for their enthusiastic support and assistance in turning my vision for this project into reality. The receptiveness of all of our state leaders and their guidance and commitment to strengthening the economic viability of our state has been very gratifying to me as I have worked on this project over the past seven months," commented Mr. Murdock.

The 250-acre Cannon Mills Plant 1 site was purchased by Mr. Murdock at auction in December 2004. Mr. Murdock also owns another 100 acres in the downtown Kannapolis area and another 1000 acres throughout Cabarrus and Rowan counties.

"The most exciting part of this project is to be able to create sustainable, better-paying jobs for the people of Kannapolis and the region, and the creation of this scientific community centered on biotechnology will allow a transformation of this economy from a manufacturing-based one to one centered on scientific knowledge and research. Through the collaboration of the university scientists, the biotechnology research, and the state-of-the-art laboratories, new discoveries will be made that will further my goal of teaching people about proper health, nutrition, and wellness," explained Murdock.

UNC President Molly C. Broad observed, "We cannot overstate the significance of the University's embarking – in partnership with Dole and David Murdock – on a project of this magnitude, scale, and potential. This initiative advances our three-part mission of teaching, research, and public service – and in the process gives new meaning to the

terms 'collaborative' and 'multi-disciplinary.' It underscores our commitment to foster statewide economic development and technology transfer – and demonstrates a new level of our commitment to serve the needs of the entire state. This project will serve as a national model for what can happen when private enterprise, higher education, and state government partner to affect positive change for the future."

When completed, the 350-acre campus will house the most state-of-the-art laboratory space in the nation and is expected to become home to over 100 biotechnology companies. A partnership with the University of North Carolina, including UNC-Chapel Hill, North Carolina State University, and the University of North Carolina at Charlotte, has been forged to advance groundbreaking research focused on health and nutrition and to enable each of these institutions to have a physical presence in Kannapolis. Advanced discussions with Duke University and other universities in the state are underway to define these institutions' involvement in the campus.

Construction on the first building will begin as soon as architectural plans are finalized. When completed, the North Carolina Research Campus will include more than one million square feet of office and laboratory space, 350,000 square feet of new retail and commercial space, and approximately 700 new residential units.

Components of the project announced today include:

- The campus will be home to a new, privately-operated high school for girls from across the United States who have reached their junior or senior year and who have excelled in the fields of mathematics and science. To be founded by David Murdock and other private enterprises, the school will enroll 120 students and will have residential facilities on the campus. The curriculum will be devoted to mathematics and science and will provide interactive opportunities with the University's research components and the biotechnology campus. Women comprise the largest minority in the fields of math and science, and the campus will strive to alleviate this statistic through a specialized curriculum aimed at preparing women for careers in these fields. The most accomplished and gifted young women from throughout the country will be admitted to this institution.

- The initial 330,000 square foot building will house the Core Laboratory facility, a state-of-the-art contract manufacturing biogenic facility, and the Dole Research Institute. In addition, this building will house temporary facilities for the University research institutes until permanent structures can be built. The facility also will provide more than 75,000 square feet of multi-tenant space.

  The Core Laboratory will comprise approximately 60,000 square feet of laboratory and office suites and will contain a DNA sequencing facility, micro-array facilities, mass spectrometry facilities, and all other analytical

tools. This facility will be available for use by all companies located on the campus.

The Contract Manufacturing biogenic fermentation facility will encompass roughly 30,000 square feet of a sterile environment and will provide a vehicle in which small to medium sized technology companies can produce single runs of biological products in a good manufacturing practice (GMP) facility.

The Dole Research Institute will contain 10,000 square feet and will focus on scientific research relating to nutrition and fruits and vegetables. This institute will collaborate with both UNC-Chapel Hill and NC State University on research findings related to nutrition and the development of new varieties of fruits and vegetables.

The North Carolina State University Institute for Advanced Fruit and Vegetable Science will develop enabling technologies for research, education, extension, and outreach to bolster the economic and horticultural potential for fruit and vegetable production across the southeastern United States. The purpose of this Center is to improve the nutritional content of fruits and vegetables, to enhance human health, to increase agricultural production, and to support scientific ideas and technologies. Basic and applied researchers will work side by side in state-of-the-art facilities, allowing plant breeders and pathologists to quickly adopt the latest breakthroughs in plant genomics, metabolic profiling, and cell biology. The North Carolina State facilities will include approximately 50,000 square feet of laboratory and research space and 100,000 square feet of experimental and research-oriented greenhouse facilities.

The University of North Carolina at Chapel Hill will establish the UNC Institute for Excellence in Nutrition, which will focus on research examining the relationship between nutrition and the brain, obesity, and cancer. The work of the Center will include basic science on the causes of cancer and on the related genetic, biological, and behavioral mechanisms. Researchers will collaborate with NC State and other educational institutions to translate research into practice, with the goal of promoting better nutrition throughout the state and nation. Community-based interventions, population cohort studies, and clinical research on treatment and prevention also would be undertaken. The UNC-Chapel Hill facilities will encompass approximately 120,000 square feet.

The University of North Carolina at Charlotte not only will be providing leadership in the preliminary design and academic plan for the girls' high school, but also will develop plans that could lead to its participation in the bioinformatics aspect of nutritional research. Other UNC campuses may play future roles as well.

- Discussions are underway with the North Carolina Community College System for a 40,000 square foot structure on the campus that will focus on the education and training for biotechnology jobs that will be created as a result of these various initiatives. The facility will provide significant retraining opportunities for displaced textile workers, including the more than 4,000 former Pillowtex employees who lost their jobs in 2003.

- A 1000-seat auditorium and conference facility will be constructed on the campus, along with a 125-room hotel. The conference facility will be the home to national scientific conferences and meetings and will also provide opportunities for community cultural and performing arts events.

- A new retail area to be developed on the site will include a multiplex movie theater, new shops, restaurants, and other commercial properties.

- Cabarrus Family Medicine, founded by Dr. Allen Dobson, who is also the North Carolina Division of Medical Assistance Director, will locate a 50,000 square foot facility on the campus and will partner with UNC Chapel Hill in several areas of research, including wellness, obesity, and illness prevention. The facility will provide primary care for the employees who will populate the new companies locating on the campus, and will collaborate with these entities on research projects.

- NorthEast Medical Center, a 457-bed community hospital located in Cabarrus County, will provide specialty care and other services on the campus. Space planning for this facility will begin shortly and is estimated to be between 25,000 and 50,000 square feet, depending on the clinical offerings sited at this location. NorthEast's participation on the campus will focus largely on providing specialty and integrative medicine, an array of alternative healthcare services built into a traditional medical plan of care. From a research perspective, NorthEast Medical Center's Clinical Research Institute currently participates in clinical trials with academic medical centers in the state, in addition to conducting smaller original research studies. NorthEast will work directly with the research centers on campus to determine future collaborative efforts.

- Burlington, N.C.-based Laboratory Corporation of America (LabCorp), a pioneer in genomic testing, has announced intentions to place a facility on the campus. The size of this facility and the number of staff have not yet been determined. LabCorp, with more than 25,000 employees, offers more than 4,400 clinical tests, ranging from routine blood analyses to the most sophisticated molecular diagnostics and tests more than 360,000 specimens daily for over 220,000 clients nationwide.

- Negotiations with dozens of biotechnology tenants are already underway, with several tenants in final lease discussions for the new facilities.

Last month, Mr. Murdock and Dole announced that they would construct a $54 million vegetable processing plant in Gaston County that, when fully functional, is expected to create about 1,000 jobs. Mr. Murdock announced today that he has begun searching the state for a second site, not yet identified, for the construction of a packaging plant for frozen fruit.

Mr. Murdock and Dole Food Company have been traveling across North Carolina with state officials and with the state's farming community to identify multiple geographic regions of the state that could transition from tobacco to healthy fruits and vegetables that could be processed at one of the Dole facilities being constructed. Working with North Carolina State University, the North Carolina Department of Agriculture, and the North Carolina Cooperative Extension Service, this program will significantly advance the state's agricultural transition and expansion.

"It has been an exciting endeavor for me to work with the scientific community in North Carolina on this project. As a scientist, it is a place like this campus that will inspire research and allow great scientific discovery for years to come," commented Dr. Andrew Conrad, chief scientific officer of LabCorp's National Genetics Institute, and a member of the Board of Directors for both Castle and Cooke, Inc. and Dole Food Company, Inc.

"It's exciting to be able to express how I feel," said Kannapolis Mayor Ray Moss. "Mr. Murdock's plans to take silent factories, demolish them and create new industry will have a remarkable impact in our city. We have seen many wonderful new development projects in the last few years, and have worked hard to bring them here. The North Carolina Research Campus marks a new level of excitement and achievement where people will be able to live, learn, work, play and worship in the city they love."

Justin Murdock, son of David Murdock and Senior Vice President for Dole and Castle & Cooke, stated, "This project will bring full circle the synergies of education, job retraining, and employment; and with this, the creation of new business for the future. Young people who are graduating from high school in North Carolina will go on to institutes of higher education in this state, and then will be able to return to Kannapolis for employment in the scientific laboratories or to create their own new businesses. It is my generation who needs to advance the study of life sciences and the life-changing discoveries that will alter the world for years to come, discoveries which will bring a brighter and healthier future for people throughout the world."

"I am very excited to be working with our state government leaders and the University system on what is the beginning of the economic revitalization not only of Kannapolis, but also of Gaston County, the surrounding region, and the entire state of North Carolina. As the plans for this project have taken shape over the last seven months, I have been impressed by how receptive state leaders have been to new ideas and how warmly I have been welcomed in communities all across North Carolina. With their cooperation and

involvement, this initiative will extend far beyond the laboratories in Kannapolis to regional manufacturing plants and farms statewide. I commend the state's farming community, the University leaders, and state officials for joining in this great example of public-private partnership," stated David Murdock.

Molly Corbett Broad
Biographical Sketch

Molly Corbett Broad has served as President of the 16-campus University of North Carolina since July 1997. The oldest public university in America, the University enrolls nearly 190,000 students and encompasses all of the state's public institutions that grant baccalaureate degrees, along with affiliated enterprises that advance the mission of the University, including the 11-station UNC Center for Public Television, the UNC Health Care System, the NC Arboretum, and the NC School of Science and Mathematics. As UNC's chief executive officer, she is responsible for managing the affairs and executing the policies of the University and for representing the University to the NC General Assembly, state officials, the federal government, and other key University constituencies.

An economist, Broad came to UNC from the California State University system, where she had served as senior vice chancellor for administration and finance from 1992 to 1993, and as executive vice chancellor and chief operating officer from 1993 until her election as UNC President. Earlier in her career, Broad had served as the chief executive officer for Arizona's three-campus university system (1985-92) and in a succession of administrative posts at Syracuse University (1971-85), where she was manager of the Office of Budget and Planning, Director of Institutional Research, and Vice President for Government and Corporate Relations. In 1976, she took a one-year leave of absence to serve as deputy director of the New York State Commission on the Future of Postsecondary Education, a blue-ribbon panel charged with evaluating the organizational structure and financing of the state's two public university systems.

A native Pennsylvanian and the daughter of two public school teachers, Broad earned a General Motors Scholarship to Syracuse University, where she graduated Phi Beta Kappa in 1962 with a baccalaureate degree in economics from the Maxwell School of Citizenship and Public Affairs. She holds a master's degree in the field from Ohio State University.

Active in an array of professional and civic organizations, Broad has written and spoken widely on strategic planning for higher education, emerging technologies, and K-16 partnerships. She is chair of the National Association of State Universities and Land-grant Colleges (NASULGC) board of directors and past president for the International Council for Distance Education. She holds seats on the boards and executive committees of the Business-Higher Education Forum, the National Council on Competitiveness, the National Association of University System Heads, MCNC, and RTI International. She also serves on the boards of the North Carolina Biotechnology Center and the North Carolina Economic Development Board. She is the State Higher Education Executive Officer (SHEEO) and sits on advisory boards of the Mellon Foundation, the Association of Governing Boards Presidents' Council, and the Partnership for Public Service. A member of the First Centenary Consultative Committee for Fudan University in Shanghai, China, she also serves on the Parsons Corporation Board of Directors.

Mary Corbett Broad and her husband, Robert W. Broad, have two adult sons.

David H. Murdock
Biographical Sketch

David H. Murdock is Chairman, CEO and sole owner of Dole Food Company, Inc., (http://www.dole.com), a Fortune 500 company, and Castle & Cooke, Inc., (http://www.castlecooke.net/) both of which were listed on the New York Stock Exchange before being privatized by Mr. Murdock.

Dole Food Company, Inc. is the worldís largest producer and marketer of high-quality fresh fruit, fresh vegetables, and fresh-cut flowers. Dole markets a growing line of packaged and frozen foods and is a produce industry leader in nutrition education and research. Castle & Cooke's business activities include the development and ownership of real estate, leasing of transportation equipment and manufacture of brick. His combined companies employ more than 68,000 people in over 90 countries and rank as one of the largest privately held entities in America.

Mr. Murdock's vast land holdings perpetuate development and ownership of manufacturing and processing plants, office, retail, hotel, resort and industrial projects throughout the world. Through Flexi-Van Leasing, he is one of the nationís leading lessor of chassis. In the United States, major master-planned residential communities are developed in California, Florida, Hawaii (Hawaii's largest homebuilder) and Arizona.

Mr. Murdock is an advocate of eating healthy to live a longer, more vital life. He organized the collaborative efforts of medical and nutrition experts at Mayo Clinic, University of California, Los Angeles and Dole Food Company, Inc. to write *The Encyclopedia of Foods, A Guide to Healthy Nutrition*. This 500-page book is the definitive guide to a healthier lifestyle through improved nutrition, exercise and disease prevention. Mr. Murdock established the Dole Nutrition Institute to "Feed the World with Knowledge". The Institute focuses on education and research regarding the potential of a plant-based diet to promote health and prevent disease. Opening in July 2006, a wellness complex is under construction across the street from Dole worldwide headquarters in Westlake Village, California. The complex will be a Four Seasons Hotel & Spa and house the California Wellbeing Institute which will include a healthy lifestyle teaching center, medical facilities with complete diagnostic capabilities and a television production studio.

Mr. Murdock is active in civic affairs and very supportive of educational, medical, and cultural programs, particularly within the communities in which he lives and works. One such program, which is scheduled for completion in 2005, is Casa de Esperanza in Ventura County, California. It is a 45-unit transitional housing project for mentally disordered persons which Mr. Murdock will donate to the County of Ventura upon completion.

Mr. Murdock has been a Regentís Professor of Creativity in Business at UCLA's Andersen Graduate School of Management. He is the recipient of an honorary Doctorate of Law degree from Pepperdine University and honorary Doctorate of Humane Letters degrees from the University of Nebraska-Lincoln and Hawaii Loa College.

His hobbies include reading, the arts, poetry, and horticulture. He is a breeder of more than 200 prized Arabian horses, has an orchid collection consisting of more than 16,500 plants, and is an avid art and antique furniture collector.

Mr. Murdock resides in California with residences in New York, Kannapolis, North Carolina and Lana'i, Hawaii. He has a son who is also active in the family businesses.

Andrew J. Conrad, Ph.D.
Biographical Sketch

ANDREW CONRAD, Ph.D. is the Chief Scientific Officer and co-founder of LabCorp's National Genetics Institute. Dr. Conrad graduated with a B.S. in neurobiology and a Ph.D. in cell biology from the University of California Los Angeles. He has served as the Responsible Head for the FDA Product License for an automated device for the detection of HIV-1, HIV-2 and HCV in plasma from large numbers of donors. The primary focus of Dr. Conrad's research has been on the effects and manifestations of chronic viral illnesses as measured by the polymerase chain reaction (PCR), and he also conducts research on the role of gene expression in cancer. He has more than sixty publications in scientific journals. National Genetics Institute performs over three million PCR reactions per year and is one of the largest genetics laboratories in the world. Dr. Conrad is also the founder and Laboratory Director of the California Health and Longevity Institute (CHLI). CHLI operates preventative and early detection medical facilities at the new world-class wellness centers being built around the country in partnership with Dole, Wellpoint Inc. and the Four Seasons Hotels.

Dr. Conrad also serves on the boards of Castle and Cooke, Inc. and Dole Food Company and is the Chief Scientific Officer for Dole.

For immediate use *Sept. 12, 2005*

UNC-Chapel Hill to play key role in Kannapolis revitalization effort

CHAPEL HILL - The University of North Carolina at Chapel Hill today (Sept. 12) announced a proposed nutrition research center that will be part of the newly announced North Carolina Research Campus in Kannapolis.

"We have an opportunity to reach out to a region of the state particularly hard-hit by global competition for manufacturing and agriculture," said Chancellor James Moeser. "We want to leverage our considerable research strengths in obesity, nutrition and disease prevention, creating jobs and improving the lives of all North Carolinians. Ultimately, we hope to involve faculty and departments from across campus to make this another example of how our interdisciplinary approach to problems can pay dividends for the state's citizens."

Research to be conducted there will involve Carolinaís department of nutrition, which is jointly housed in the universityís schools of public health and medicine, and will focus primarily on three aspects of nutrition: nutrition and the brain; obesity; and nutrition and cancer.

"We are excited about the possibility of creating an internationally recognized research institute that would contribute significantly to our understanding of how the foods we eat affect our overall health and longevity," said Dr. Steven H. Zeisel, associate dean for research in the School of Public Health and director of the UNC Clinical Nutrition Research Center. "The location will allow us to collaborate with other partners who will locate research facilities here, including N.C. State University and the Dole FoodCo., to translate our research findings into practice."

Zeisel is also Kenan Distinguished University Professor of nutrition and pediatrics in the schools of public health and medicine.

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NC STATE UNIVERSITY **NEWS RELEASE**

News Services, Campus Box 7504, Raleigh, NC 27695-7504 (919) 515-3470

Media Contacts: Keith Nichols, News Services, 919/515-3470 or keith_nichols@ncsu.edu

Sept 12, 2005

NC State Will Lead Research At New 'Biopolis' Institute

FOR IMMEDIATE RELEASE

North Carolina State University and Dole Foods will form a cutting-edge research institute to lead the state's efforts in enhancing the nutritional content of fruits and vegetables to improve human health; increasing agricultural production to create a sustainable food supply; and providing scientific ideas and technologies that will contribute to North Carolina's economic growth. The Dole-NC State Institute for Advanced Fruit and Vegetable Science is part of a "biopolis" being constructed at the site of the former Pillowtex facility in Kannapolis.

The Institute for Advanced Fruit and Vegetable Science is a research and education institute with a global vision for improving the human condition. In addition to more plentiful harvests of fruits and vegetables already grown in North Carolina, NC State researchers and extension personnel will work with farmers to bring new crops to North Carolina in order to meet the demands of a Dole processing plant nearby.

"NC State has built a tradition of listening to the needs of the people and businesses of North Carolina and responding with real-world solutions," said Chancellor James L. Oblinger. "Our strengths in agriculture, research and technology make NC State uniquely qualified to operate the Institute for Advanced Fruit and Vegetable Science. The world-class basic and applied research conducted at the institute will yield innovative results and our extension service – with offices in all 100 NC counties and the Cherokee reservation -- will share the new developments across the state.

"This project could mean a significant boost in economic development for North Carolina. Working with the state's producers and processors, we have an opportunity to not only make a strong contribution to the Kannapolis area, but to the entire state. "

The work of NC State researchers at the institute will be devoted to:

- improving quality traits of crops, including nutritional value, flavor, size and color
- discovering better and faster ways to grow fruits and vegetables to size while enhancing flavor

- extending the harvest to near year-round capabilities
- improving resistance to disease managing irrigation to provide maximum productivity and quality of fruits at a low cost
- extending preservation and shelf life

"As a first-class research facility, the institute will quickly establish an international reputation for excellence and leadership in translating research into practical benefits," said Steve Leath, associate dean and director of the North Carolina Agriculture Research Service. Leath said a team approach to research will fuel this rise to international prominence. NC State will employ teams that combine researchers from genetics, genomics, horticultural science and plant breeding for research on a single crop.

Each team will examine methods of increasing nutritional value of the given crop, novel storage and preservation methods, extending the harvest season, protecting the crop against diseases, and other methods of crop improvement. The team also will consider ways to meet the growing demand for organic crops. This model will not only create a novel team approach, but also allow researchers from each team to interact – for example, allowing the geneticist from each team to share research.

This work will include berry crops and other fruits, as well as vegetables and flowers.

"NC State will work with Dole in an unprecedented, ongoing and ambitious effort to recruit and assist farmers in the growing of fruits and vegetables needed to meet the high demands of the Dole plant," Leath said.

"Research and extension personnel will coordinate grower transition to new crops, or to greater acreage of particular crops. The effort could support and complement changes in the tobacco industry by providing diverse and alternative crop choices to growers, and the expertise to produce them."

Coordination of the harvest cycle also is an important part of the process. NC State will assist in the recruitment, education and coordination of farmers across the state so that crops could be harvested virtually year-round. For example, with a given crop, early-season harvests might take place first in eastern North Carolina, followed by harvests in the piedmont, and later harvests in the western mountains completing the cycle.

NC State envisions the creation of about 60 new jobs, including 12 new faculty research positions, as well as several grad students and postdocs at Kannapolis.

Ongoing educational support would be provided through distance learning, producer training, consumer outreach (including outreach to high schools), grower awareness, and internship opportunities for NC State, UNC-Charlotte and North Carolina A&T State University students.

The facility will include 100,000 square feet of research space and 65,000 square feet of greenhouse space.

The Dole project at Kannapolis also will include UNC-Chapel Hill and UNC-Charlotte.

KANNAPOLIS

Location
Kannapolis is a thriving city of 40,000 located along the I-85 corridor in the Charlotte region of North Carolina. A central point in the expanding area north of Charlotte, Kannapolis is less than 30 minutes from I-77, uptown Charlotte, Charlotte-Douglas International Airport and the University of North Carolina at Charlotte.

History
At one time Kannapolis was a traditional mill village that surrounded Cannon Mills, which was the world leader in the manufacturing of home textile products. Kannapolis incorporated in 1984 and has experienced steady growth in its business sector and residential areas over the last 20 years. Kannapolis is now home to companies such as Shoe Show, Stanley Works, K-Town Furniture, and Novant Health.

Taxes/Incentives
The City boasts a very favorable tax climate, ranked by the John Locke Foundation as having one of the lowest per capita tax burdens in the state of North Carolina.

Quality of Life
With a mild annual average temperature of 61 degrees, Kannapolis offers a small-town lifestyle with all the benefits of major-city attractions. There are parks and greenways, the Kannapolis Intimidators minor league baseball team and quality schools in the Cabarrus County, Rowan County and Kannapolis City Schools systems. There are ample new neighborhood developments.

Kannapolis' award-winning summer concert series, festivals and other events harken back to a simpler era. Meanwhile, Kannapolis' neighbor Charlotte offers the NFL, NBA, and a strong arts community with the #1 per capita in giving to the arts and sciences in the nation. Kannapolis also sits square in the middle of NASCAR Valley, with nearly every team's headquarters a short drive away.

The region surrounding Kannapolis is home to four universities, 11 liberal arts colleges and ten community colleges. The Blue Ridge Mountains are two hours away and the Carolina beaches less than a four-hour drive. Other outdoor activities including boating, hiking and golf are less than an hour away.

For more information about the City of Kannapolis please visit
www.cityofkannapolis.com or contact Karen Whichard at
kwhichard@ci.kannapolis.nc.us.

KANNAPOLIS

Kannapolis Growth & Development Quick Facts

The City of Kannapolis prepared for the day that Pillowtex closed. Situated just north of Charlotte in the growing I-85 corridor, Kannapolis has seen $25 million of new investment since 2003, with $1 billion worth of new investment, including the North Carolina Research Campus, in various stages of the planning and zoning process.

Aggressively focused on economic development, 350 jobs have been created in Kannapolis since 2003. This section offers highlights of projects recently completed or currently underway in the City

Industrial and Commercial Highlights since 2003

- Haas CNC Racing will build a 140,000 square foot racing facility on 23 acres in the Kannapolis Gateway Business Park. The investment is projected at $16 million, and the facility could create more than 70 jobs over the next several years.

- Golden Gate Trailer has invested $4 million into a new headquarters facility in Kannapolis. Moving from Charlotte, the firm currently employs 30 and has plans to expand its workforce to 100 once the relocation is complete.

- Gem Marble and Granite, a high-end stone fabricator, picked Kannapolis and built a new 10,000 square foot facility that created 7 –10 jobs immediately and could spur more job creation in the future.

- MarkPiercePoole, Inc. moved forward this spring with both a 57,600 square foot industrial spec building and a retail center in the Kannapolis Gateway Business Park. With their decision to move forward and the Haas CNC Racing land purchase, only 5 developable acres remain in the Gateway Park.

- Novant Health chose Kannapolis in 2004 as the central distribution point for its eight hospitals. Located in the Kannapolis Gateway Business Park, Novant Health created 35 jobs.

- Biscayne Industrial Business Park has seen brisk growth in the past two years. ECS Enterprises, a CNC manufacturer, built a $1.5 million facility that also houses Carolina Transportation Systems. Falapco Plumbing created 60 jobs at its $2 million facility, and the Tiverton Group located to the Park.

- Artistic Frame relocated from New York to Kannapolis, purchasing a facility to manufacture furniture.

- Stanly Works invested $12.8 million for a 300,000 square foot expansion of their 625,000 square foot distribution center. The firm created 120 new jobs, 50 full-time and 70 part-time.

Retail Growth since 2003

- Kellswater Commons, a planned 60-acre retail and office complex that will include an investment of $80 to $90 million and is projected to create 1,400 to 1,700 jobs.
- Winecoff Commons, a new retail center anchored by Food Lion.
- Renaissance Square, a development that will include a Northeast Medical Center clinic as well as out parcels for retail, office and restaurant use.
- Childress Klein will develop a 275-acre tract for 2.5 million square feet of retail, office/warehouse and industrial businesses. The $140 million dollar development is expected to create 2,800 jobs over the next decade.

Residential Growth

Several residential communities with individual home values from $300,000 to more than $3 million are under development within the city limits. There are currently 2,000 residential building lots in various stages of planning or development

Small Business Growth

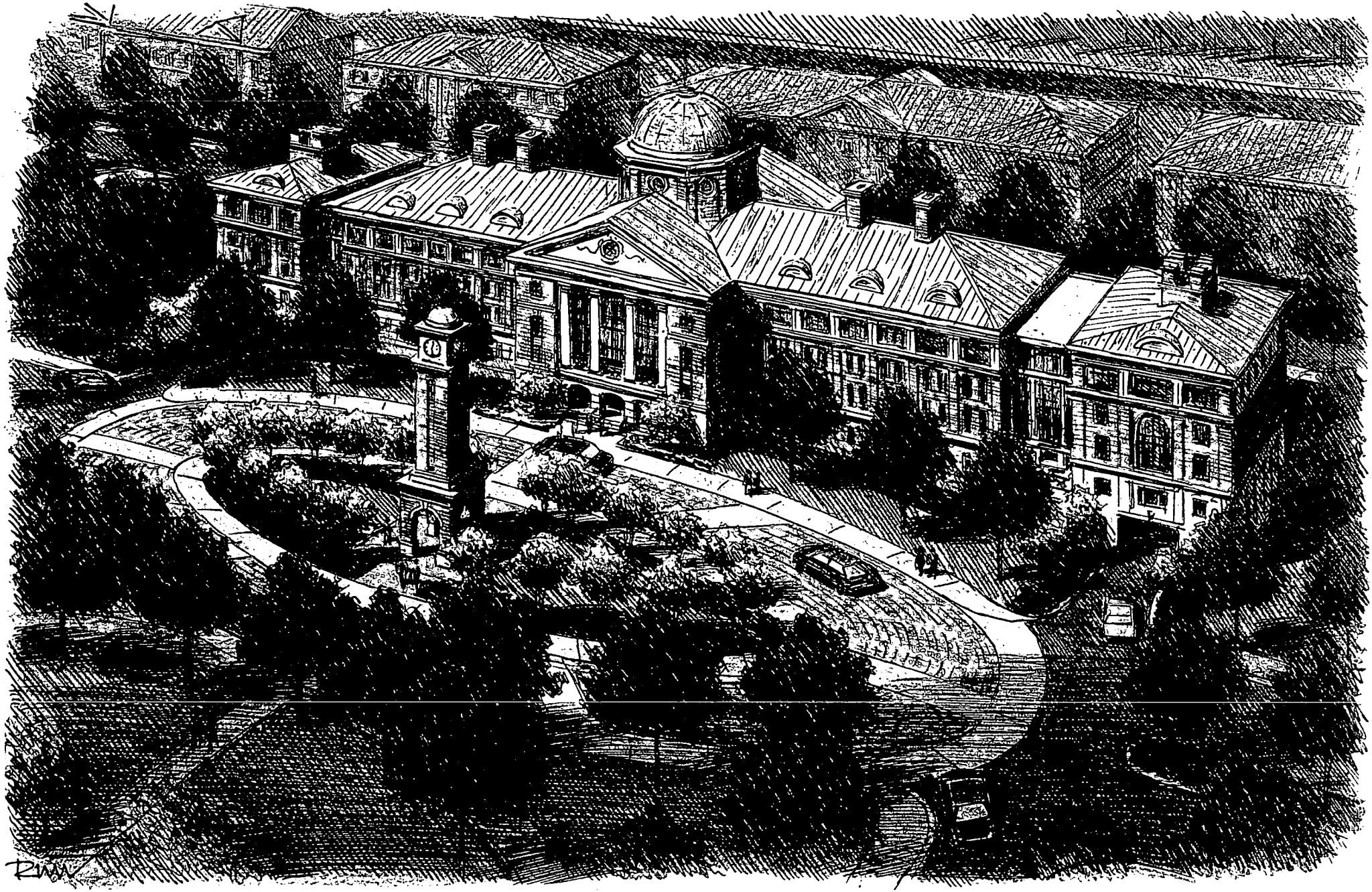
- Each month, 12-15 new businesses apply for a business license.
- The number of privilege licenses increased by 114 percent between 2003 and 2004.
- Between 2003 and 2004, 246 positions were listed with the Cabarrus County Employment Security Commission and most were created by small businesses.
- Listings included diverse industries such as restaurants, consulting services, landscaping companies, transportation companies, hotels and health industry jobs.
- According to the United States Small Business Administration, small businesses represent 99.7 percent of all employers and employ more than half of all private sector employees. They also generate 60 to 80 percent of new jobs annually.

Tax Base Growth

- Kannapolis' tax base was $708 million in 1984 when the City incorporated.
- The total tax base increased from $1.8 billion for FY2000 to $2.2 billion for the current fiscal year.

	FY2000	FY2006
Total Tax Base	$1.8 billion	$2.2 billion
Sales Tax Revenue	$3 million	$5 million
City Budget	$25 million	$36 million

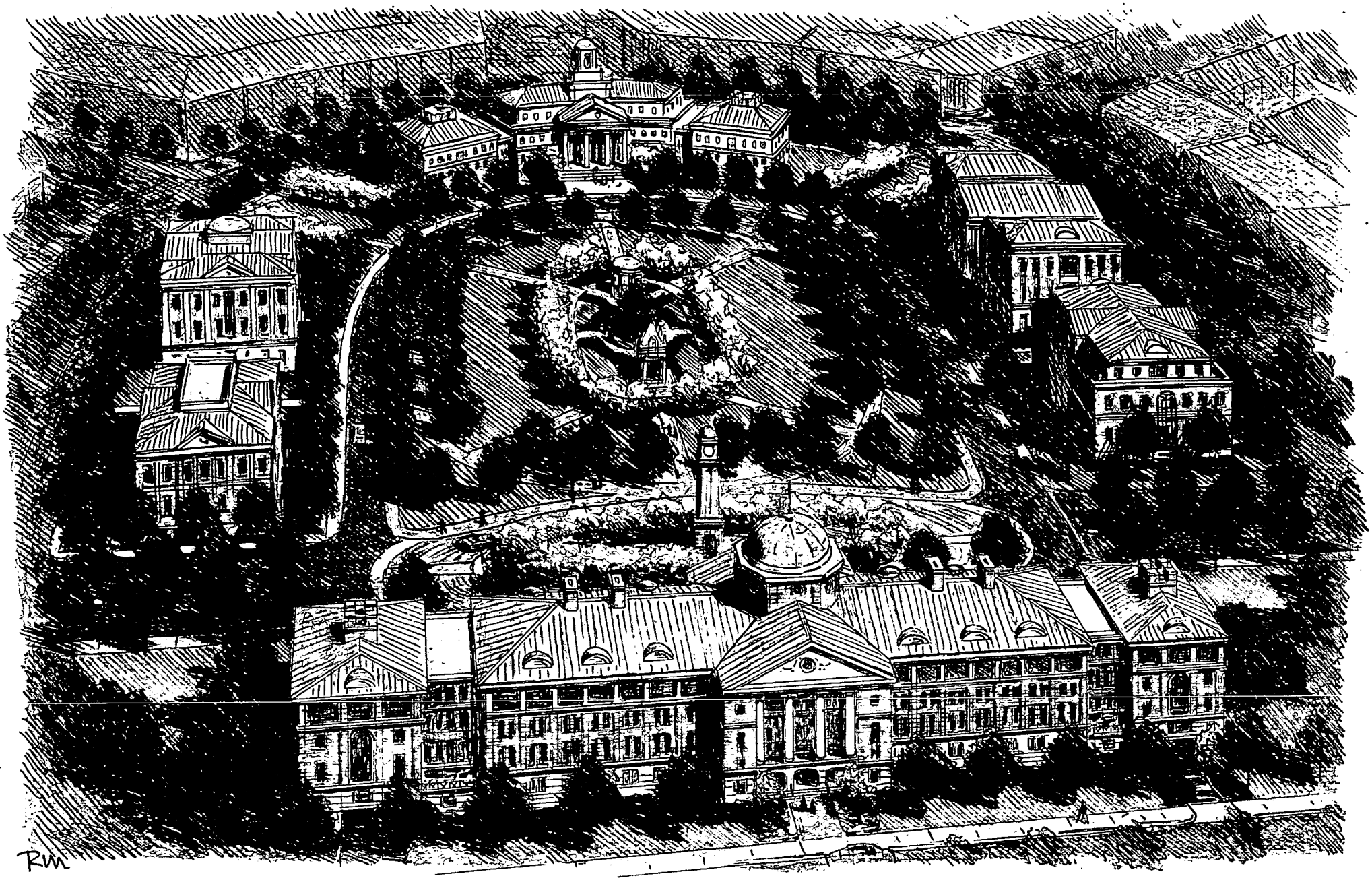
For more information about the City of Kannapolis please visit www.cityofkannapolis.com or contact Karen Whichard at kwhichard@ci.kannapolis.nc.us.



CORE LAB / BIOGENIC FERMENTATION LAB / DOLE LAB BUILDING

NORTH CAROLINA RESEARCH CAMPUS

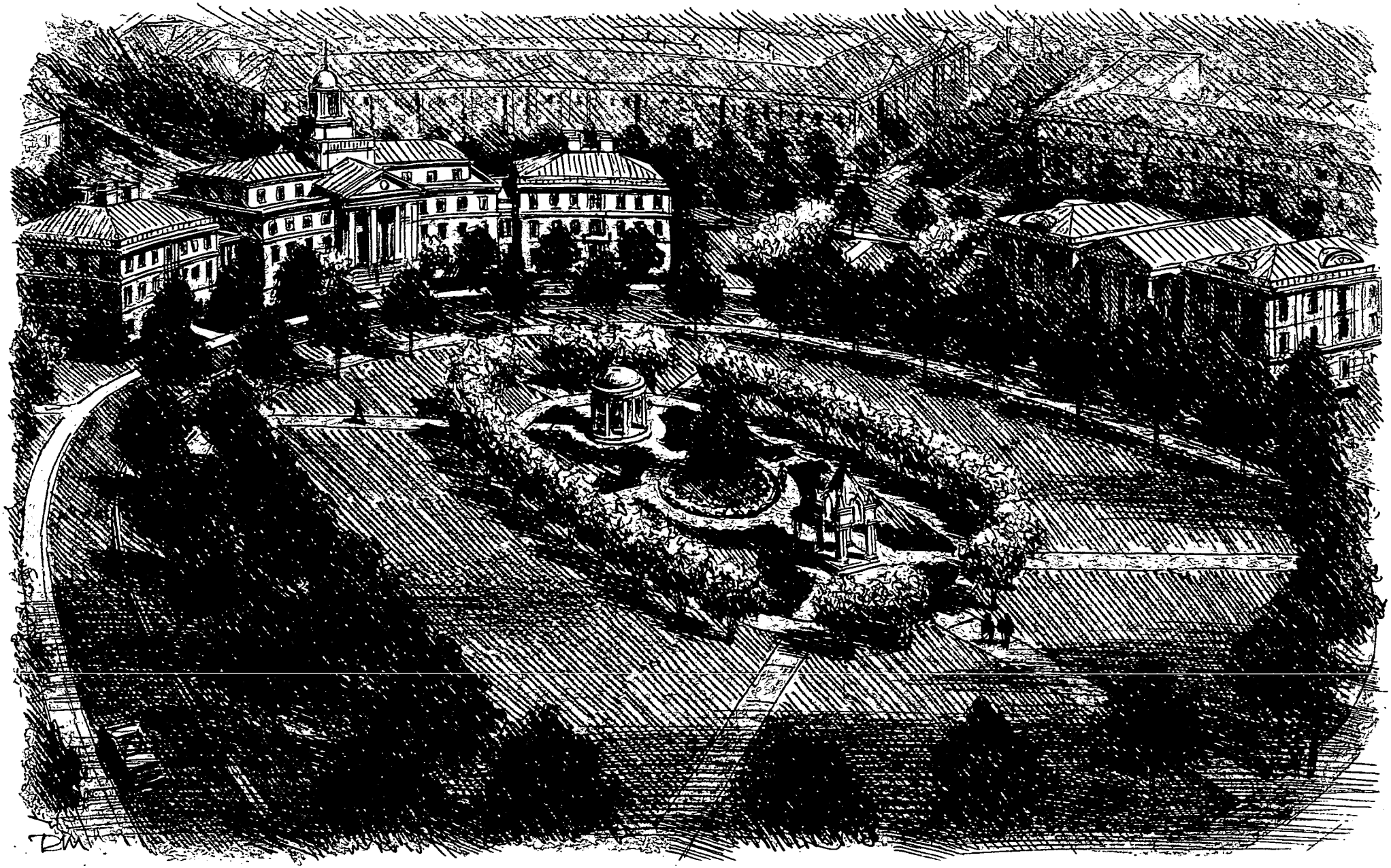
KANNAPOLIS, NORTH CAROLINA



PERSPECTIVE OF CENTRAL CAMPUS

NORTH CAROLINA RESEARCH CAMPUS

KANNAPOLIS, NORTH CAROLINA



Civic Building and UNC Center

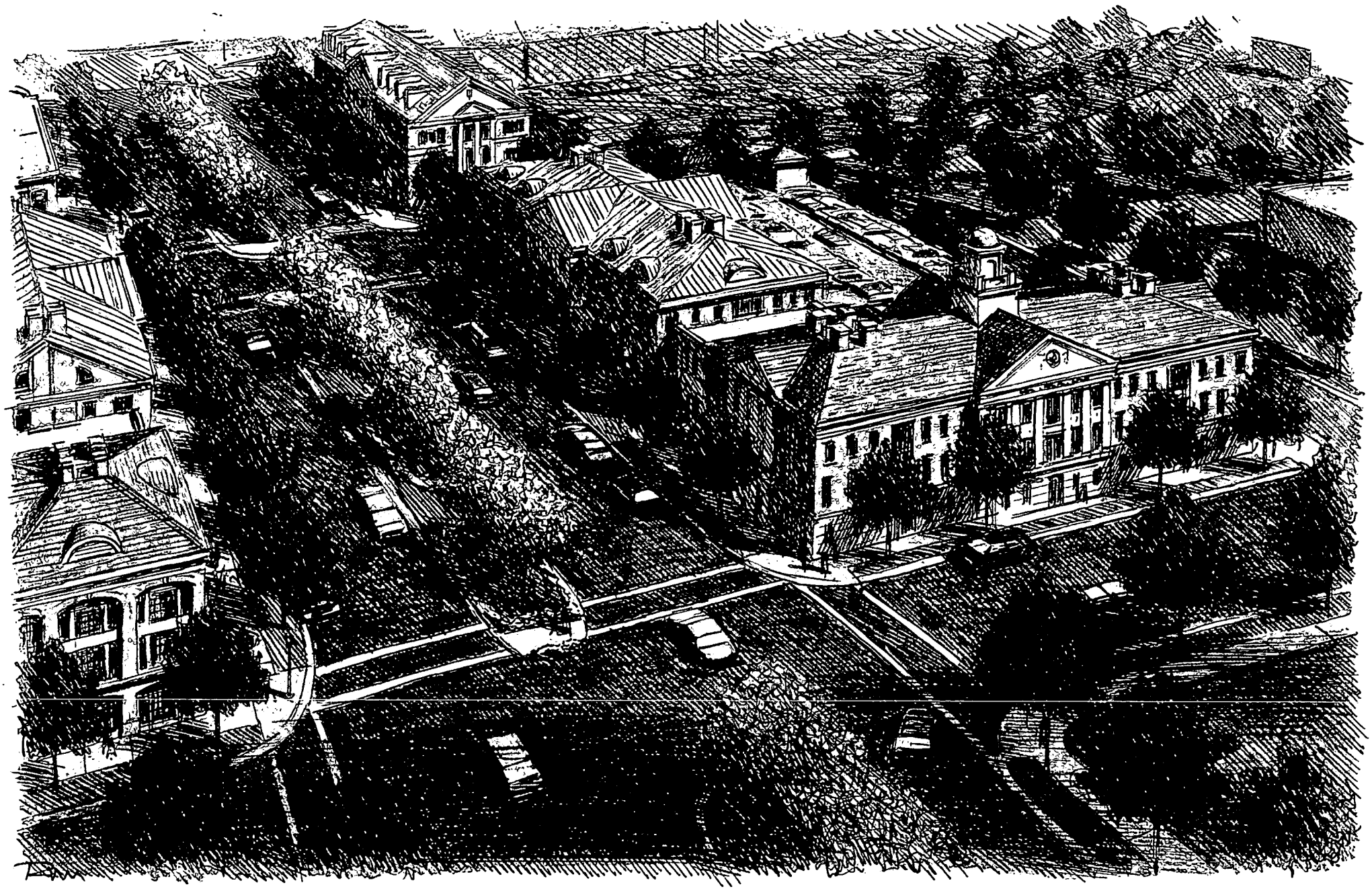
North Carolina Research Campus

Kannapolis, North Carolina

UNC Center for Excellence in Nutrition

North Carolina Research Campus

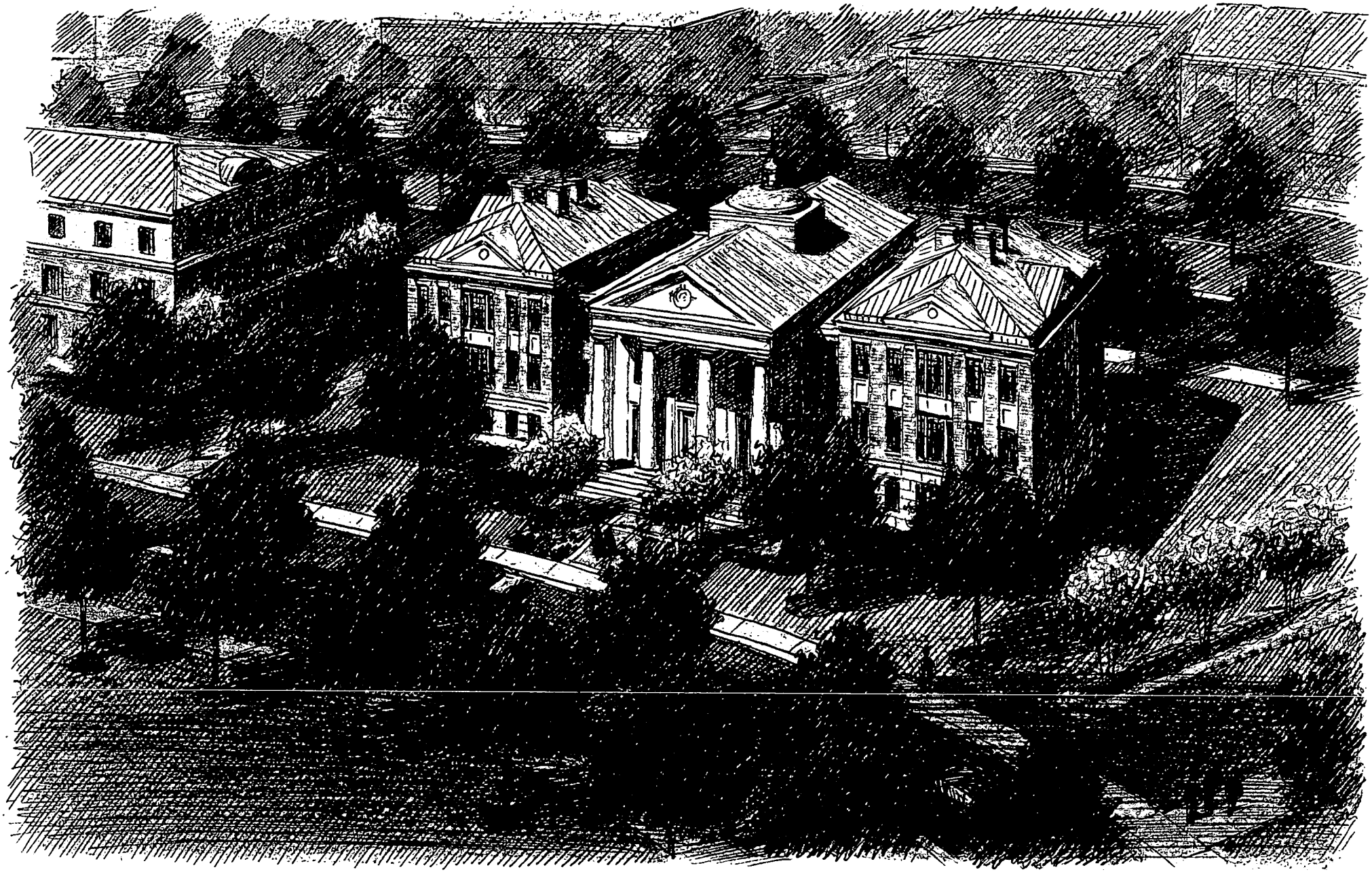
Kannapolis, North Carolina



LabCorp and Medical Clinic

North Carolina Research Campus

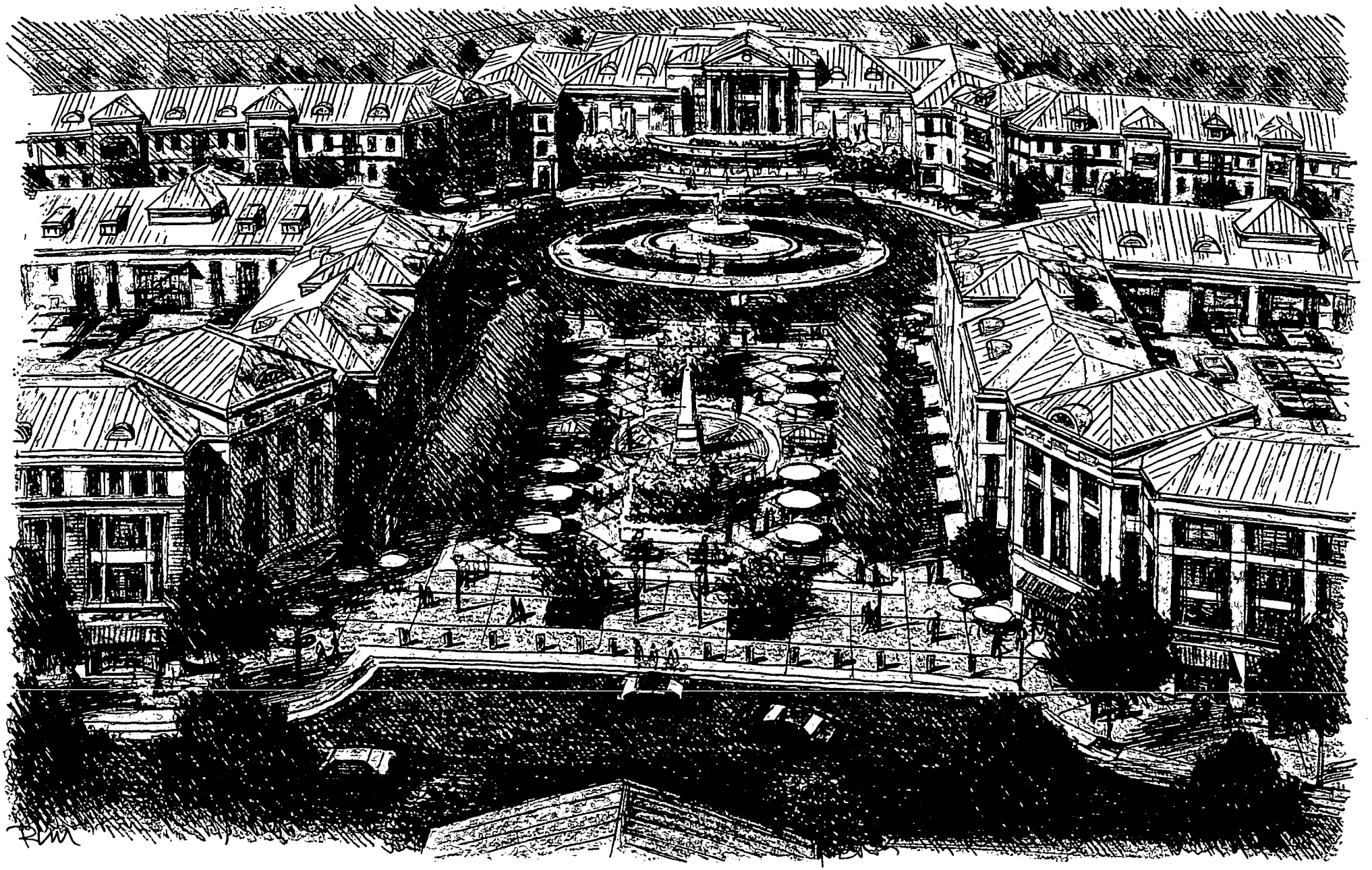
Kannapolis, North Carolina



University Lab Building

North Carolina Research Campus

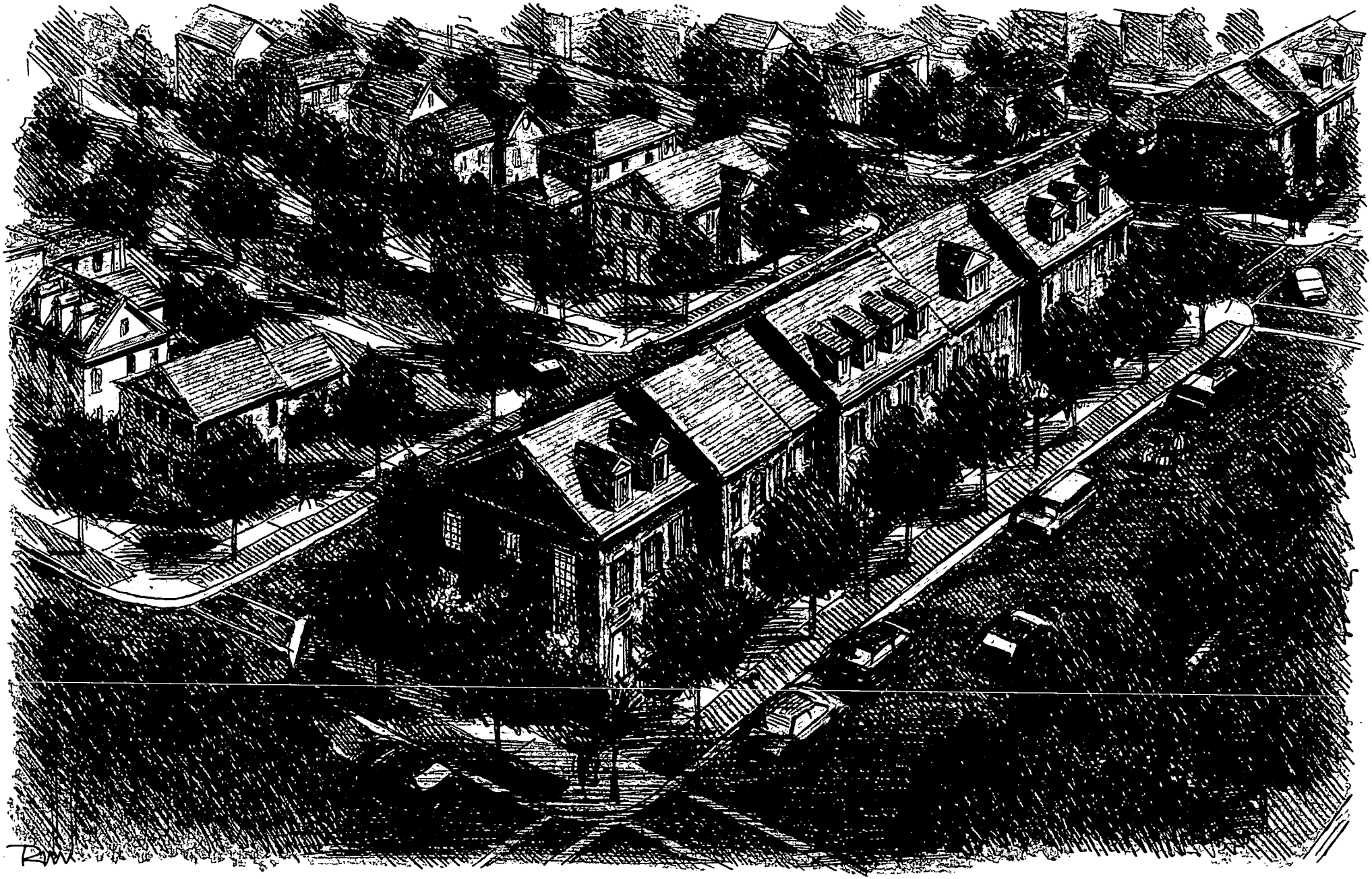
Kannapolis, North Carolina



RETAIL PLAZA AND THEATER

NORTH CAROLINA RESEARCH CAMPUS

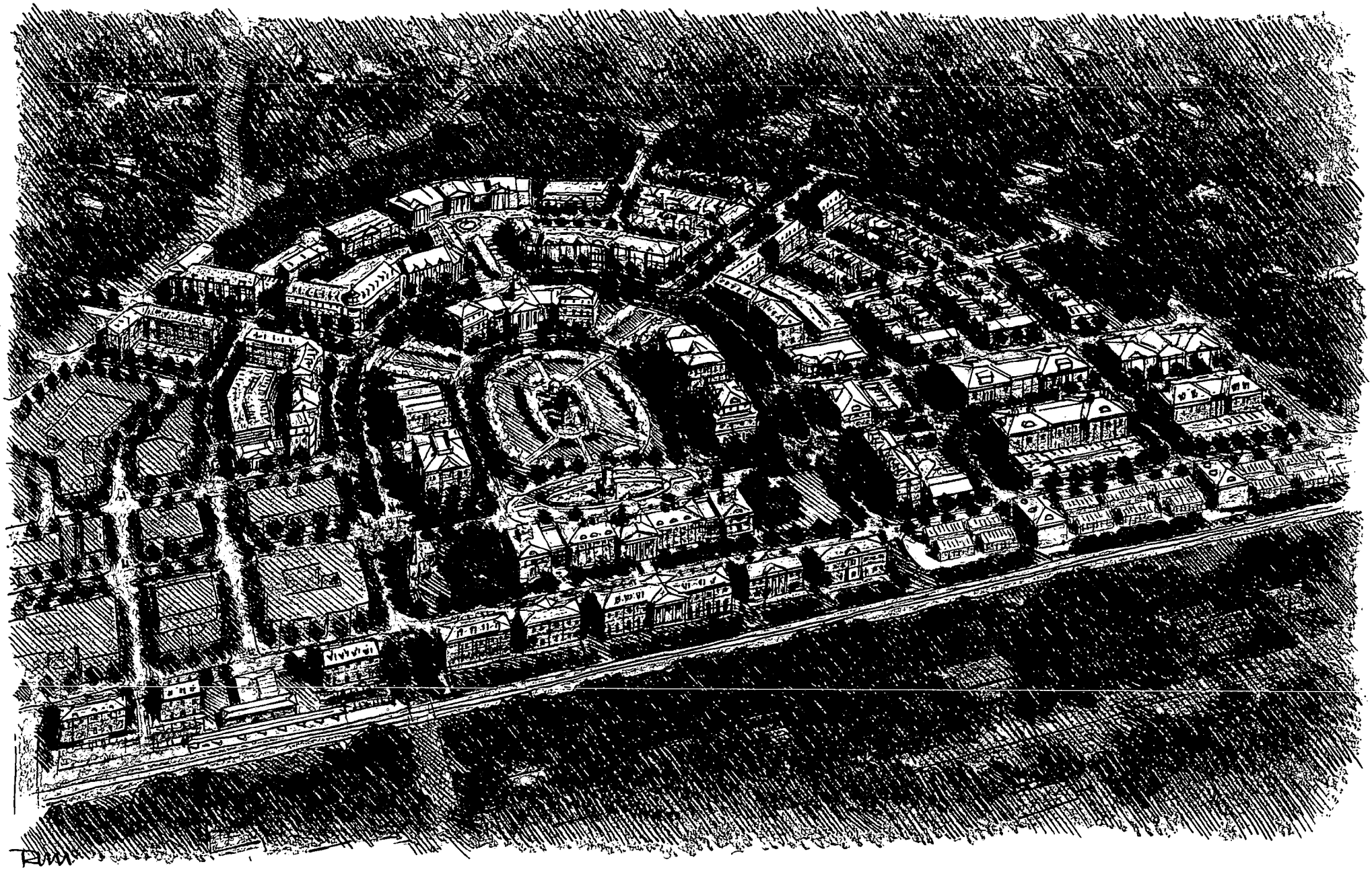
KANNAPOLIS, NORTH CAROLINA



TOWN HOMES AND SINGLE-FAMILY RESIDENTIAL

NORTH CAROLINA RESEARCH CAMPUS

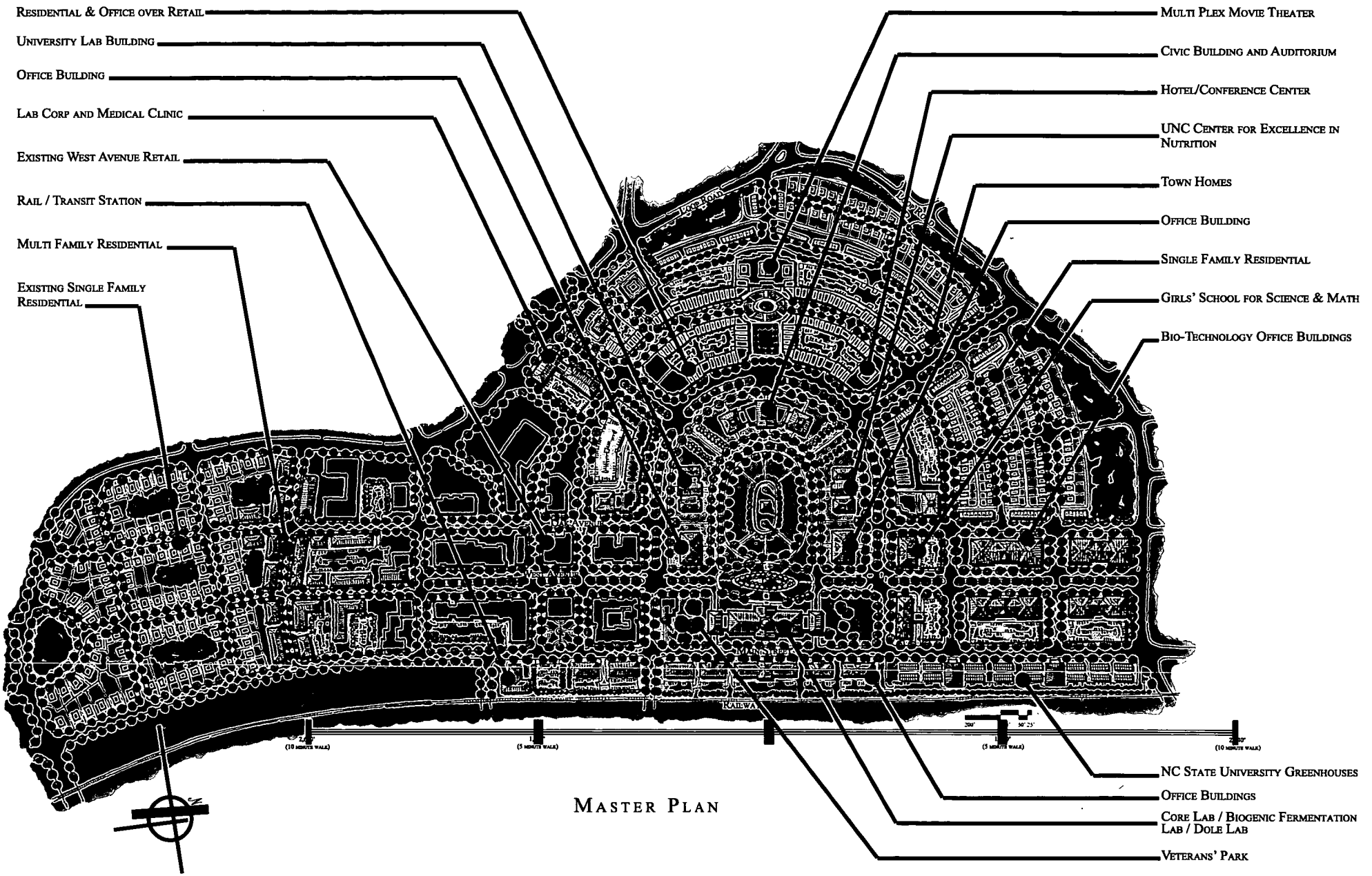
KANNAPOLIS, NORTH CAROLINA



PERSPECTIVE VIEW

NORTH CAROLINA RESEARCH CAMPUS

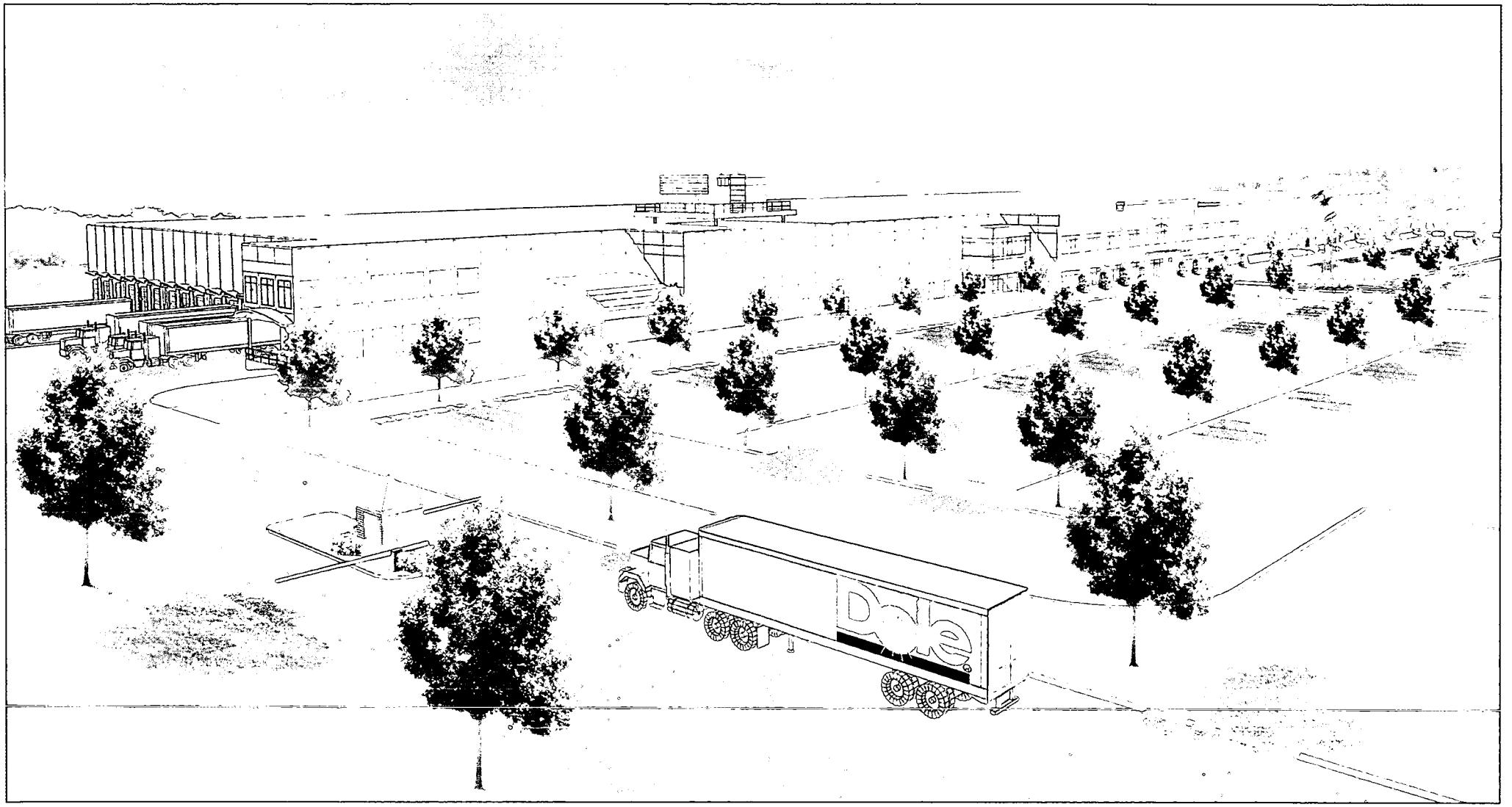
KANNAPOLIS, NORTH CAROLINA



Master Plan

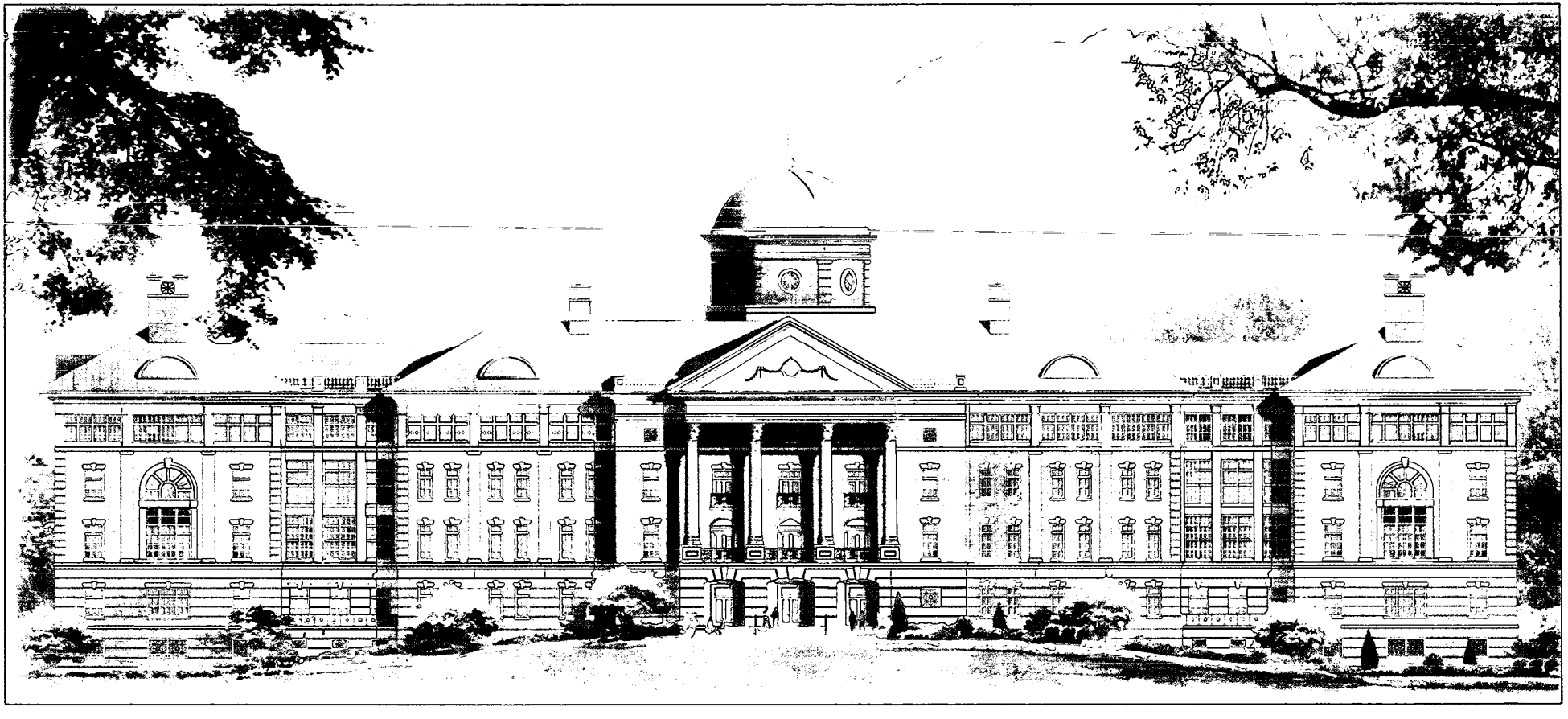
North Carolina Research Campus

Kannapolis, North Carolina



PERSPECTIVE OF DOLE PLANT

GASTON COUNTY, NORTH CAROLINA



Core Lab

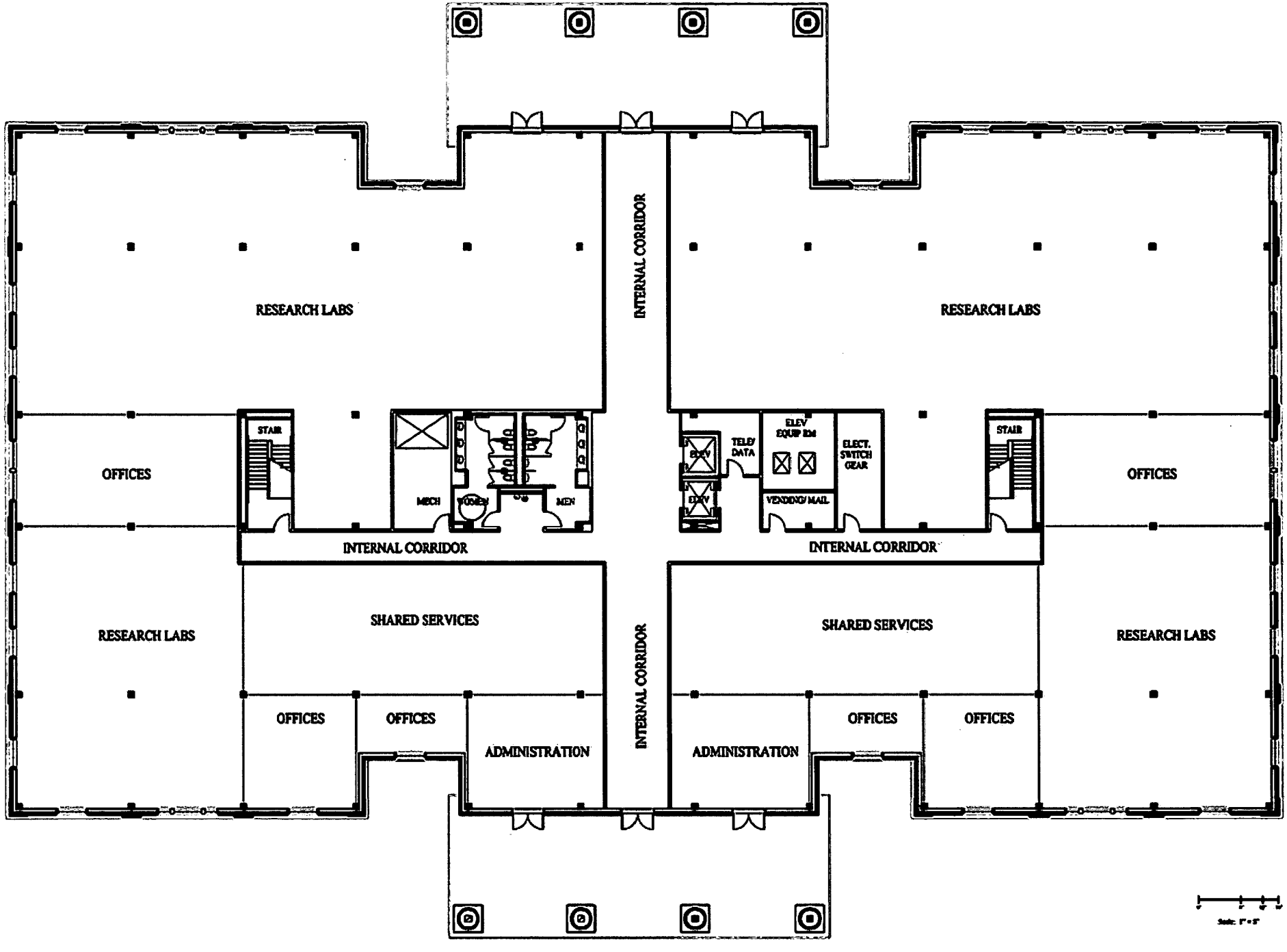
North Carolina Research Campus

Kannapolis, North Carolina

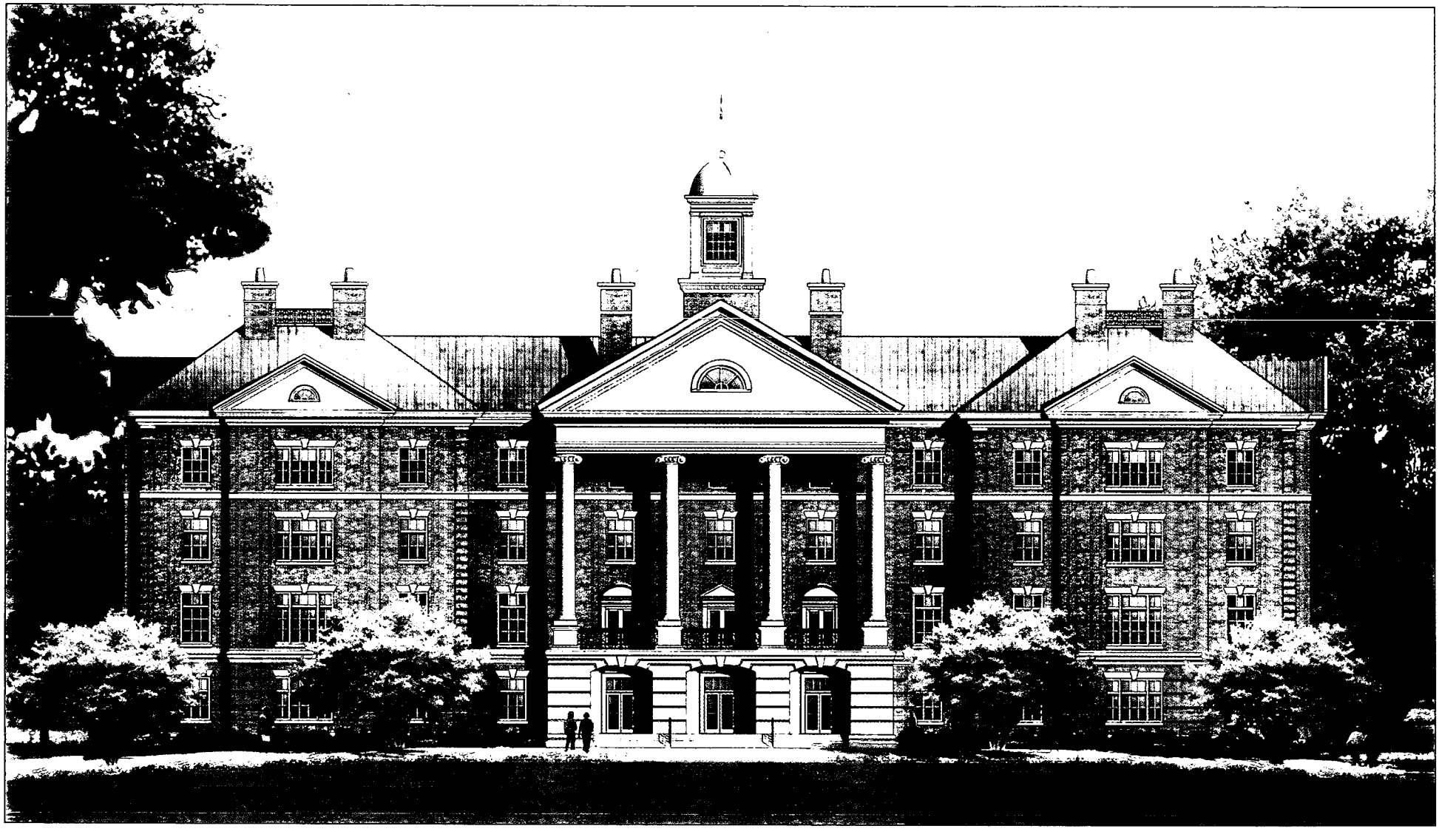
UNC Building

North Carolina Research Campus

Kannapolis, North Carolina



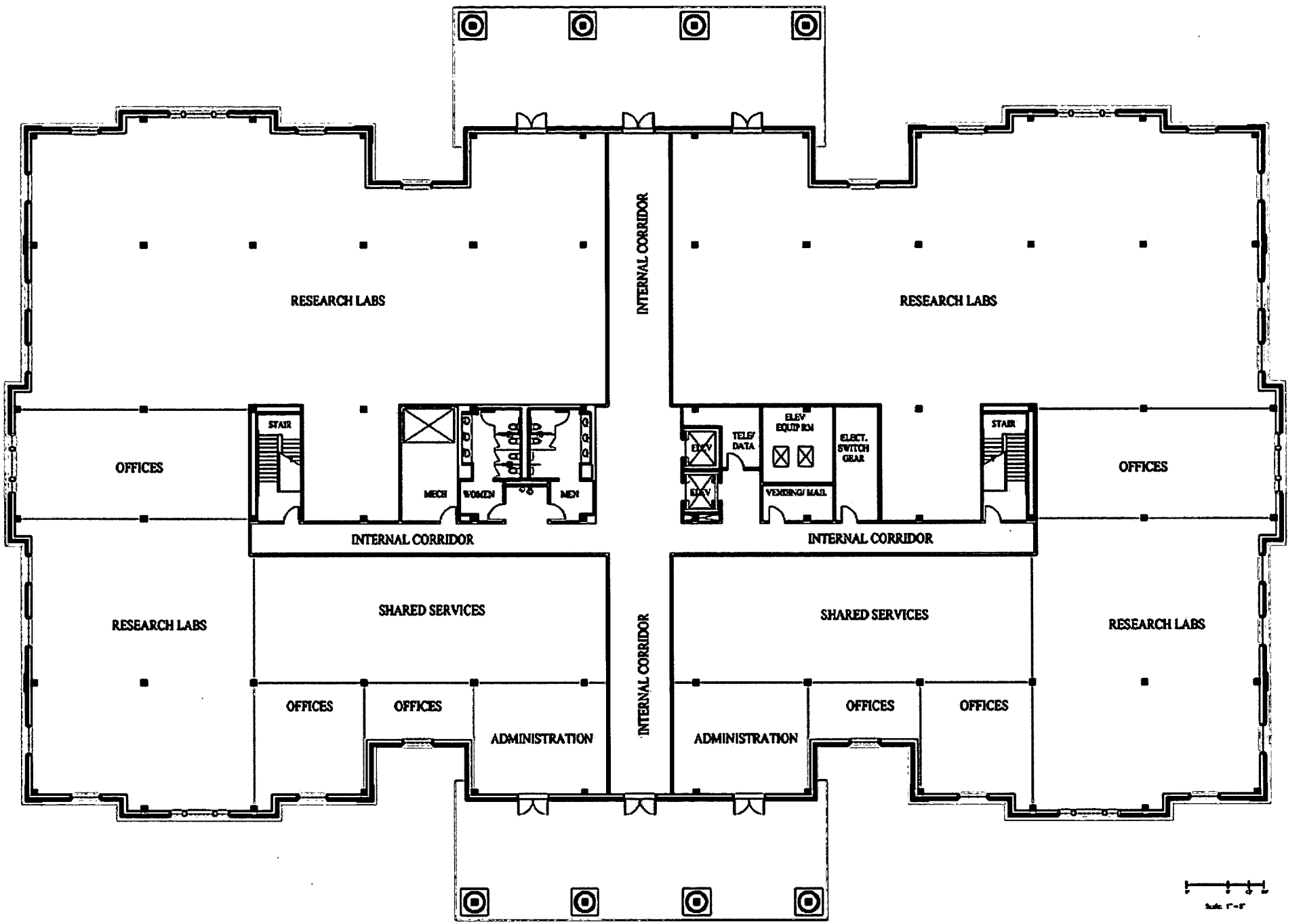
UNC Building Plan



DUKE LAB

NORTH CAROLINA RESEARCH CAMPUS

KANNAPOLIS, NORTH CAROLINA

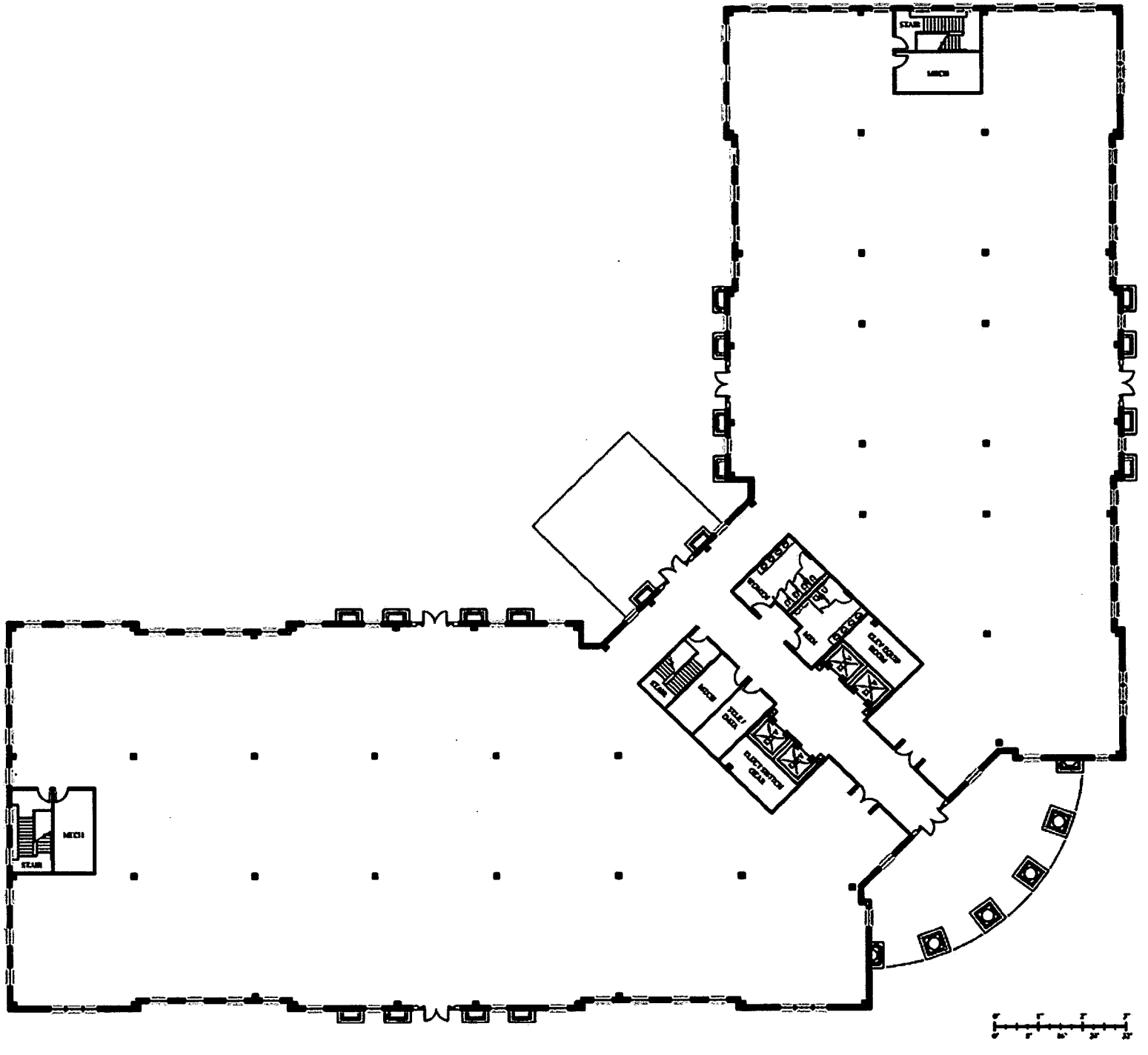


DUKE BUILDING PLAN

MEDICAL BUILDING

NORTH CAROLINA RESEARCH CAMPUS

KANNAPOLIS, NORTH CAROLINA



MEDICAL BUILDING PLAN

VISITOR REGISTRATION SHEET

NC Ag & Forestry Awareness — **Name of Committee**

1-19-06 — **Date**

VISITORS: PLEASE SIGN IN BELOW AND RETURN TO COMMITTEE CLERK

NAME	FIRM OR AGENCY AND ADDRESS
Dianne Moon	Castle & Cooke
FRAN PRESTON	NORTH CAROLINA RETAIL MERCHANTS ASSOCIATION 601 SAINT MARY'S STREET, RALEIGH 27608
TEROSS YOUNG	FOOD LION, LLC P.O. BOX 1330 Salisbury, NC 28145
Richard Smith	City of Kannapolis
Jennifer Woodford	City of Kannapolis
ANDREW BROCK	NC SENATE
Fred F. Steen, II	NC House
Zane Hedgecock	NCDA+CS
Blake Brown	NCSU
Tracy Walker	N.C. House 94th Dest.
Bridget Burke	Independent Tribune Charlotte Observer
Adam Bell	
Rep. JEFF BARNHART	NC HOUSE
Gary Mitchell	Rep. Robin Hayes

VISITOR REGISTRATION SHEET

NC Ag & Forestry Awareness — 1-19-06

Name of Committee — **Date**

VISITORS: PLEASE SIGN IN BELOW AND RETURN TO COMMITTEE CLERK

NAME	FIRM OR AGENCY AND ADDRESS
Tom Melton	NC Coop Extension, NC STATE, Raleigh
Debbie Hamrick	NC Farm Bureau Federation
Mac Gibbs	NC Coop Extension Hyde County
Shamona McClary	Salisbury Post/Kannapolis Citizen
Ray Preston Karriker	Corriher Grange Rowan Co
JoAnn Stroud	Extension State Advisory Board 640 ENC 24 Kenansville, NC.
Jerry Karriker	Corriher Grange Rowan County
Andy Willis	NC State University
Steven Leath	NC State University
Joe Ortt	NC State Univ.
Carl D. Ploss Jr.	NC Cooperative Extension, Cabarrus Co

VISITOR REGISTRATION SHEET

NC Ag & Forestry Awareness — **Name of Committee**

1-19-06 — **Date**

VISITORS: PLEASE SIGN IN BELOW AND RETURN TO COMMITTEE CLERK

NAME	FIRM OR AGENCY AND ADDRESS
Robert L. Holloman	N.C. Sen.
Don East	NC Senate
JOHN SNOW	" "
ALICE G. Underhill	NC House / Agric. Comm
Lorene Coates	NC House Agri Com
James H. Langdon Jr.	NC House Ag Comm
Robin Hayes	US Congress
Jerry W. Tillman	NC Senate
Linda P. Johnson	NC House
Stan Bingham	NC Senate
Lynn Beckner	Castle + Cooke

VISITOR REGISTRATION SHEET

NC Ag & Forestry Awareness — **Name of Committee**

1-19-06 — **Date**

VISITORS: PLEASE SIGN IN BELOW AND RETURN TO COMMITTEE CLERK

NAME	FIRM OR AGENCY AND ADDRESS
Russ Lea	UNC-General Administration
Keith Baldwin	NC A&T State University
Alton Thompson	NC A&T State University
Richard Anderson	Kannapolis City Council
Darrell Hinnant	Kannapolis City Council
Bob Wiseheimer	Kannapolis city council
R. Gene McCombs	Kannapolis City Council
Doug Carrigan	Carrigan Farms Mooresville, N.C.
Doug Patterson	Patterson Farm Inc China Grove NC
Mike Legg	City of Kannapolis
Roger Haas	Kannapolis City Council
Charlie Dannelly	NC Senate

AG & FORESTRY AWARENESS
STUDY COMMISSION

MARCH 2, 2006

MINUTES

I. WELCOME

Sen. Albertson called the meeting to order and welcomed members. All members and guests introduced themselves. Ms. Riley announced that the Farm Bureau invites everyone to the Energy from Wood conference on March 13-14, 2006. Members present were: Sen. Albertson, Rep. Dewey Hill and Arthur Williams. Public members were: JoAnn Stroud, David Burns, Kendall Hill, Warren Hepler, Jerry Dorsett, Steve Woodson, Dave Meredith, and David McLeod.

II. STATE BUILDING CODE ISSUES/AGRICULTURAL FACILITES

Mr. Art Van Wingerden, Metrolina Greenhouses gave his presentation. (Attachment A). He explained the process of greenhouses. They are hoping for the state to extend them an exemption on building greenhouses. Other states have done this and it is working well. Other countries are more stringent on their building codes and they have discovered ways to make it work on the construction of greenhouses. They have never been mandated to have permits. Other greenhouses in Florida, Georgia and Tennessee have provided products to Metrolina because they can't have the exemptions in NC that they need. This has cost them about $350,000. In NC there are $250,000,000 products that sell to Lowes, Home Depot, etc... and landscaping businesses. This would provide more jobs in NC if we had the access to greenhouses here. Their minimum hourly wage is $10.50 and they provide benefits, which is over $16.00 per hour and they are trying to get more of these well paying jobs in NC. If they receive permits now they have been told they have to go back and retro-fit their old structures. It would cost almost $1 million to go back and do this. Their greenhouses are safer than a six-story building. They have made their facilities more safe and fire retardant than they used to be. Mr. Warren Hepler asked what the main issue is. Mr. Van Wingerden said that building codes are the issues. This is not a zoning issue, and they feel that towns should be allowed to decide if greenhouses can be constructed. Rep. Hill asked what other states are exempt. Florida and Conn. are exempt and they would like to have this exception in NC. They have been told that all greenhouses in NC are illegal due to codes. They want to continue to grow in NC. Our population is increasing and more and more people want to plant flowers and landscape. Ms. Riley asked if we are talking about retail. Mr. Van Wingerden said this is not for retail. Rep. Williams asked if tobacco plants are grown in greenhouses. Mr. Van Wingerden said lots of cucumbers and other crops are grown in greenhouses. Mr. Kendall Hill said that Lenoir County doesn't have permits he didn't think. Mr. David McLeod, Dept of Ag receives lots of calls during the year from towns that don't understand the nursery industry and they don't recognize any exemptions. Ms. Stroud asked what we can do as a committee to offer assistance. Mr. Van Wingerden said we need to change the laws. Rep. Hill moved to see if we can make any changes in our existing laws to see if we can move forward to help this issue. Rep Williams seconded the motion. Mr. Jerry Dorsett, DENR asked for the definition of a greenhouse. Mr. Van Wingerden

gave the definition. Rep. Hill asked why tobacco plants and hot house tomatoes are exempt? Mr. Van Wingerden said it is in the urban areas. Vote taken on the motion and passed.

III. GIS TECHNOLOGY AND NUTRIENT MANAGEMENT

Mr. Mark Thigpen, President, Nutec Soils, Inc. made the next presentation. He gave a demonstration of two farms with and without technology by using a lock. Rep. Hill and Sen. Albertson participated in his demonstration. He gave a power point presentation about his cotton farm production. They use technology of GPS and satellites, computers and labs to come up with all results. Over time they can find exact points to analyze. Soil sampling and yield records help record data to obtain their yield maps. Variable rate technology can increase their yields. Nitrogen is a big issue and he has Hydro Agri's N Sensor on his farm. He has one of the 3 in the country. There is one is Kentucky, and Mississippi. This equipment helps with the placement of nitrogen per field. He established NuTec Soil, Inc. 3 years ago and he went to Mr. Pete Murphy to improve golf courses. His father is a hog farmer and he has won 2 awards for keeping the soil in balance and monitoring and sampling that created a yield and profit. This can be done but it takes more time and effort to maintain hog operations. Some people are skeptical but you have to keep a balance to make it work on farming operations. This is a new technology that will help anything that grows in soil. Production, environmental friendly solutions, complete management of fertility program, cost savings, reduction of diseases, exact square footage of fertility areas, precision technology for uniform growth, precision application of chemicals, and help with consulting are the benefits of NuTec Soil. He has used this technology on three major golf courses. Soil samples made all the difference within 45 days. Phosphorous application is important too. His slide presentation showed the differences in land that had phosphorous applied and areas where it was not applied. They can grow grass without any type of fertilizer due to soil typing. He stressed that with the right technology anyone can manage their land. Technology is endless, but the problem is cost. Education and funding are necessary from the state in order to move forward. Young farmers are willing to use technology but cost is the driving factor. Mr. Warren Hepler asked if farmers wouldn't save money if they used this technology. Mr. Thigpen said yes, definitely. There are nutrients in the soil and we need to use what's there without adding more and more year after year. Sen. Albertson said this is the most impressive technology and this is the way of the future. It's a matter of finding cost share funds. He's proud to have this technology in Duplin County. Sen. Albertson asked him for his gasoline savings. Mr. Thigpen said it was hard to tell. He will not apply any phosphorus on his farms this year. He can grow a crop with one product so there is a major savings by not going to the fields to apply chemicals as often. Sen. Albertson mentioned this is better for our environment. Ms. Stroud said that our average farmers age out and new farmers come along that they will buy into these types of programs. Mr. Thigpen said that in dealing with golf courses, older managers are skeptical of this new technology verses younger managers. The older generation is afraid of new technology.

Mr. David Williams, Chief, Non-Point Source Section, Division of Soil and Water Conservation, NC Dept. of Environment and Natural Resources. His power point presentation discussed the efforts including precision farming in the NC agriculture cost share program. (Attachment B). He explained the differences in the Tier I, II and III programs. Getting

growing conditions will make the most efficient use of the land. If approved by the Commission this production can begin in July 2006. There are no numbers on settlements yet because they need to educate farmers to look and consider and hopefully adopt this technology. Other workgroups include drainage for tile drains, animal operations; poultry litter utilization, abandoned wells, aquaculture, nurseries, tail water recycling, and conservation tillage. They continue to look for opportunities to make this work. Sen. Albertson asked how much we are putting into the cost sharing program. Mr. Williams said he knew there are $5.1 million and $5.2 million for specialist. Mr. Dorsett asked where the money would be needed most if the General Assembly would fund more. Mr. Williams explained. Mr. David Burns questioned logging operations. Mr. Williams said they were looking into those areas. Sen. Albertson said this is a good program and he hopes the GA will look into ways of continuing funding. Mr. David spoke and said we need to encourage people to keep looking at this and using this technology. Mr. Williams agreed with is comments.

IV. NORTH CAROLINA ALTERNATIVE ENGERY SOURCES

Mr. Alex Hobbs, NC Solar Center spoke on energy efficiency. His power point presentation is attached. (Attachment C). NC uses a lot of electricity for agricultural needs. We in NC uses mostly coal. By 2050 we are heading down hill on petroleum availability. There are some good plans on preserving petroleum. There is time to do improve some things. We are sending about $20 billion a year out of the state to buy coal. Renewable energy is important. Biomass has advantages and disadvantages.

LUNCH (graciously provided by Farm Bureau, NC Agribusiness and NC Grange.)

Mr. Ivan Urlaub, Executive Policy Director, NC Sustainable Energy Assoc. gave a power point presentation on greenhouse gases. (Attachment D). We have a loss of 66% energy effectiveness. NC has three major power providers-Duke Power, Dominion Power and Progress Energy. Coal and nuclear energy are the major sources of power. If we want more biomass we need to address the costs/rates and job situation in NC. The Utilities Commission is going to do a study on rates in NC. The price of coal is going up and Progress Energy has requested a price increase to help cover these costs. If NC would adopt a RPS (renewable portfolio standards) plan we could see lower electric costs. NC is a cross-road as to whether or not we adopt biomass. He made comparisons of nuclear and coal efficiency and renewables. We are seeing our fossil fuels decline. Oil, coal, uranium and natural gas are getting more expensive. Renewable energy costs are reducing and this is expected to continue in the future according to the US Dept. of Energy. More jobs would be generated with RPS. They are going to ask the legislation to change the way we look into the future for energy rate structures. The NC Global Warming Study Commission is studying this. Energy efficiency is the lowest costs. Power companies will not profit as much as we practice more energy efficiency. Legislation is one way to take steps to move forward. Mr. Kendall Hill asked if there could be moratoriums on light bulbs. Mr. Urlaub responded. Mr. Hill made comments on saving money on food supplies, energy, etc. Wal-Mart is pushing products and consumers continue to buy regardless of costs. Mr. Urlaub addressed his comments. We need to adopt some new polices here in the US. Wal-Mart can produce cheaper by using out of the country resources. Sen. Albertson told

members how important biomass is for us use. We have lots of opportunities but we need to work together to move forward.

V. AGRICULTURAL EXEMPTIONS IN STATE AND FEDERAL TRANSPORTATION LAWS

Capt. G. E. Gray, NC State Highway Patrol addressed members. His comments are attached. (Attachment E). He told of a meeting in Lenoir County last week with the public to go over CDL exemptions for farmers. On page two of his handout the proper explanations were given of what the exemptions are. Even though you are exempt from a CDL you may still need other types of licenses depending upon the type of vehicle you are driving. There are federal regulations on hazardous material vehicles that have to be enforced. Some of these are written with very specific terms. Another issue pertains to Hispanic drivers using their Mexican driver's license and not a NC driver's license. Capt. Gray said they would look into this for more specific clarifications. Mr. Hill asked if there are two fuels on a truck does a placard for each one need to be on a truck. Sen. Albertson asked if field to field was a big problem. Capt. Gray said it was a problem and he gave an example of how farming operations are located between fields and he needs to refuel. Ownership is the key factor of field to field. Mr. Mark Thigpen spoke and he told members that he farms 4 different farms. He explained how "field to field" are the operative words that make farmers legal or illegal for fueling. This is a gray area that needs clarification. He was written a citation because one of his drivers can't speak English. We need simple clarification between DMV and the Highway Patrol. This is confusing from a farmer's standpoint. Interpretation is the key. Rep. Williams asked about a farm friend that received a ticket due to the way he moved a tobacco load in moving product from one farm to another. Mr. David McLeod said they receive several calls on this and the state and federal requirements. He asked if NC could do something similar to VA on exemptions. Capt. Gray said that would be up to the legislature. He did give clarification in intrastate and interstate regulations according to federal government. He agrees that the federal interpretations are confusing. Mr. Hill said that NC DMV need to meet with NC Grange, Farm Bureau and others to help clarify and spread the word to farmers on the placement of placards. Sen. Albertson asked how long this law has been enforced. He heard it had been in place since 1999 but have they just begun to enforce? Capt. Gray couldn't answer that question. Mr. Thigpen asked if the language could be changed. Ms. Riley will check with the transportation counsel. Mr. Woodson said they have had calls from Christmas tree farmers and how are they treated. Capt. Gray said that tree farmers are treated as Ag farmers. Rep. Williams said that if there are federal laws the state has to comply so as not to loose funding. Ms. Riley asked if warning tickets and explanations couldn't be offered if someone hasn't been ticketed before. Capt. Gray said if it is a clear-cut violation of the law, a citation should be given. There are some extenuating circumstances but discretion of the officer is necessary. Criminal and civil fines are different citations. There is a protest procedure in place but please give a detailed reason for the protest. This is a very through process review. Mr. David Burns asked about modular trucks and does that require a CDL? Capt. Gray explained what would require the license. Mr. Burns asked if the law could be changed to exempt modular trucks because they are only used a few months a year. Georgia has already adopted this exemption. Sen. Albertson said after talking to some farmers that had been given

citations that if the approach of the officer is kind, that most farmers would be happy to comply. Mr. Thigpen spoke on the "for hire" regulation. Capt. Gray said they are looking into this. Mr. Thigpen feels there are too many loopholes and farmers think they are exempt but they really aren't according to the laws. Sen. Albertson said the General Assembly will work on this.

VI. & VII DISCUSSION & ADJOURNMENT

Having no further presenters on our agenda, Chairman Albertson announced that anyone interested can go on the tour of the rest of this facility in Duplin County. He announced our next meeting will be in Columbus County on April 5th.

Mr. Woodson said they have heard from several farmers on staggered vehicles registrations. He would like for us to take a look at this at another meeting.

Adjourned 1:45 PM.

Sen. Charlie Albertson, Co-Chair

Rep. Dewey Hill, Co-Chair

Cindy J. Davis, Committee Clerk

General Assembly of North Carolina
Joint Legislative Commission on
NC AG & FORESTRY AWARENESS
State Legislative Building
Raleigh, North Carolina

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February 21, 2006

TO: Members of the Joint Legislative Commission on NC Ag & Forestry Awareness and Interested Parties

FROM: Senator Charlie Albertson, CoChair
Representative Dewey Hill, CoChair

RE: March 2, 2006 Meeting

The Agriculture and Forestry Awareness Study Commission will meet on Thursday, March 2, 2006 in Kenansville, NC. We will meet at the Duplin County Agricultural Service Center, from 10:00 AM to 2:00 PM. A formal agenda will be available at the meeting. A catered lunch will be provided so please RSVP to Cindy at 919-733-5705 if you plan to attend so that we can plan accordingly.

The Duplin County Agricultural Service Center is located at Exit 373 off I-40 east. From Raleigh, turn left at the exit (towards Kenansville). At the first light turn left (Hwy 11) and the building is on the left (across the street from James Sprunt Community College.) The phone number is 910-296-2143.

We look forward to seeing each of you in Duplin County. If you have additional questions, please feel free to contact either of us at the above numbers.

Thank you.

NORTH CAROLINA AGRICULTURE AND FORESTRY AWARENESS STUDY COMMISSION

Duplin County Agricultural Service Center
Kenansville, North Carolina
March 2, 2006
10AM

Welcome
Senator Charles W. Albertson, CoChair
Representative Dewey L. Hill, CoChair

State Building Code Issues/Agricultural Facilities
Art Van Wingerden
Metrolina Greenhouses

GIS Technology and Nutrient Management
Marc Thigpen, President
Nutec Soils, Inc

David B. Williams, Chief
Non-Point Source Section
Division of Soil and Water Conservation
NC Department of Environment & Natural Resources

Agricultural Exemptions in State and Federal Transportation Laws
Captain G. E. Gray
NC State Highway Patrol

North Carolina Alternative Energy Sources
Ivan Urlaub
Executive and Policy Director
NC Sustainable Energy Association

Alex Hobbs
Director
NC Solar Center

Committee Discussion
Instructions to Staff

Lunch is being graciously provided by the NC Agribusiness Council, the NC Farm Bureau, and the NC State Grange
There will be a tour of the Duplin County Ag Service Center directly after lunch.

Advanced Technology for Optimum Turf Growth & Quality

Benefits of NuTec Soil Inc.

- Optimum Growth Performance
- Environmentally Friendly Solution
- Complete Management of Fertility Program
- Cost Savings
- Reduction of Disease
- Exact Square Footage of Fertility Area
- Precision Technology for Uniform Growth
- Precision Application of Pre-Emerge Fertilizers
- Consultation in Fertility Decisions

NUTEC SOIL INC.

Landfall

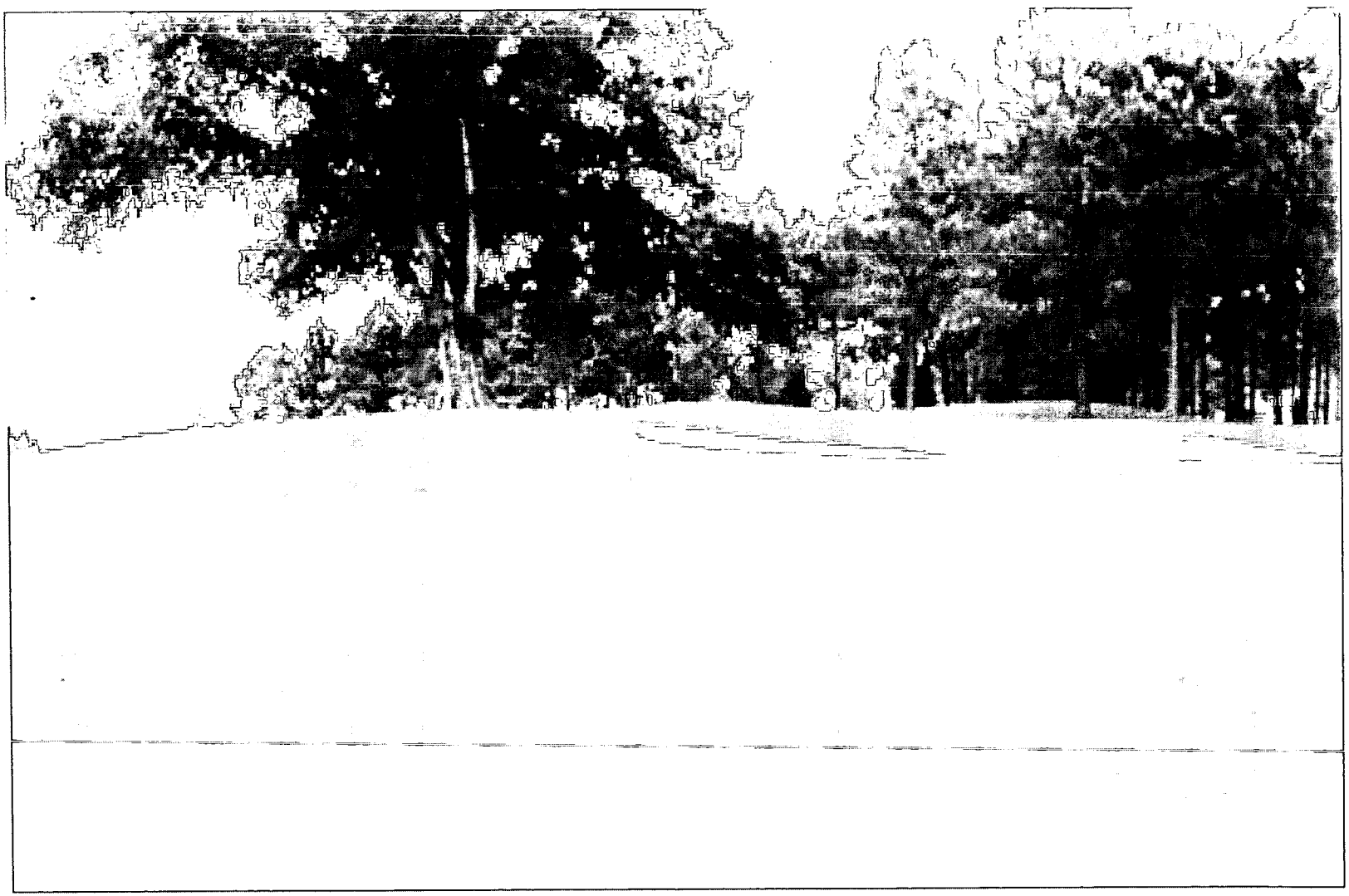
EAGLE POINT
GOLF CLUB

"Partnerships in Precision"

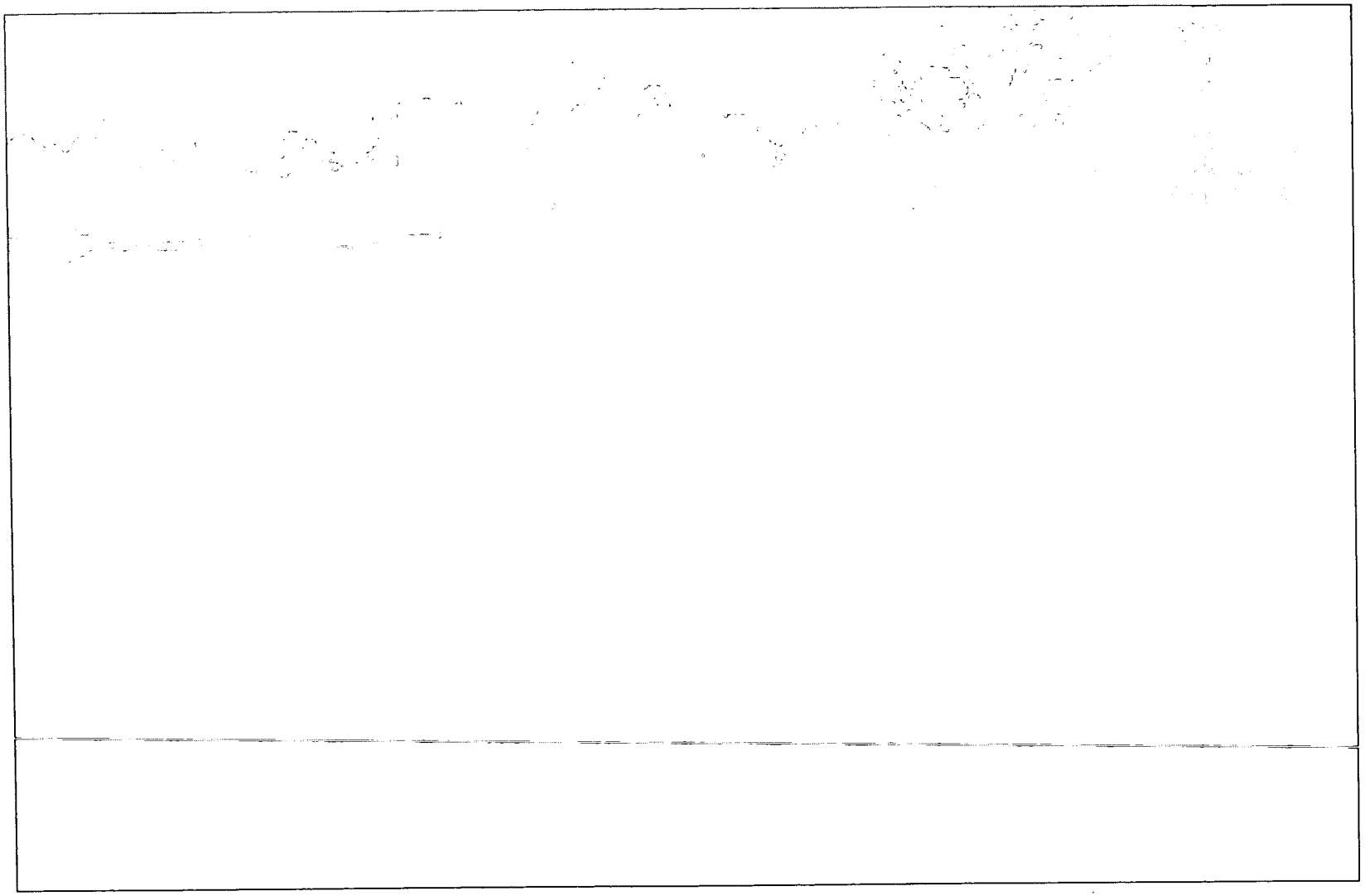
Before and After

"Says it All"

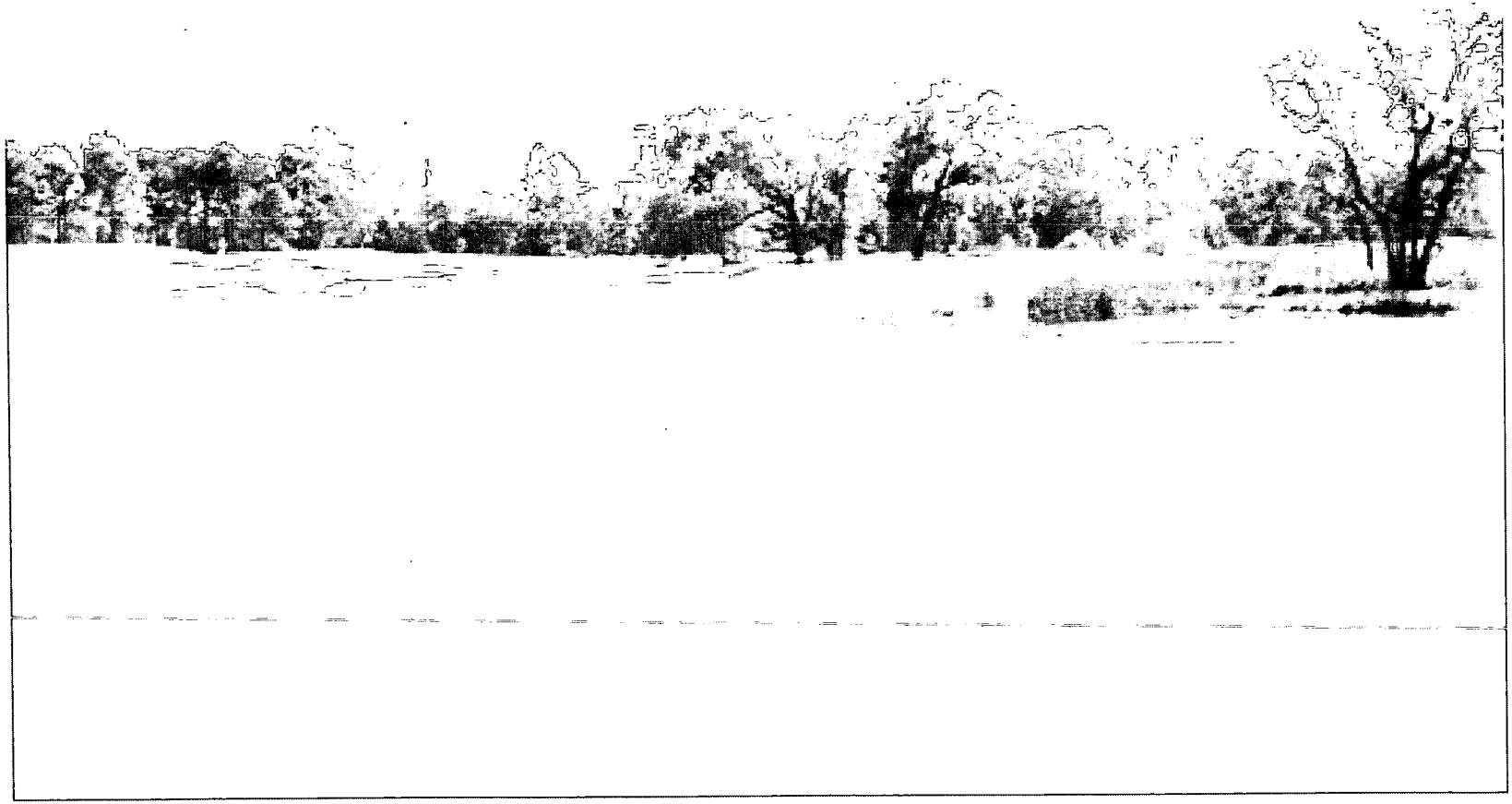
Eagle Point – Hole 11 - Before



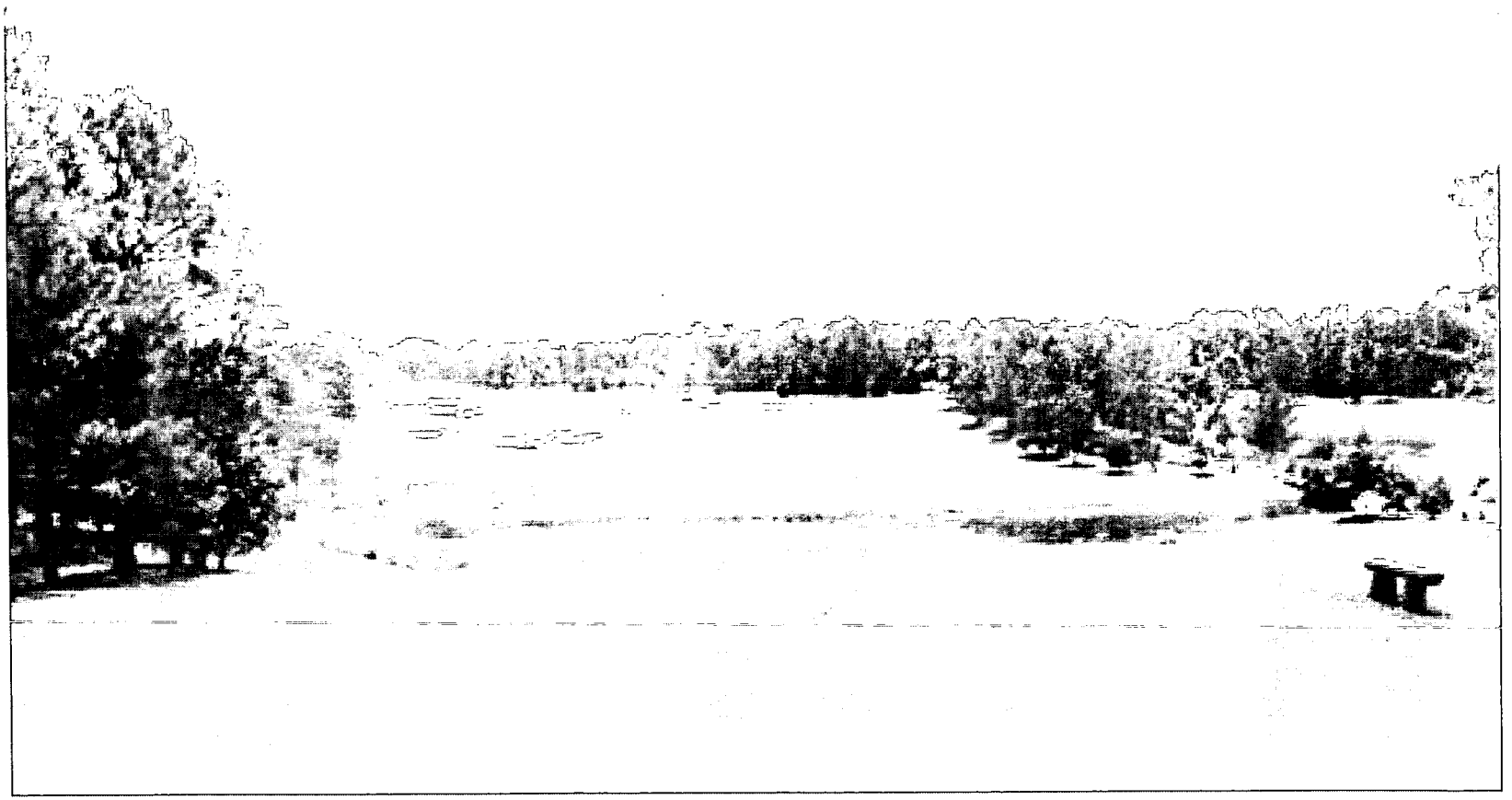
Eagle Point – Hole 11 - After



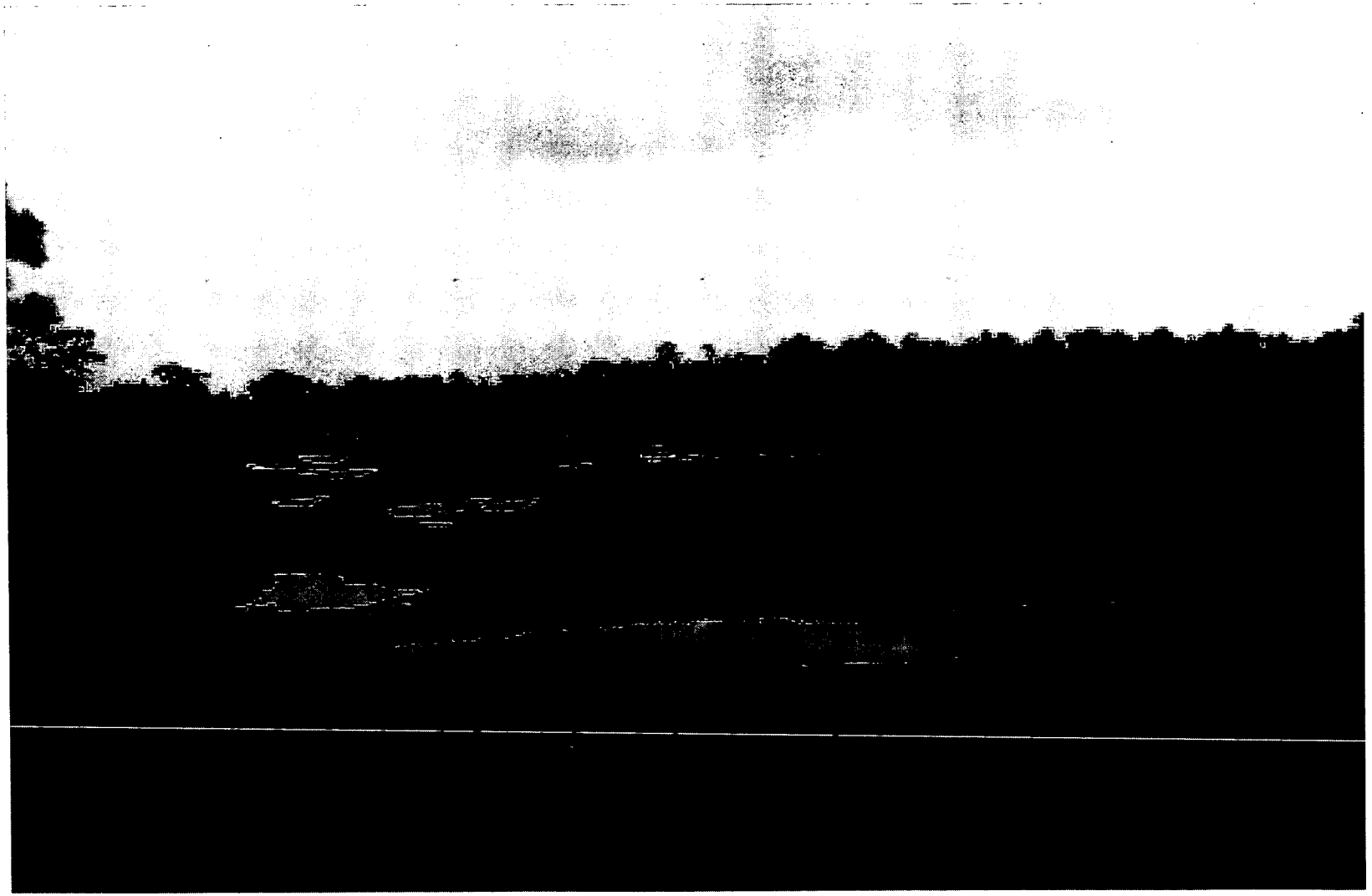
Eagle Point – Hole 18 - Before



Eagle Point - Hole 18 - After

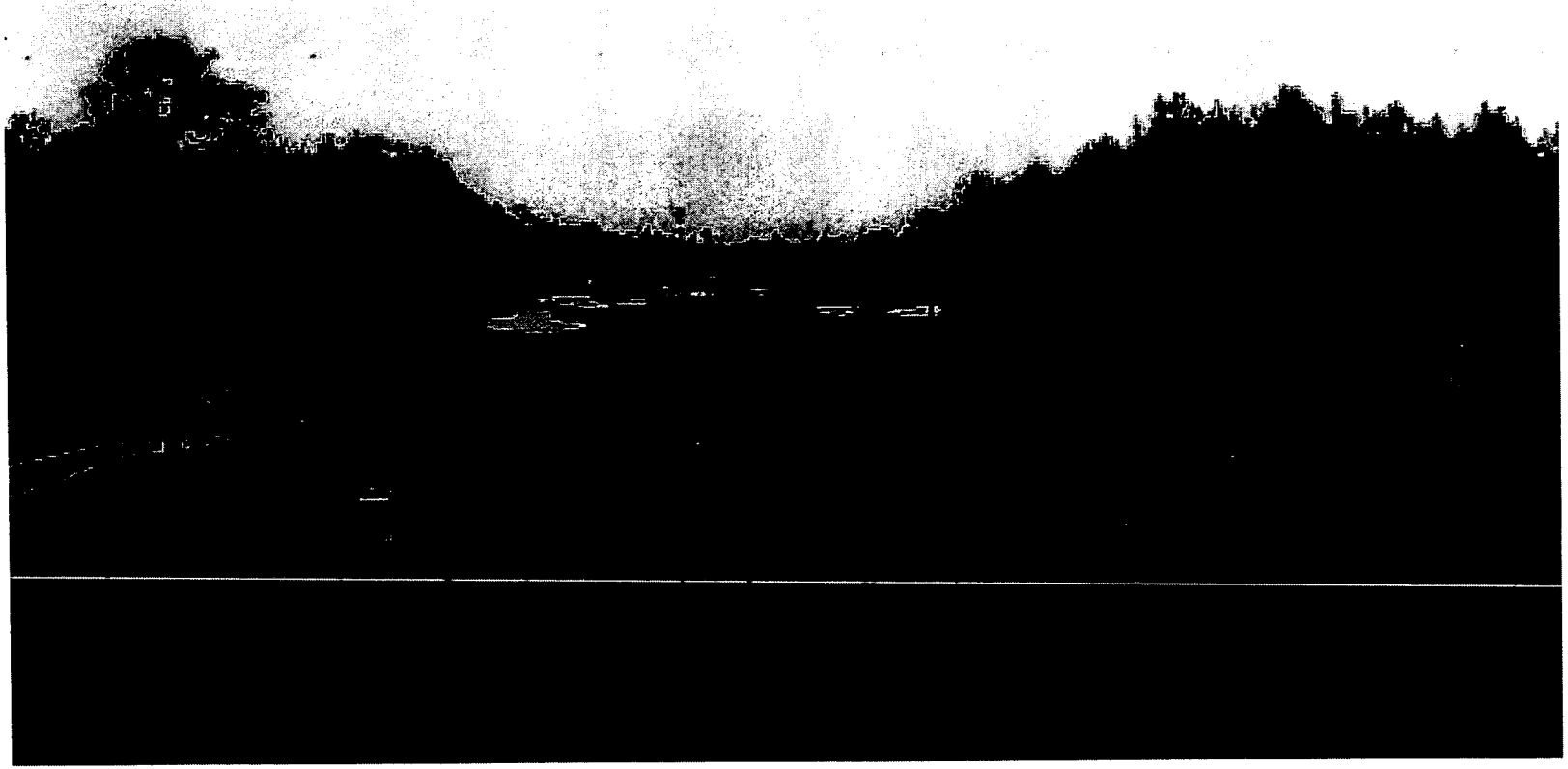


Eagle Point - Hole 17 - Before

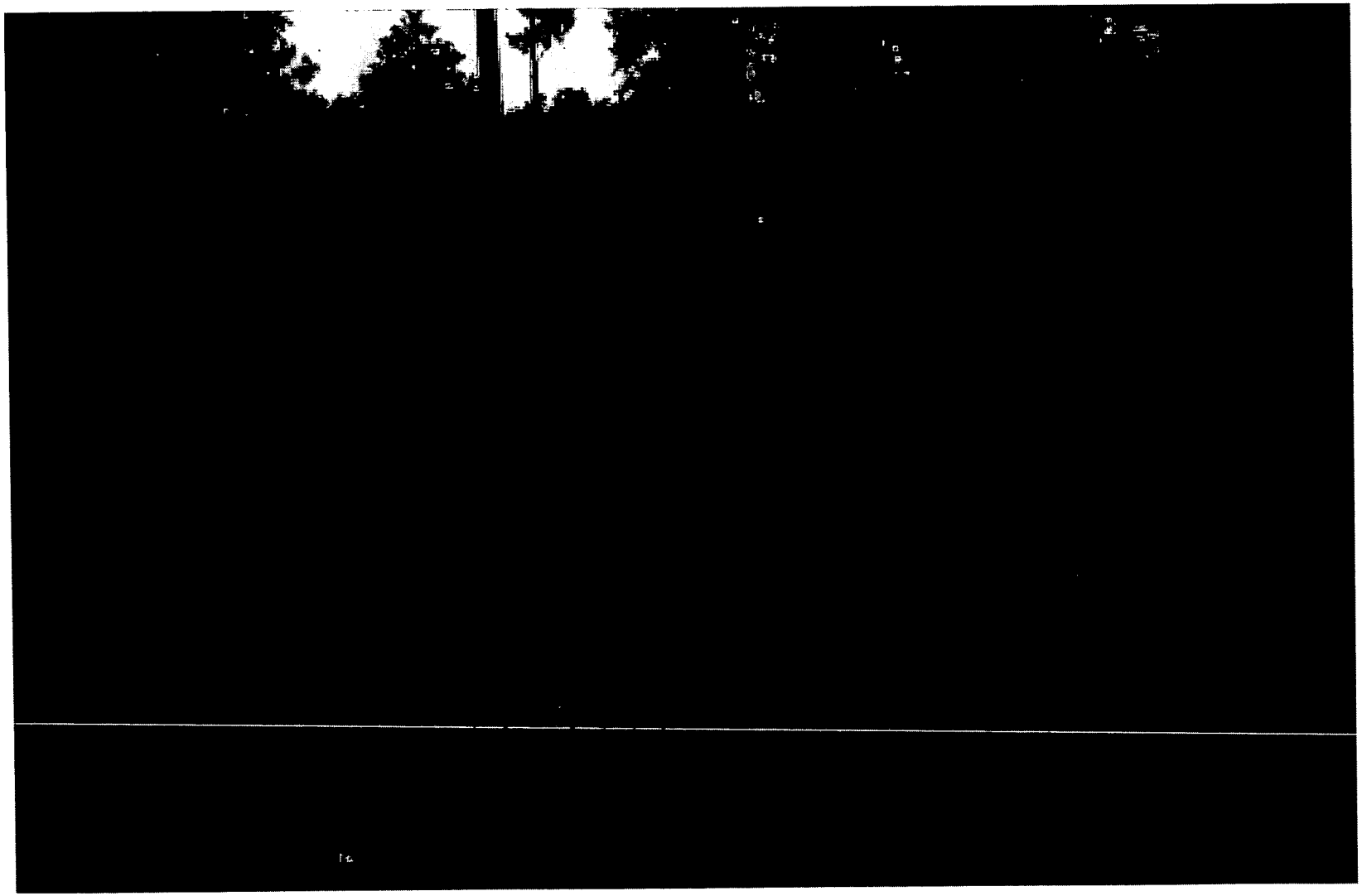


Eagle Point - Hole 17 - After

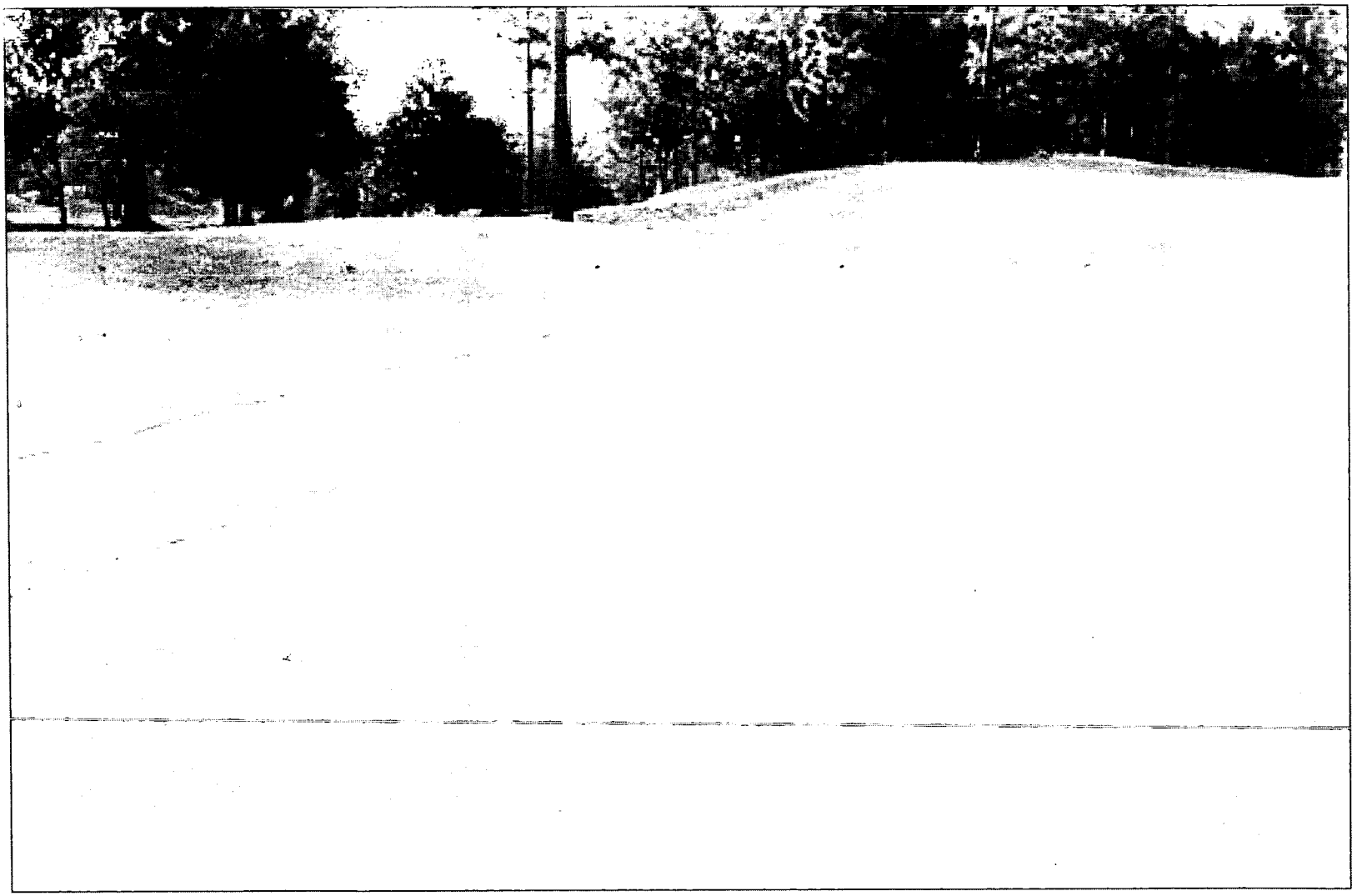
Eagle Point - Hole 18 - Before



Eagle Point - Hole 18 - After



Eagle Point - Hole 3 - Before



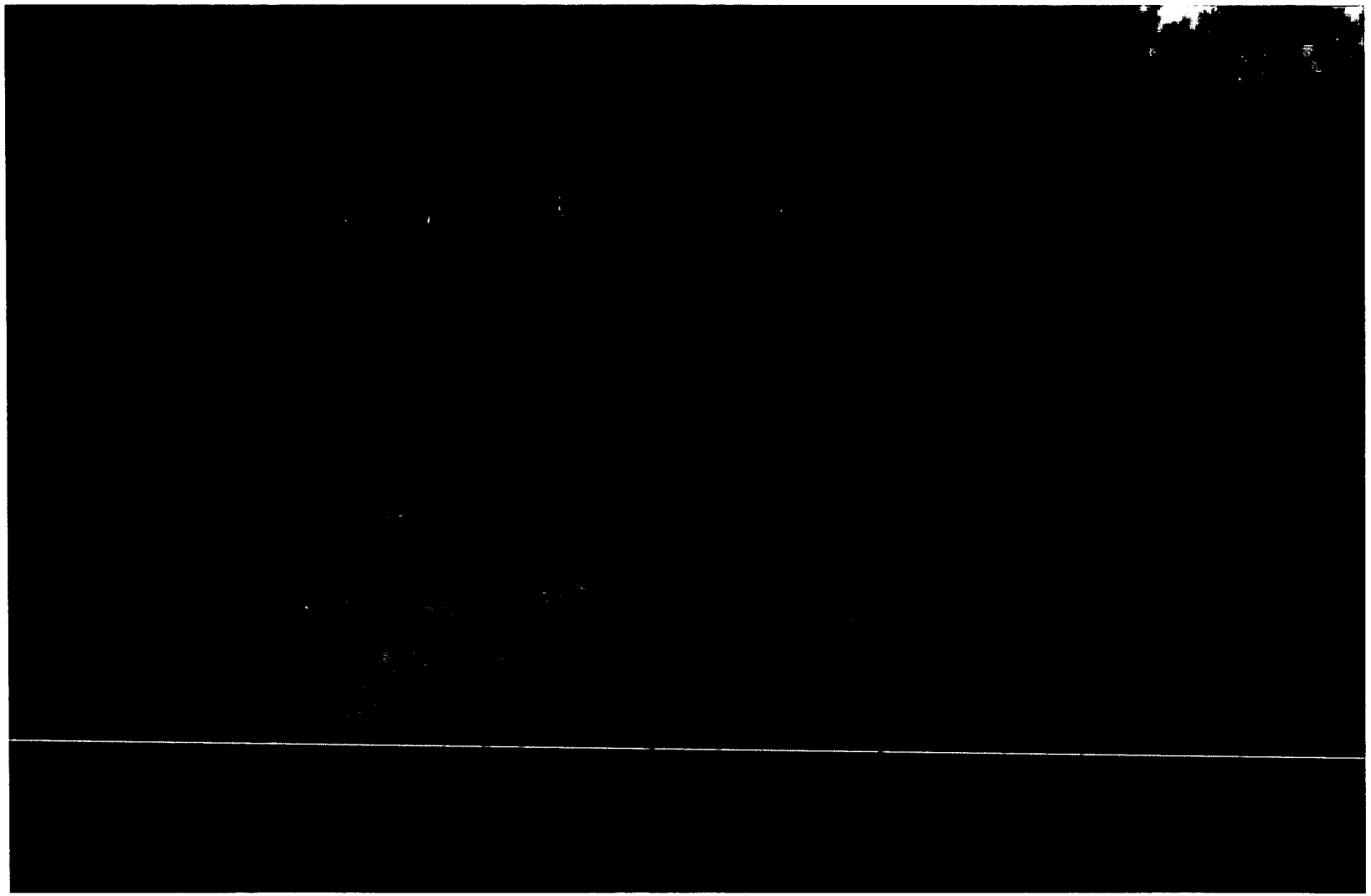
Eagle Point - Hole 3 - After

Landfall - Hole 4 - Before

Landfall - Hole 4 - After

Eagle Point - Hole 8 - Before

Eagle Point - Hole 8 - After



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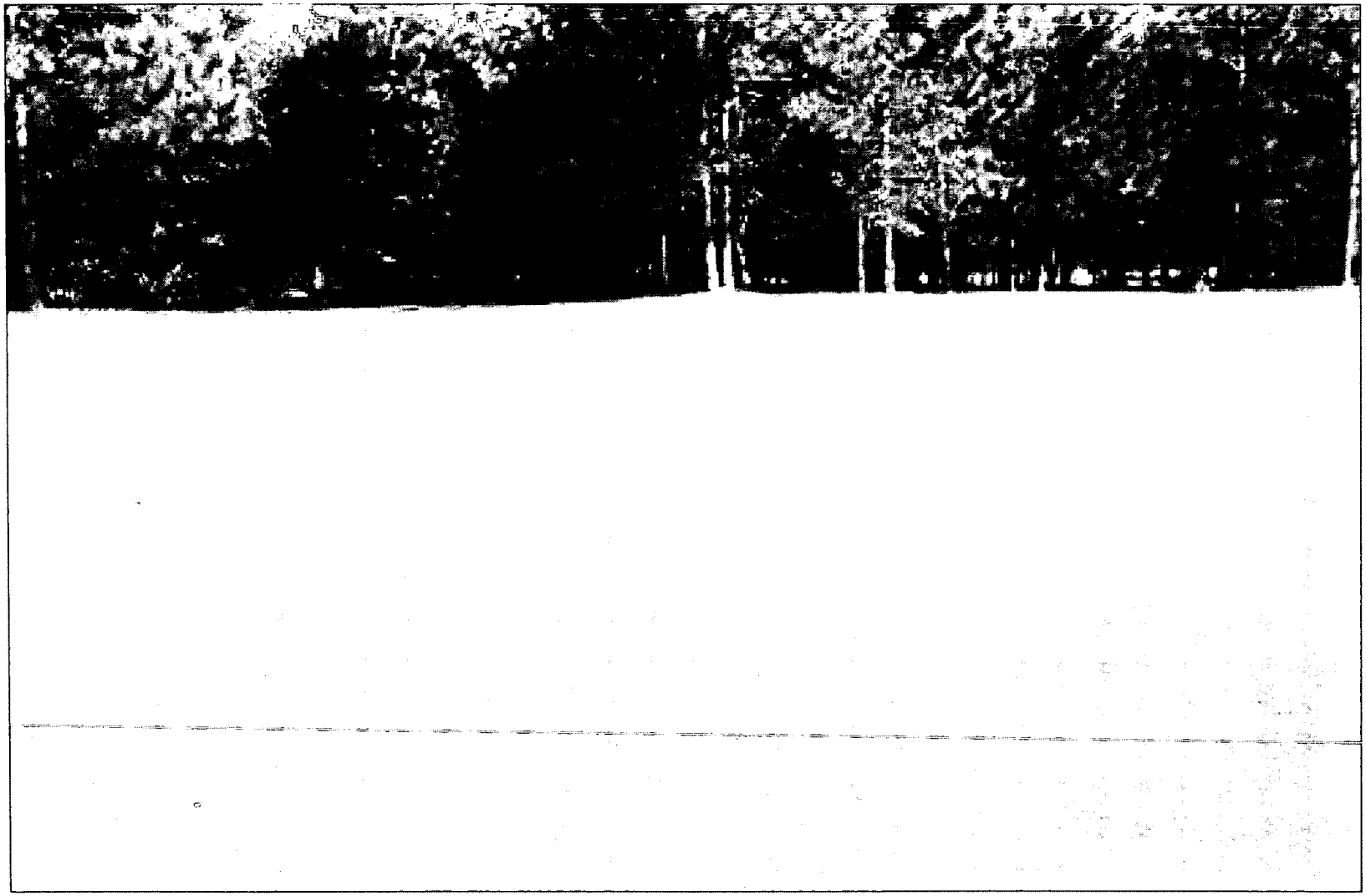
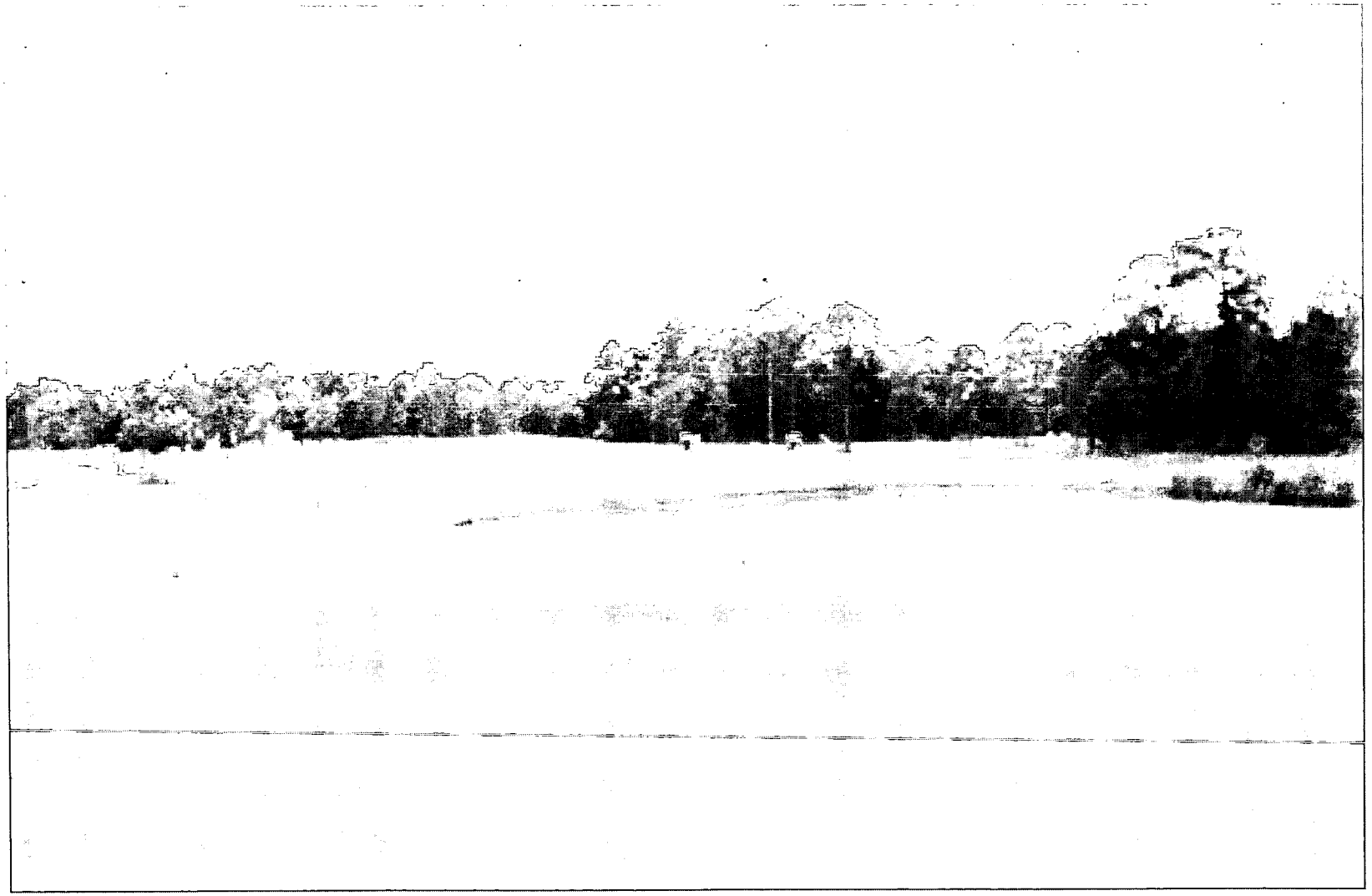
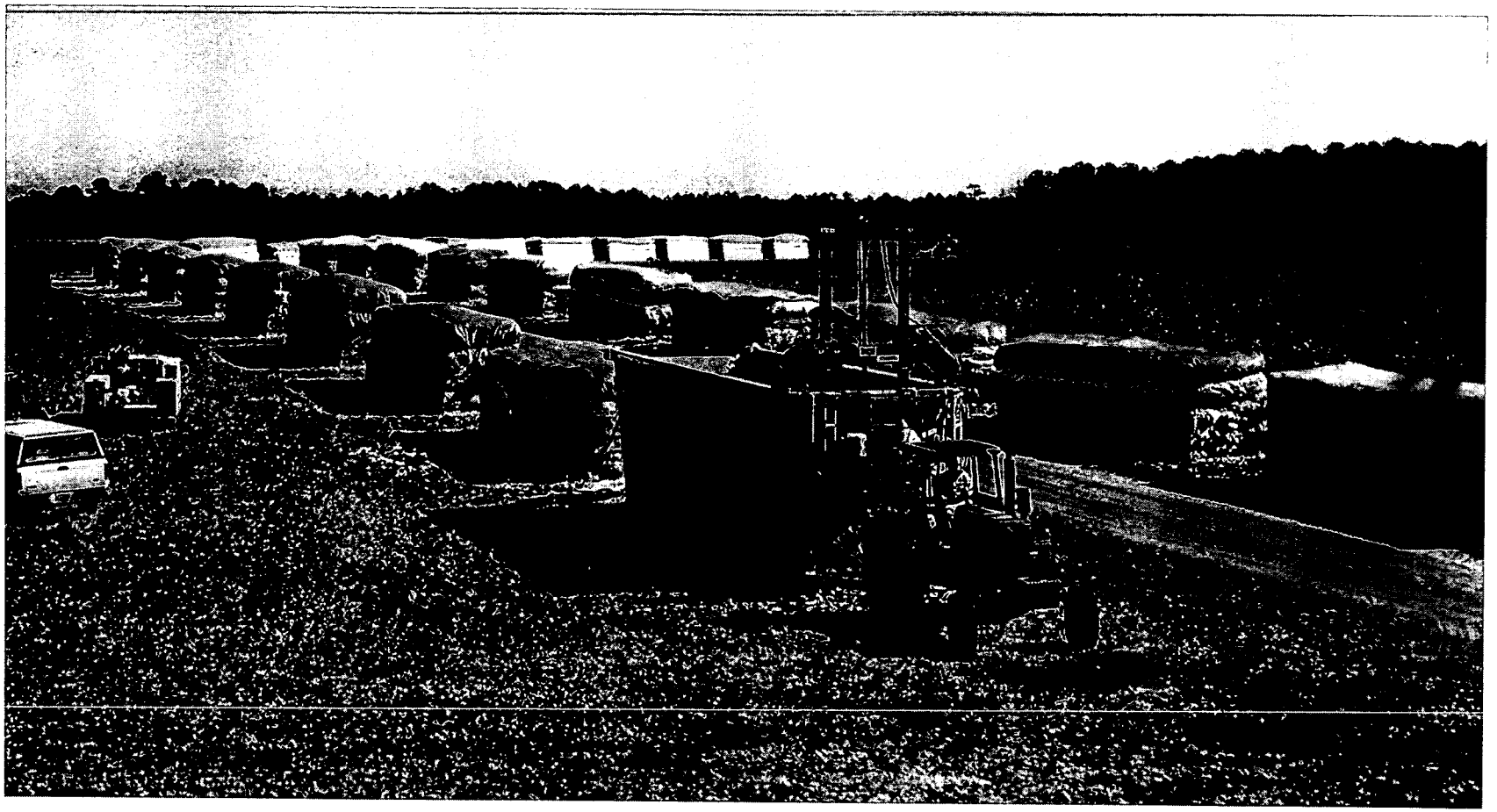


Eagle Point - Hole 8 - After



Landfall - Hole 2 - Before

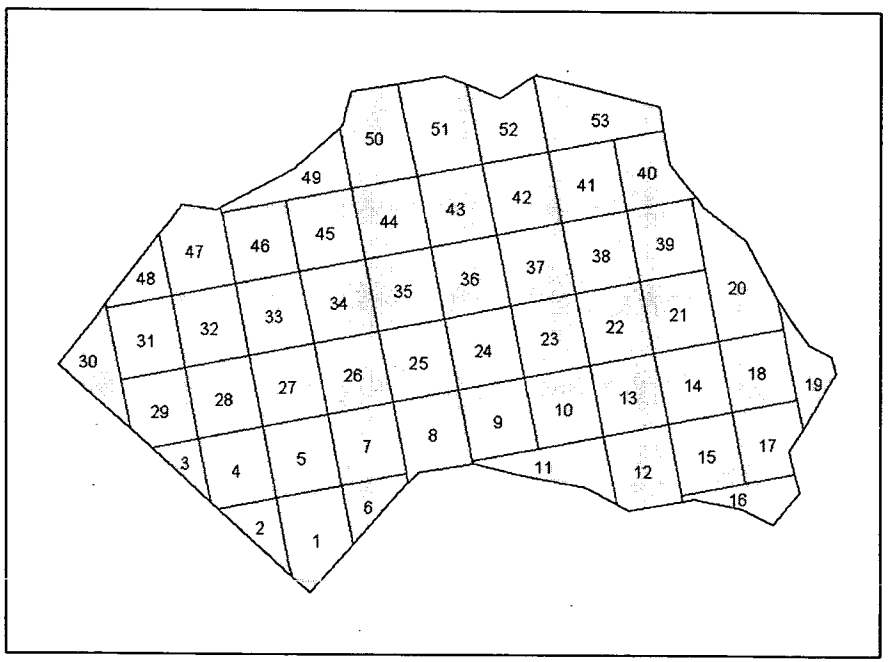
Optimizing Cotton Production



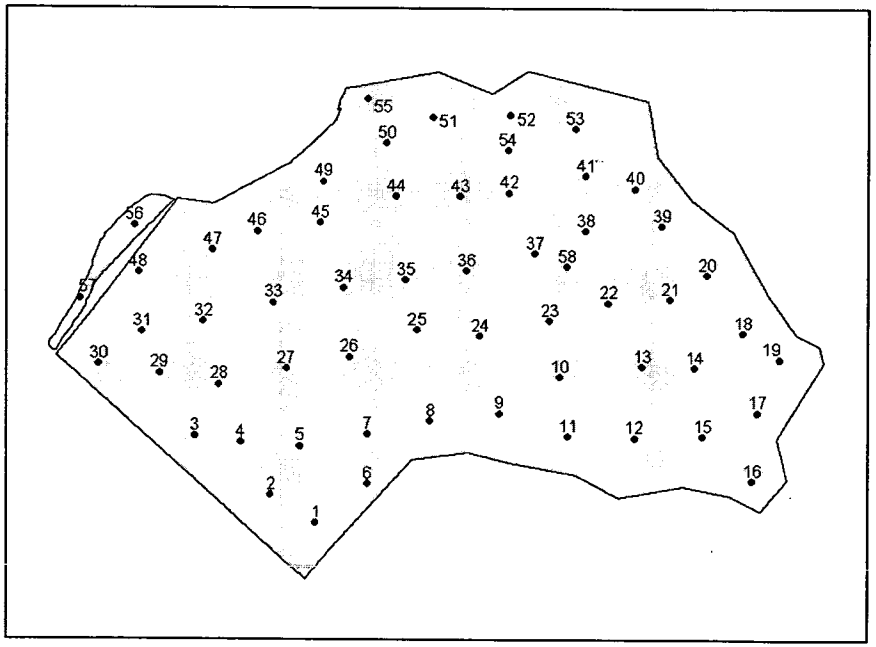
185 Acres → 32 Modules → 3.2 Bales/Ac

Soil Sampling

Grids

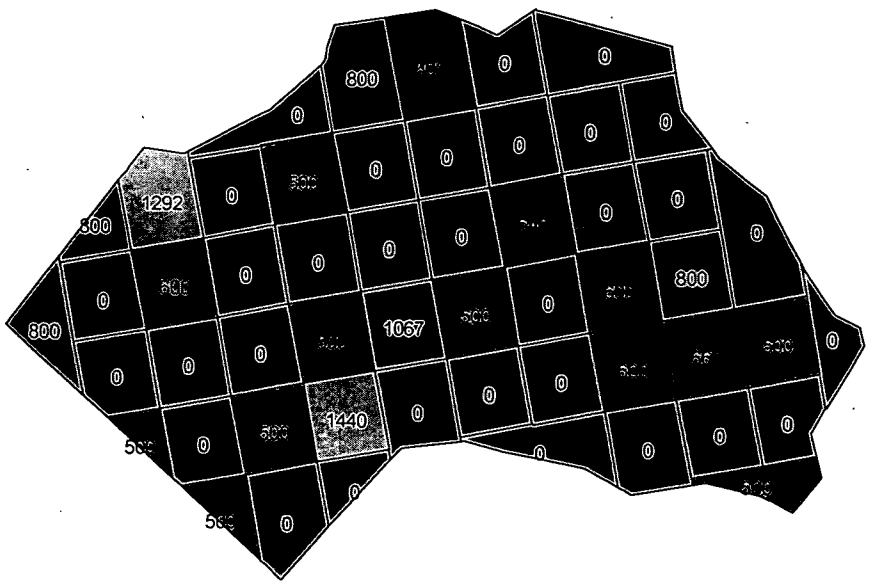


Grid Point Sampling



Lime Application

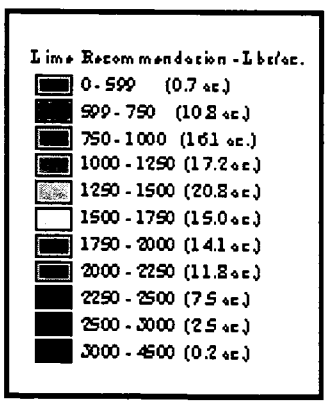
1999



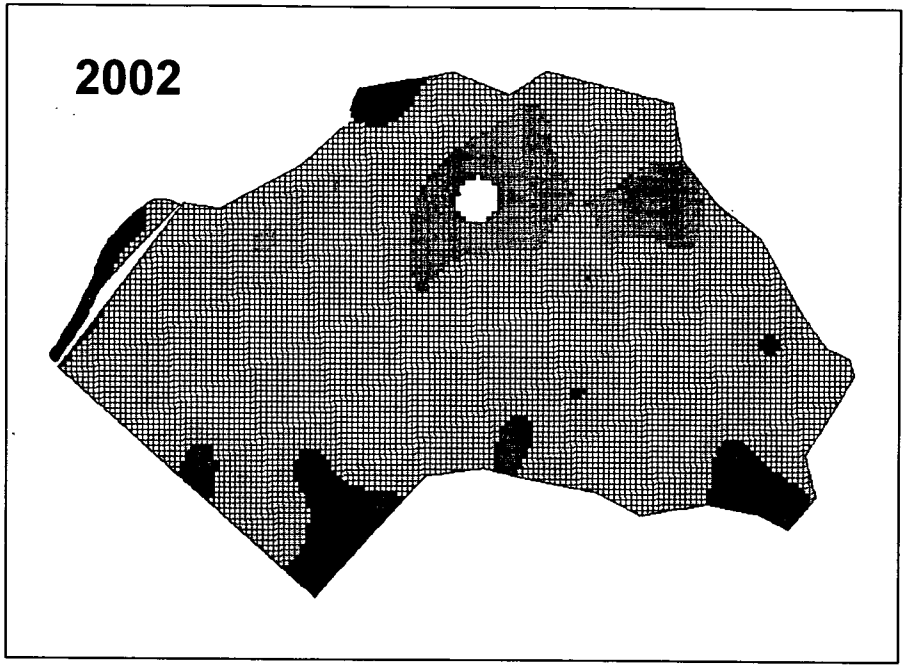
Target pH 6.0

Conventional Lime = 0 tons

VRT Lime = 15 Tons



2002



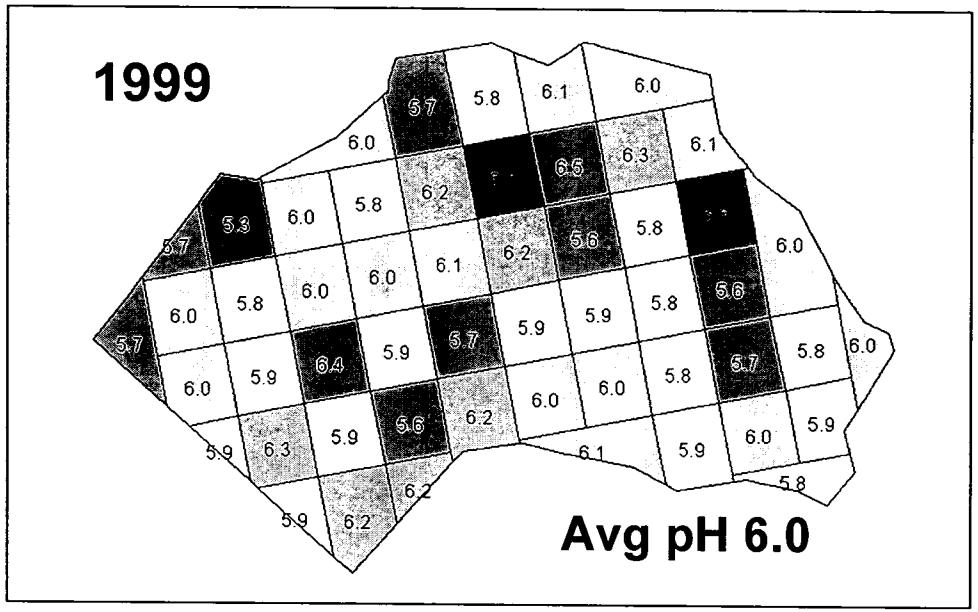
Target pH 6.5

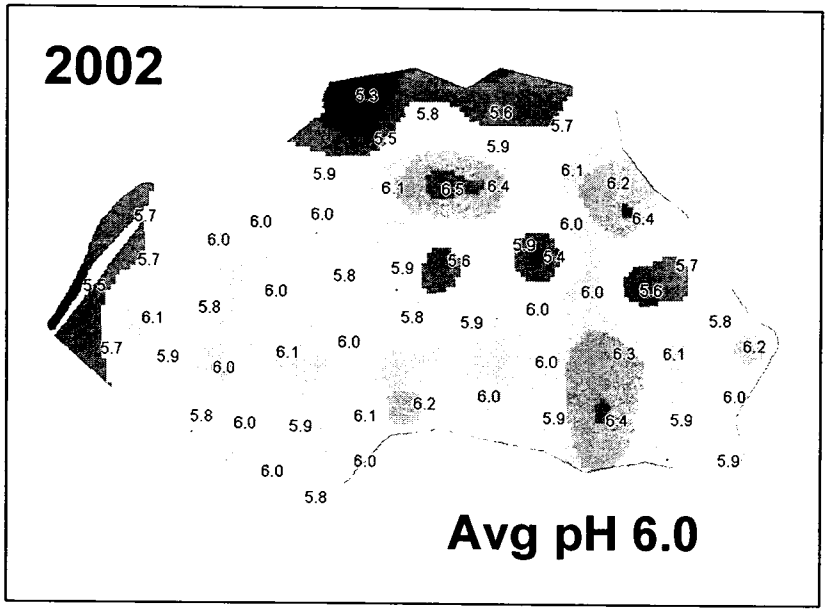
Conventional Lime = 99 Tons $2277

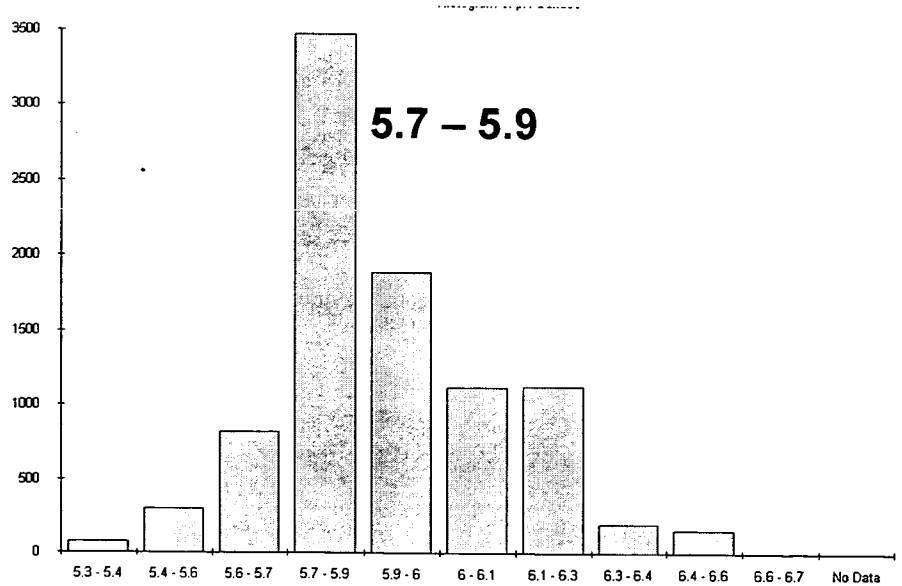
VRT Lime = 85 Tons $1955

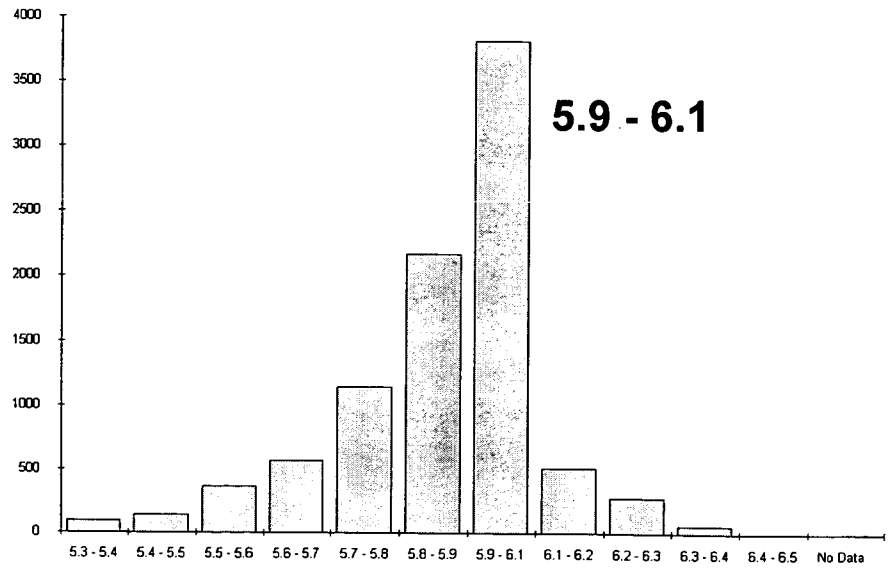
Savings $322

pH Maps


1999
Avg pH 6.0

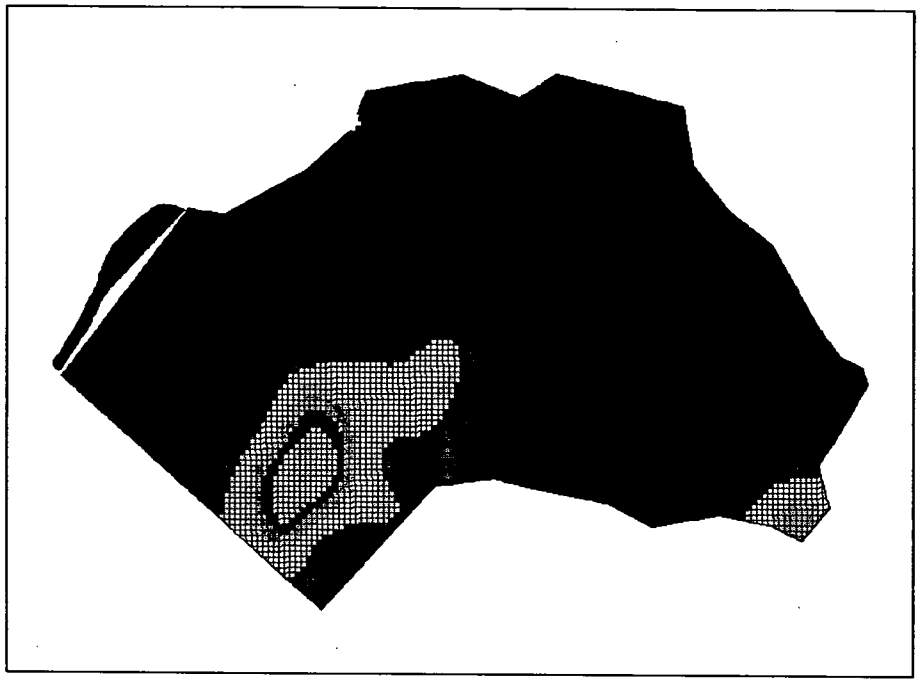

2002
Avg pH 6.0

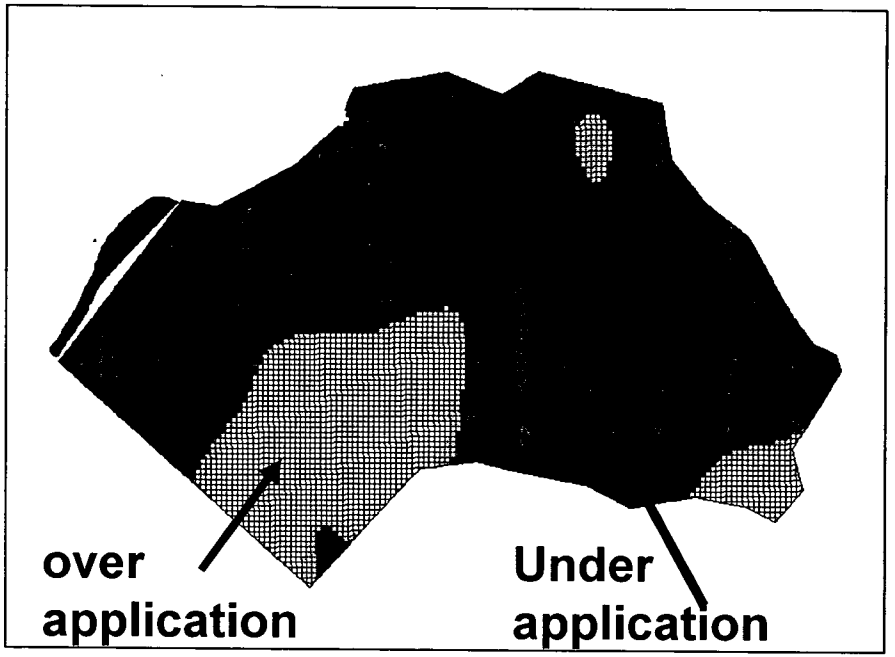

5.7 – 5.9
3500
3000
2500
2000
1500
1000
500
0
5.3 - 5.4
5.4 - 5.6
5.6 - 5.7
5.7 - 5.9
5.9 - 6
6 - 6.1
6.1 - 6.3
6.3 - 6.4
6.4 - 6.6
6.6 - 6.7
No Data


5.9 - 6.1
4000
3500
3000
2500
2000
1500
1000
500
0
5.3 - 5.4
5.4 - 5.5
5.5 - 5.6
5.6 - 5.7
5.7 - 5.8
5.8 - 5.9
5.9 - 6.1
6.1 - 6.2
6.2 - 6.3
6.3 - 6.4
6.4 - 6.5
No Data

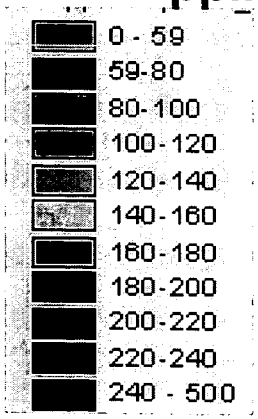
Potash Application

2002





Potash Application lbs/Ac



17.7 Tons VRT

13 Tons Conv

Straight rate 225 lbs/Ac

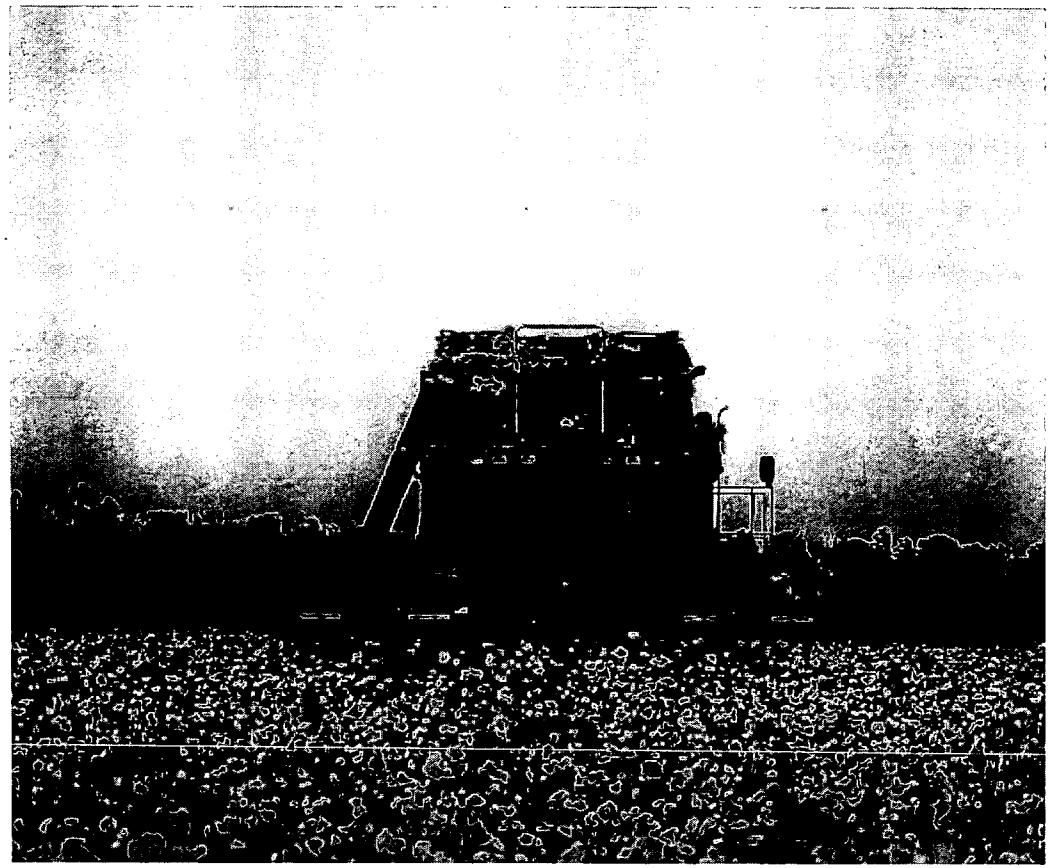
VRT Application

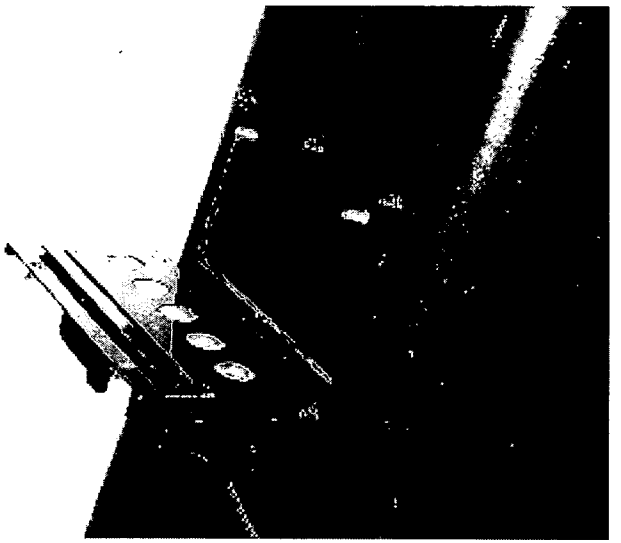
Min Rate 60 lbs

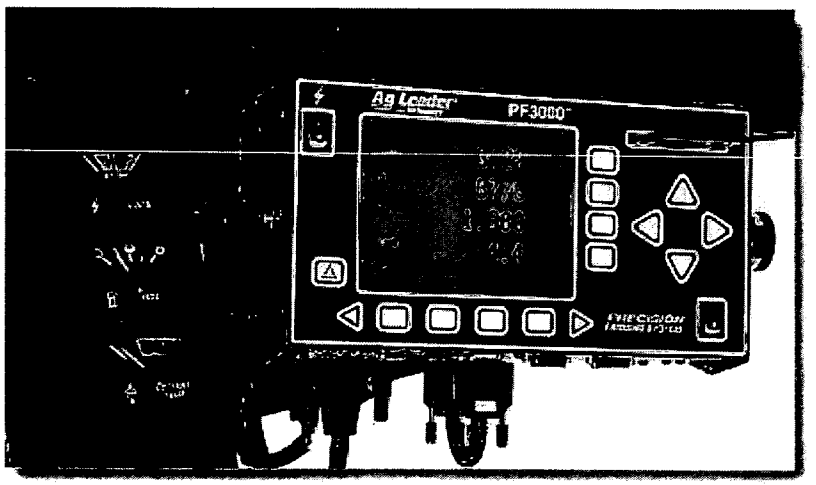
Max Rate 470 lbs

Avg Rate 330 lbs

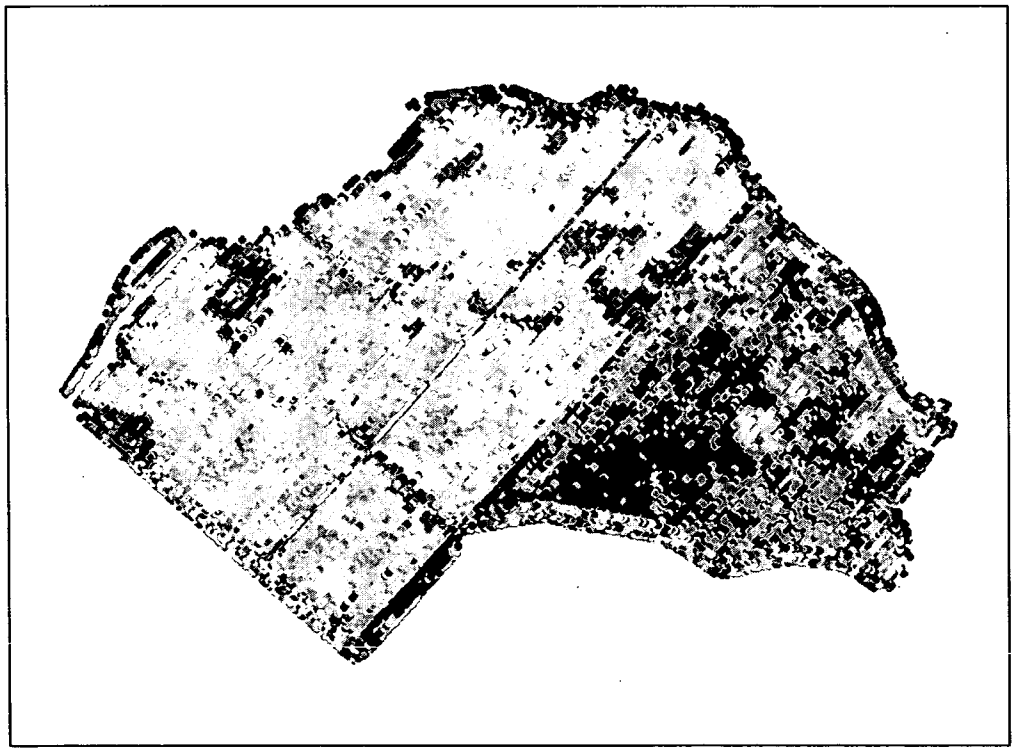
Yield Monitoring

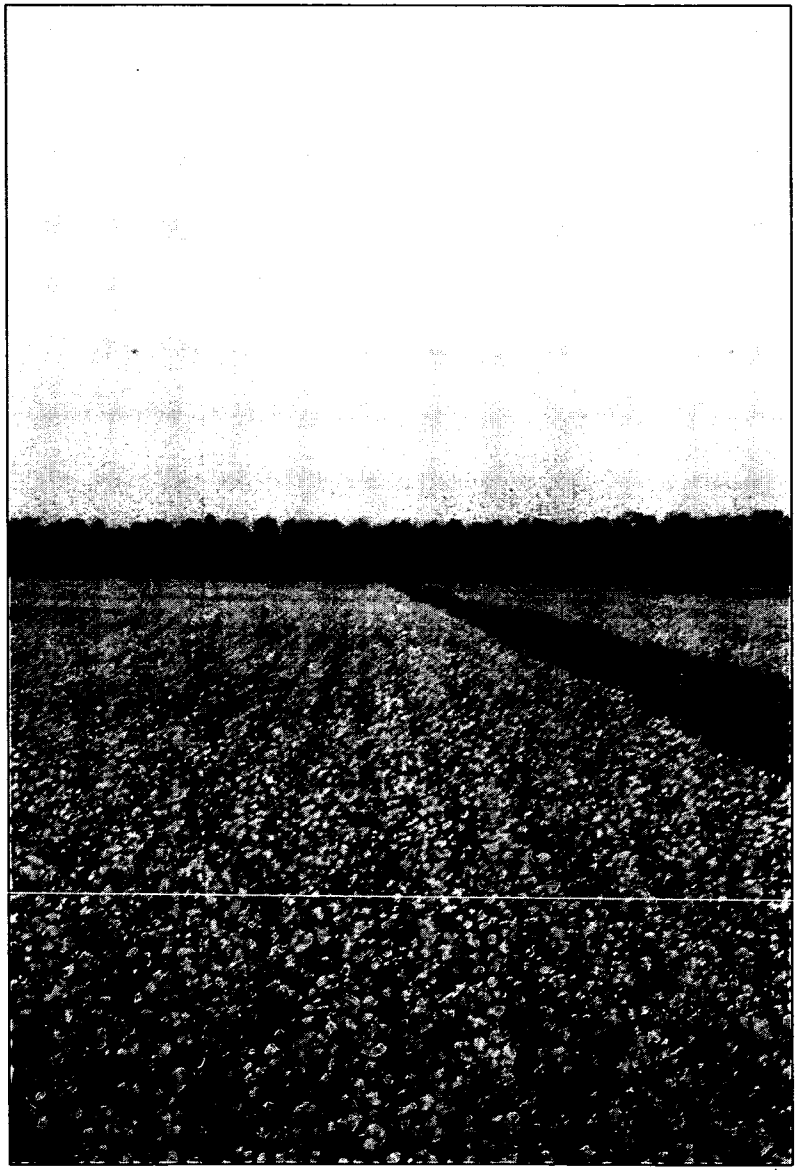






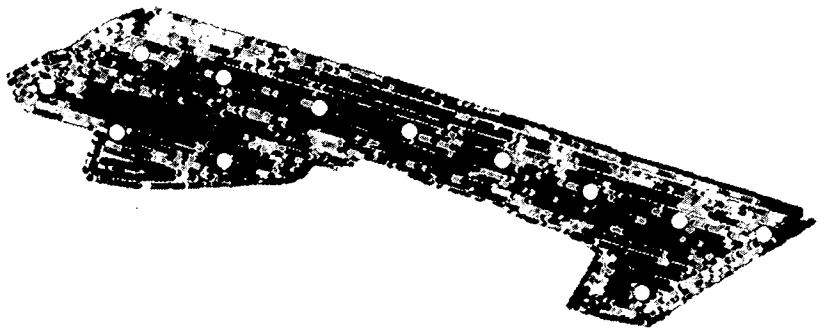
2001 Cotton Yield



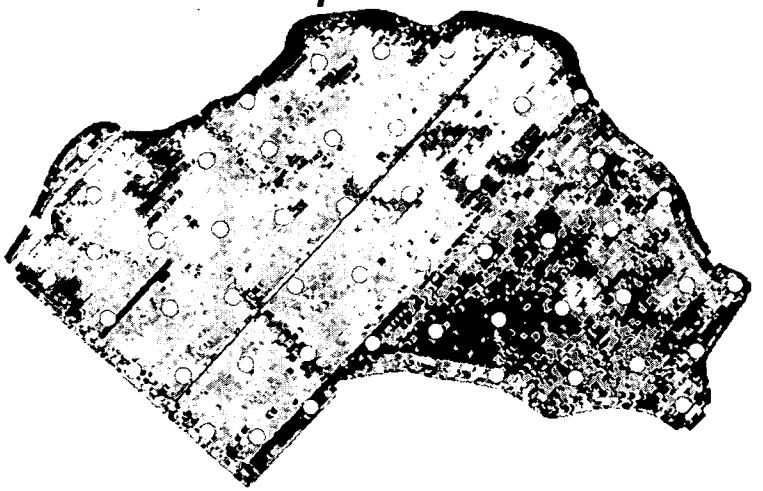


Using the Information

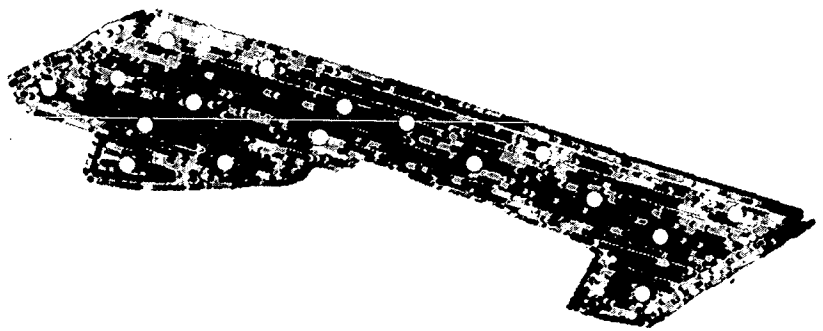
Initial Grid Sample



Initial Grid Sample

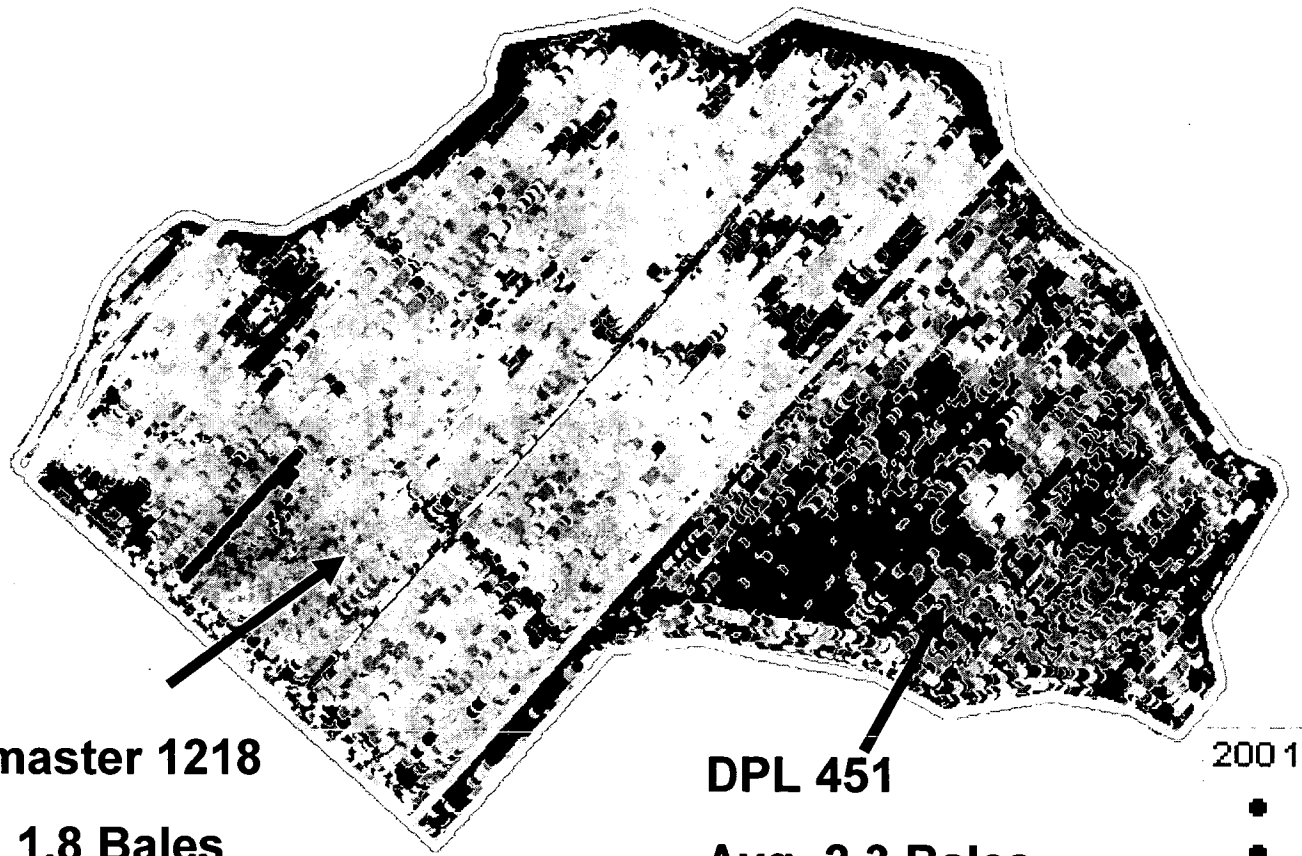


Refined Strategy



Refined Strategy

Cooper Field Cotton Yield 2001



Paymaster 1218

Avg 1.8 Bales

DPL 451

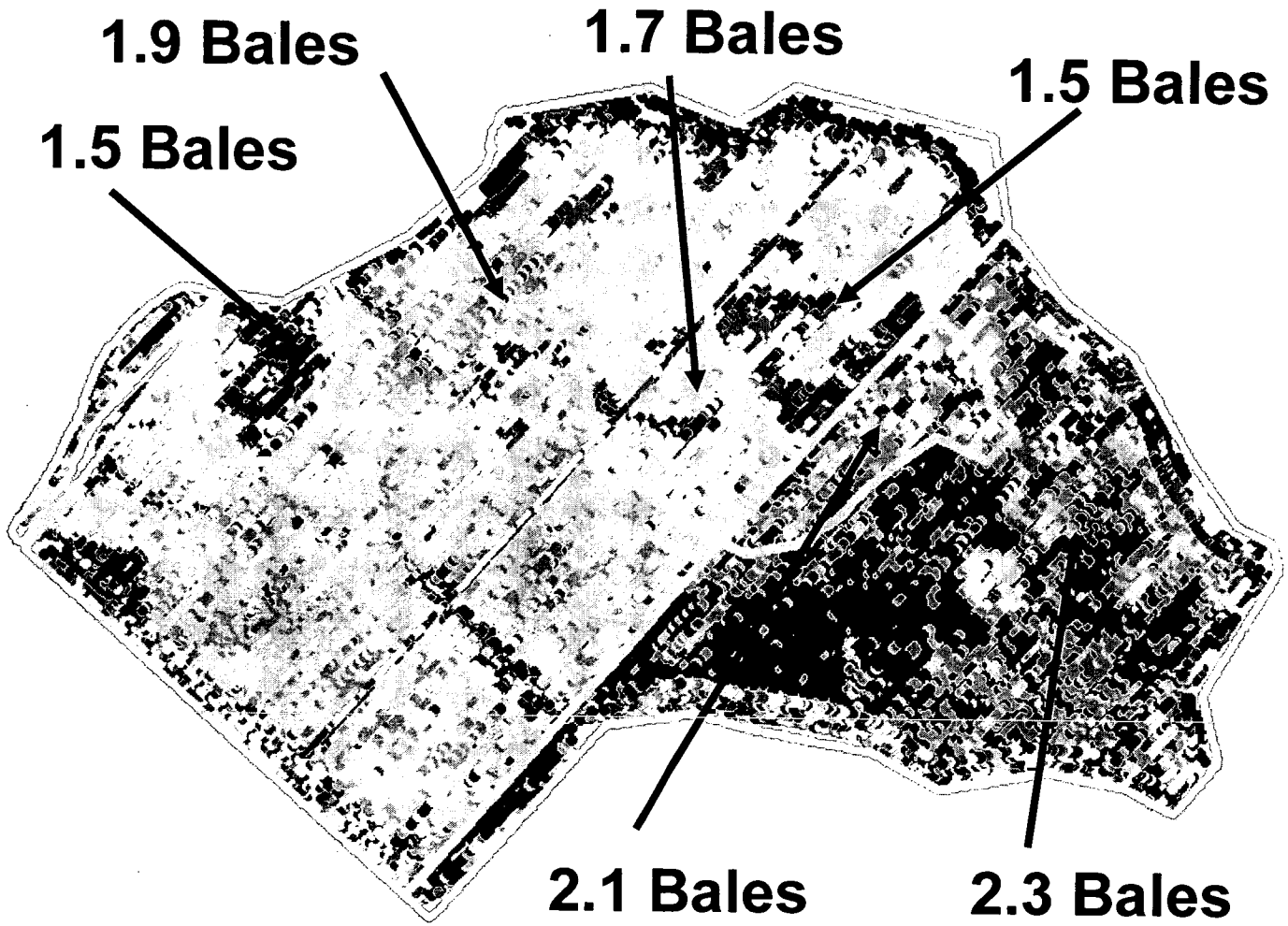
Avg 2.3 Bales

Whole Field Average Yield = 2.0 Bales

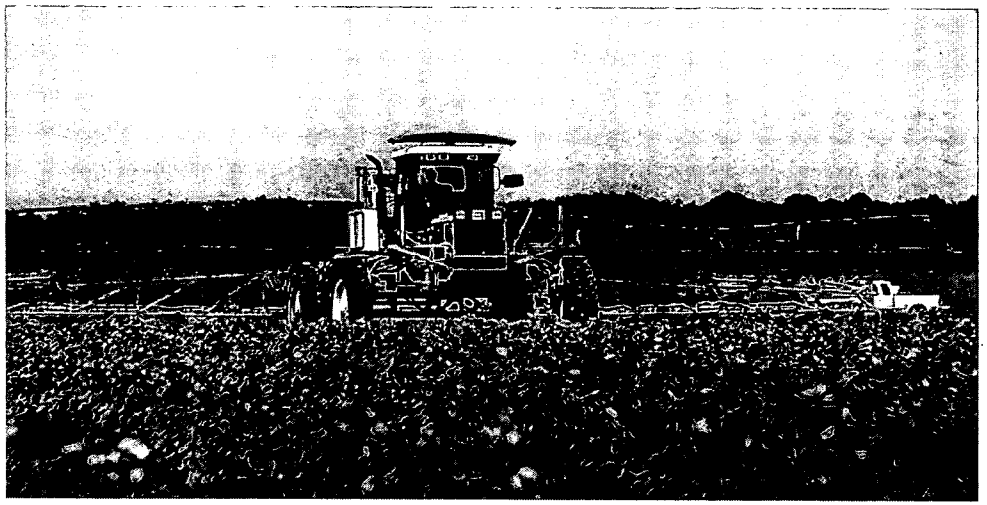
2001 Cotton Yield

- 0 - 0.5
- 0.5 - 1
- 1 - 1.5
- 1.5 - 2
- 2 - 2.5
- 2.5 - 3
- 3 - 4

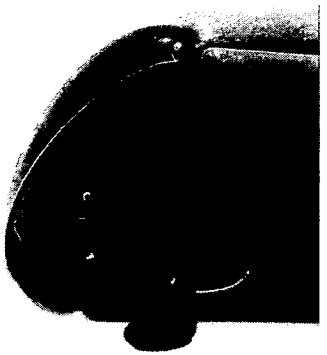
Determining lost yield potential



Hydro Agri's N Sensor

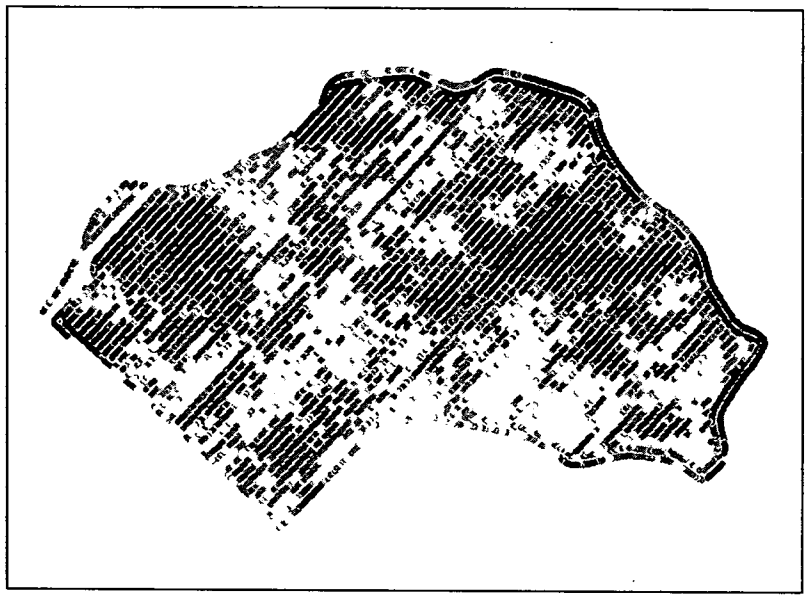


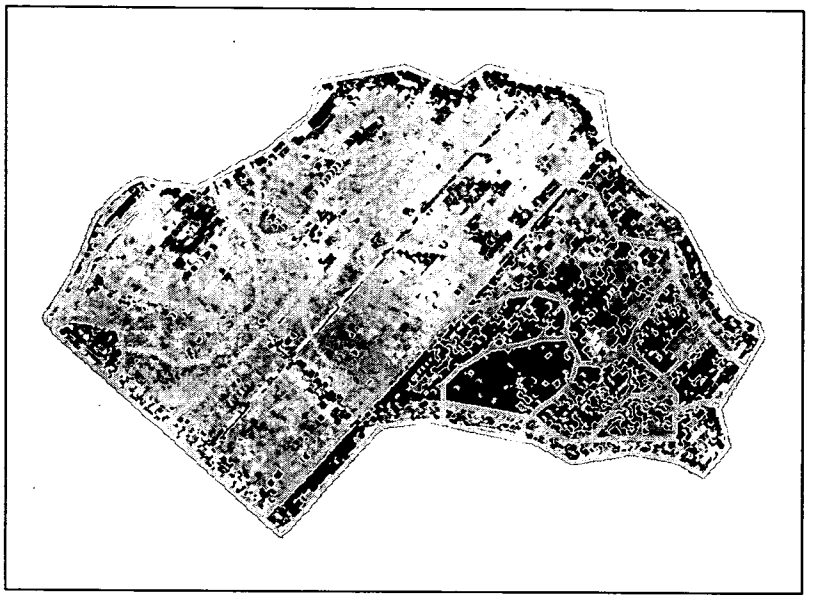
Sensors



In Cab Screen

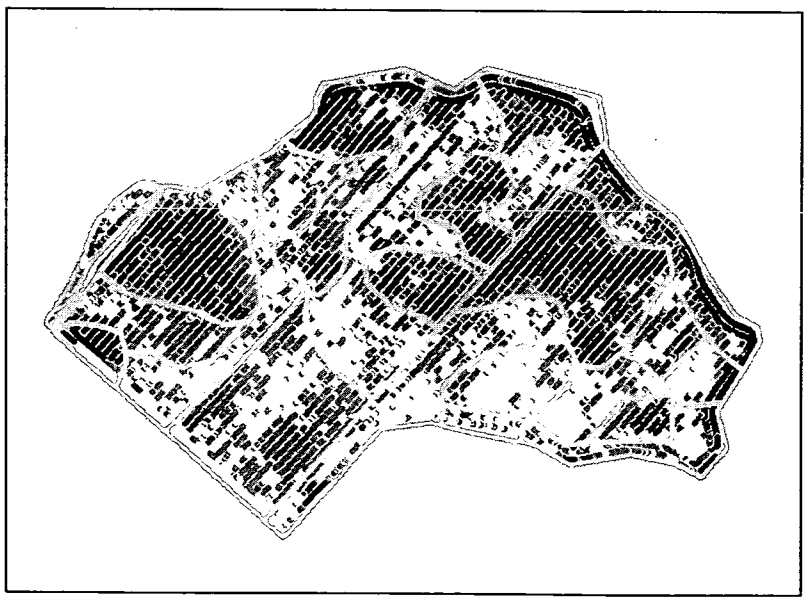
N Rate Determined from Sensor



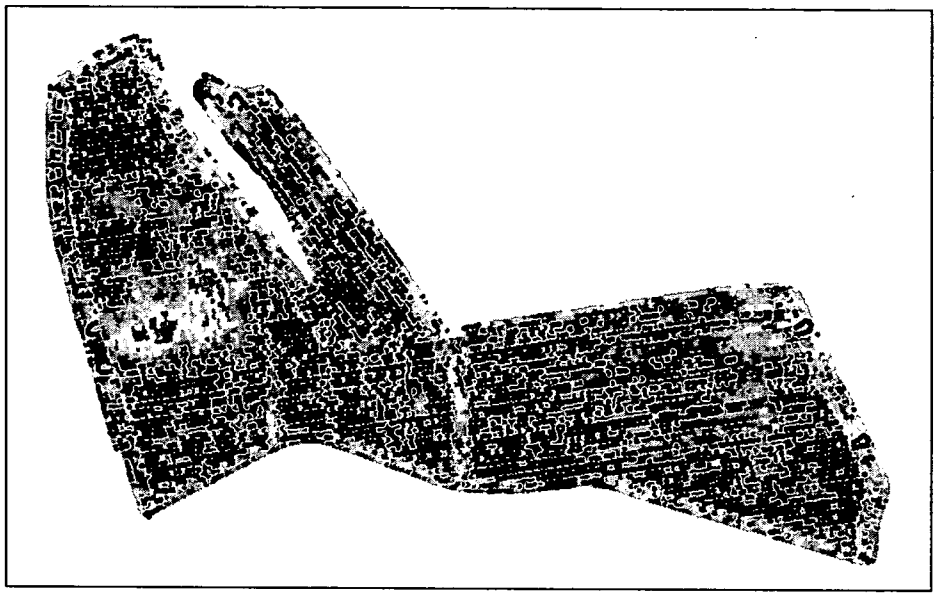


N Rate

- 0 - 20
- 20 - 40
- 40 - 60
- 60 - 80
- 80 - 100
- 100 - 120



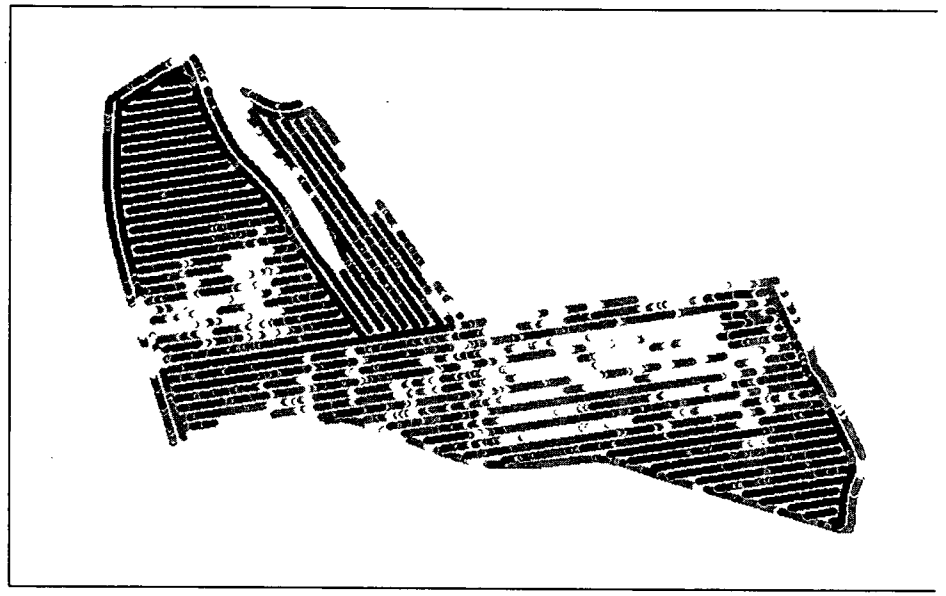
Cotton Yield 2001



2001 Cotton Yield

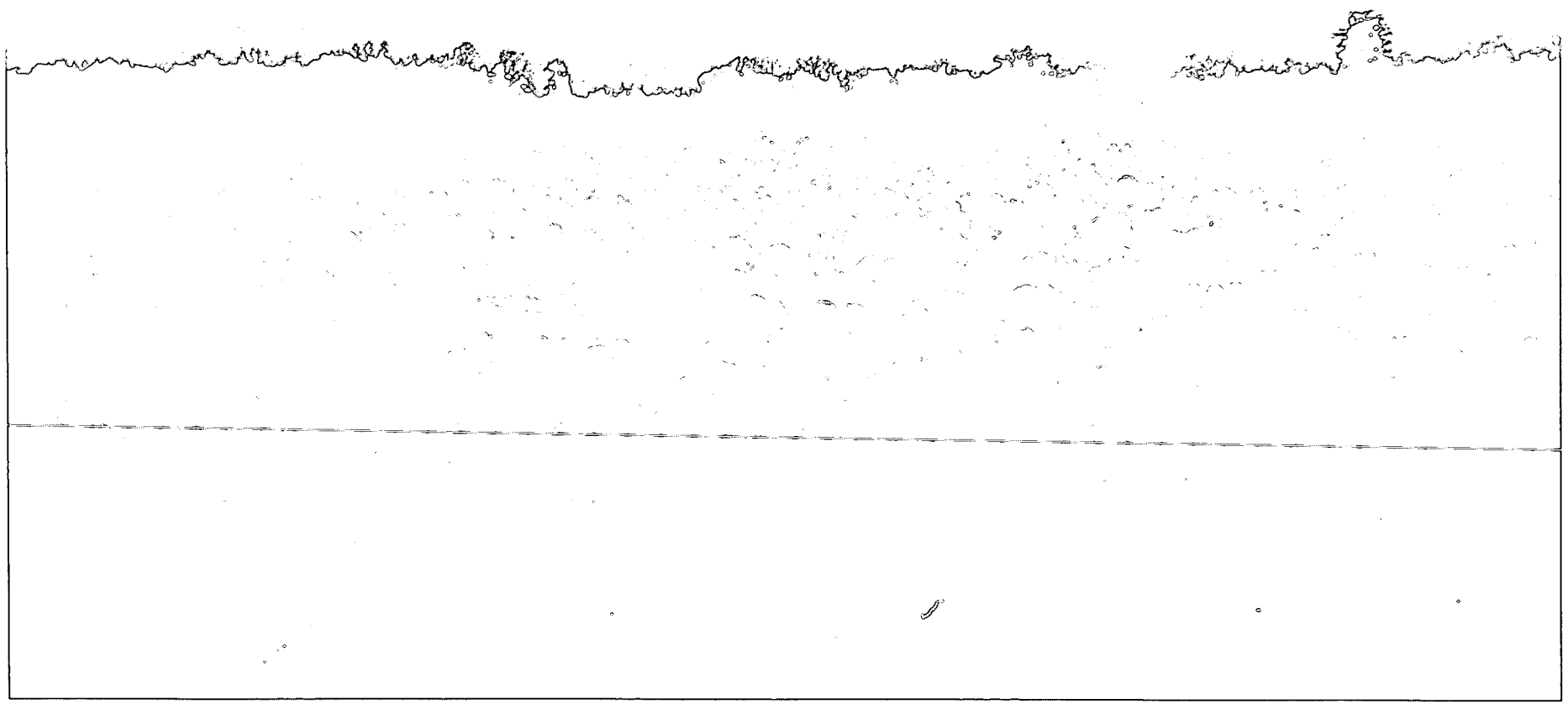
- 0 - 0.5
- 0.5 - 1
- 1 - 1.5
- 1.5 - 2
- 2 - 2.5
- 2.5 - 3
- 3 - 4

N Sensor June 2001



N Rate

- 0 - 20
- 20 - 40
- 40 - 60
- 60 - 80
- 80 - 100
- 100 - 120

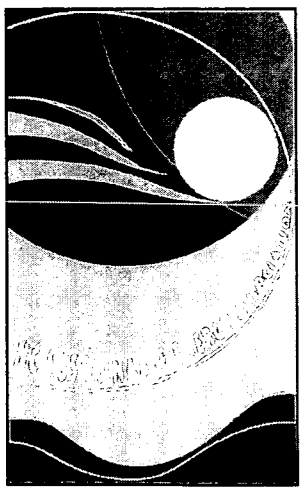


Energy Policies for Rural Economic Development and Cost Reduction

Ivan Urlaub, Executive & Policy Director
NC Sustainable Energy Association

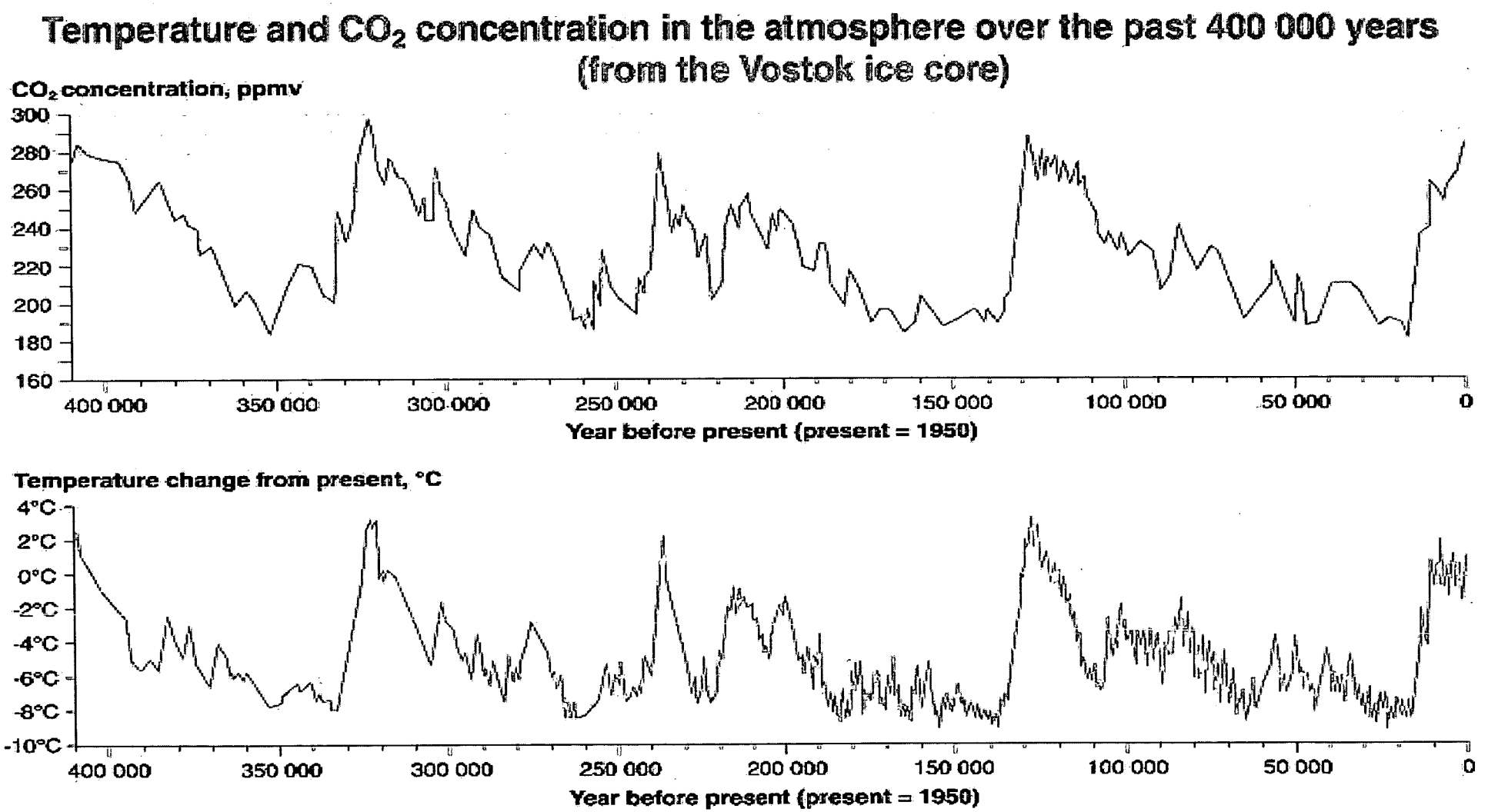
Agriculture & Forestry Study Commission

March 2, 2006



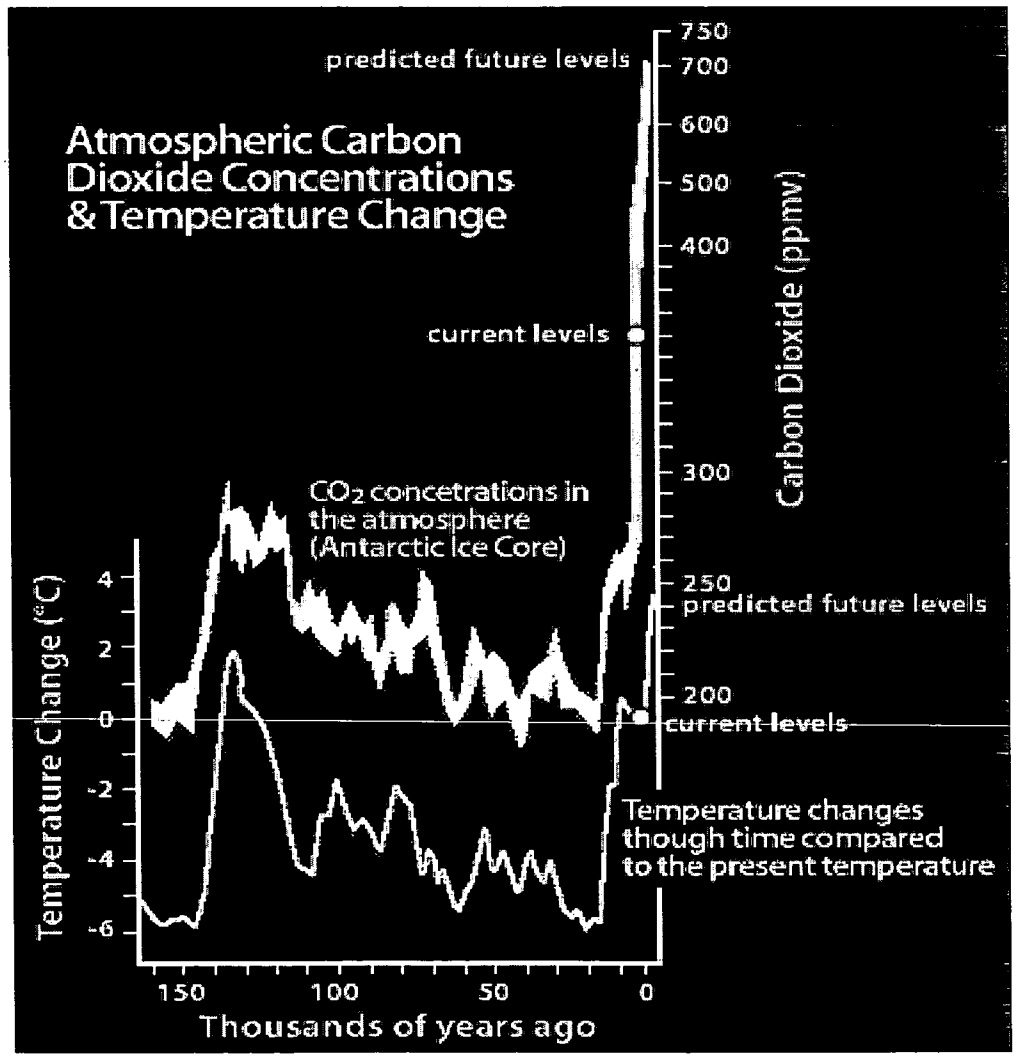
NCSEA

CO_2 and temperature run together



Source: J.R. Petit, J. Jouzel, et al. Climate and atmospheric history of the past 420 000 years from the Vostok ice core in Antarctica, Nature 399 (3JUne), pp 429-436, 1999.

Atmospheric Carbon Dioxide Concentration and Temperature Change

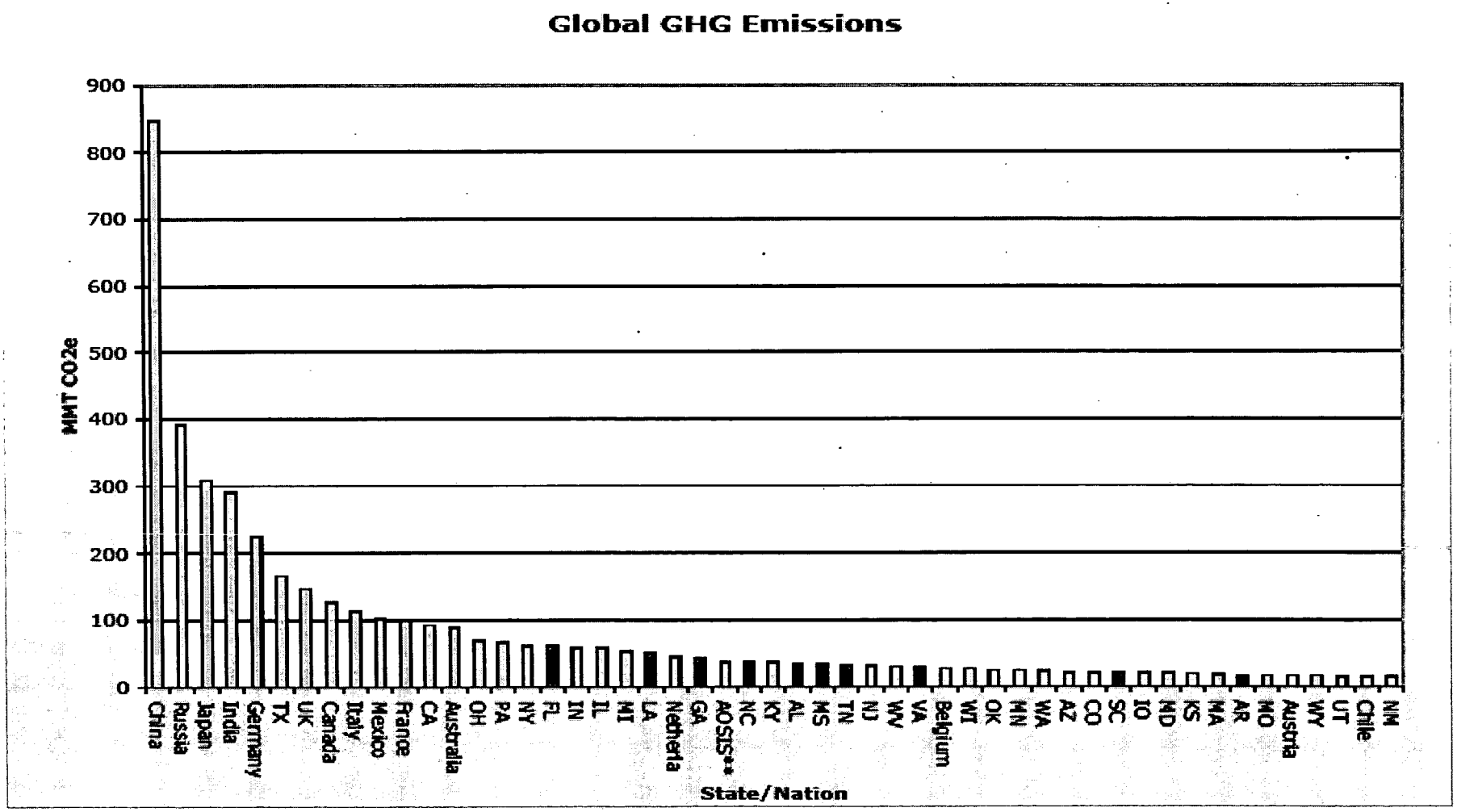


- As concentrations of CO2 change, so does the temperature.
- If emissions of CO2 stay the same as they are now, concentrations of atmospheric CO2 will increase to 700 ppm by 2100.
- Result: Mean global temperatures will increase by 3.5 °F (1.9 °C) over the next 100 years.

Courtesy: Global Climate Change (cotf.edu)

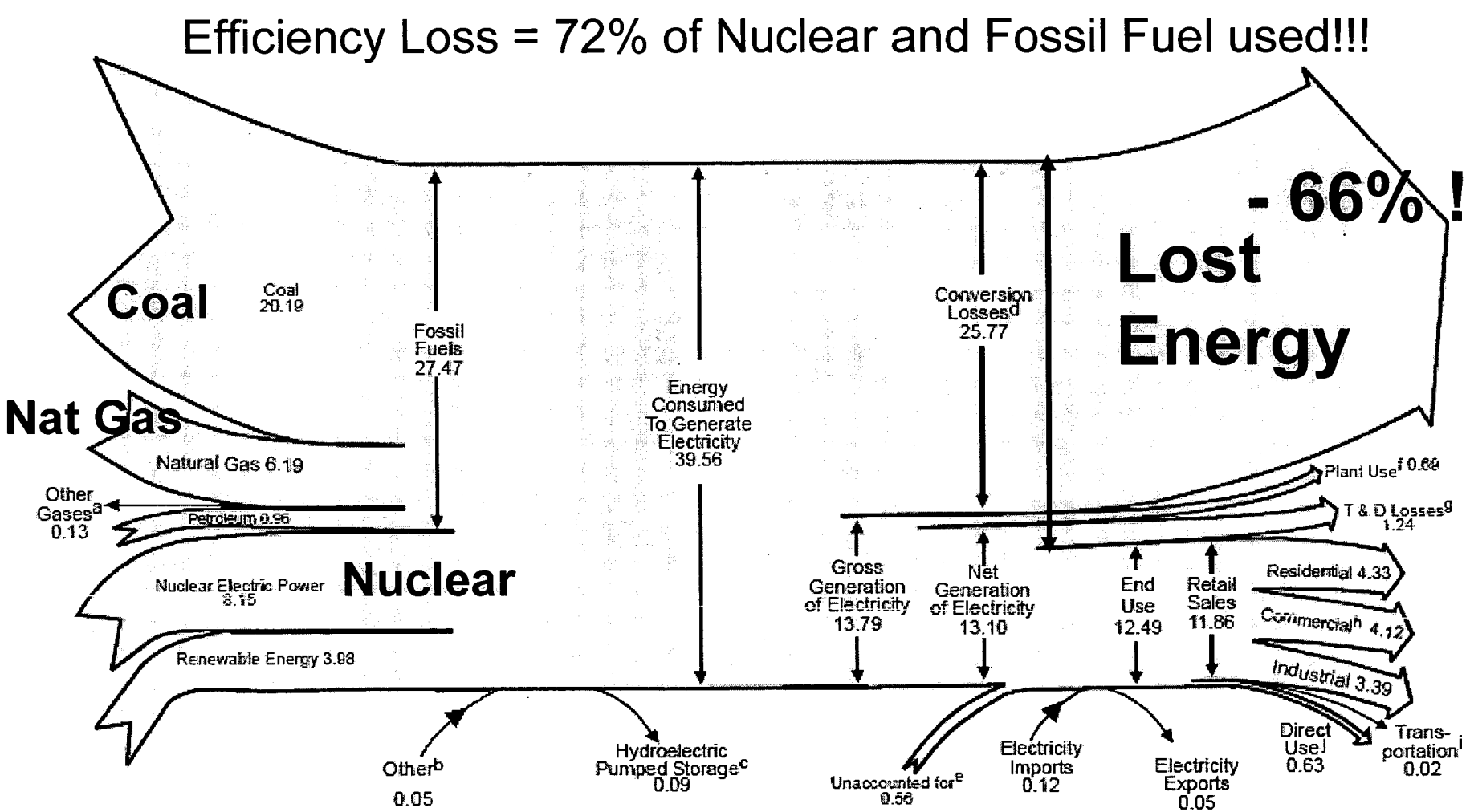
World's 50 largest GHG producers

States = 34 of top 50 Global Emitters



Inefficiency of U.S. Electric Generation, 2002

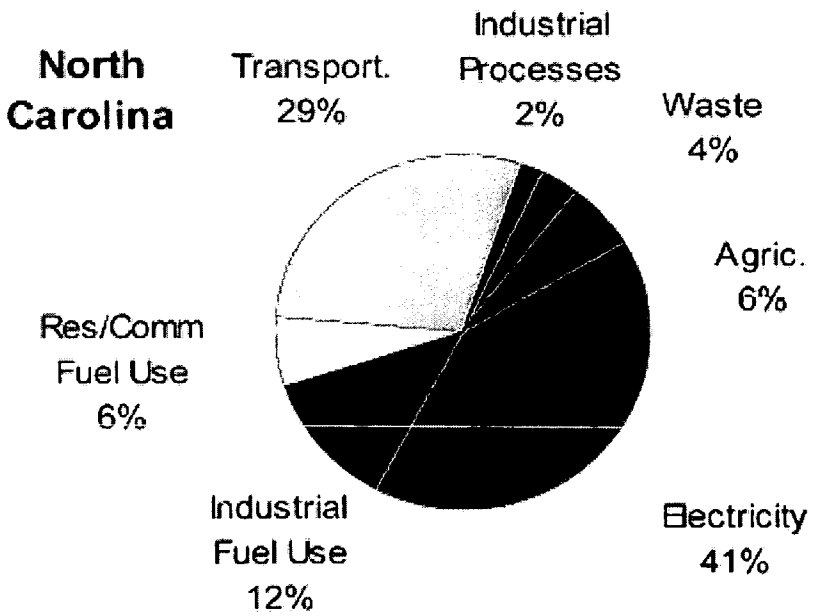
(in Quadrillion BTUs)

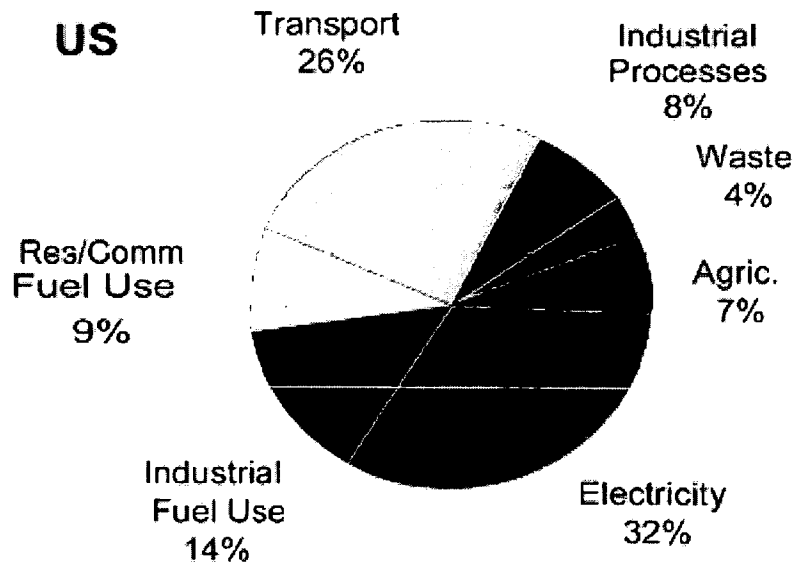


Source: U.S. Department of Energy, Energy Information Administration. *AEO 2004.*

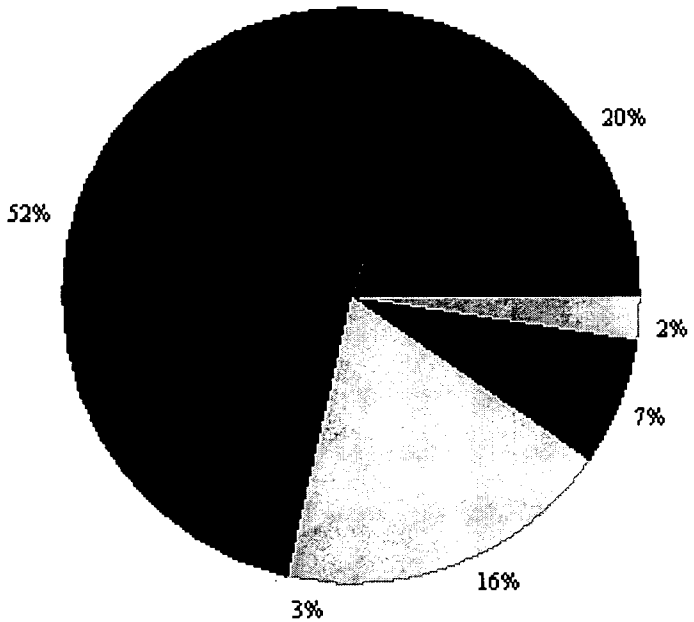
Overall view of GHG emissions

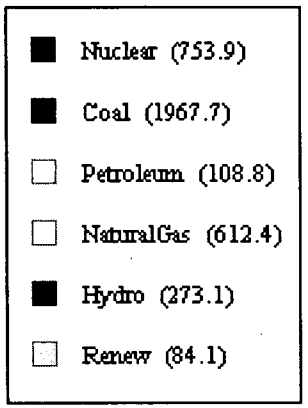
- Electricity use and transportation are principal GHG emissions sources:
  - NC = 70% of state total; U.S. = 58% of national total

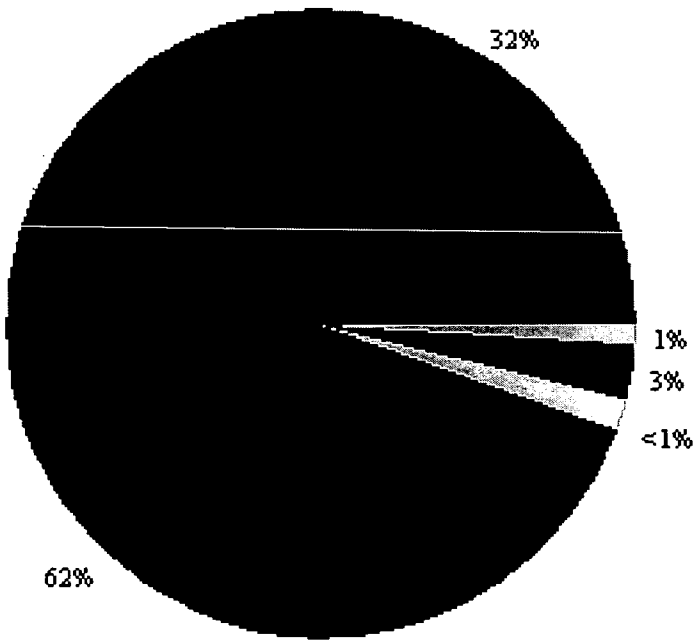


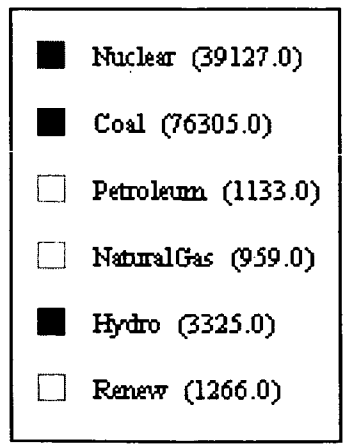


Current fuels for electrical production









Barriers to Progress

- Rate structure incentivizes utilities to:
  - Build more, bigger power plants
  - Ignore efficiency and oppose renewable energy
- NC ranks 49th in US for energy efficiency!
- NC GreenPower can only deliver 1% of electricity at best, expensive compared to RPS!
- Utilities keeping NCGP alive *just enough* to prevent more renewable energy development...unless incentives change

Big Box Electricity is Unsustainable

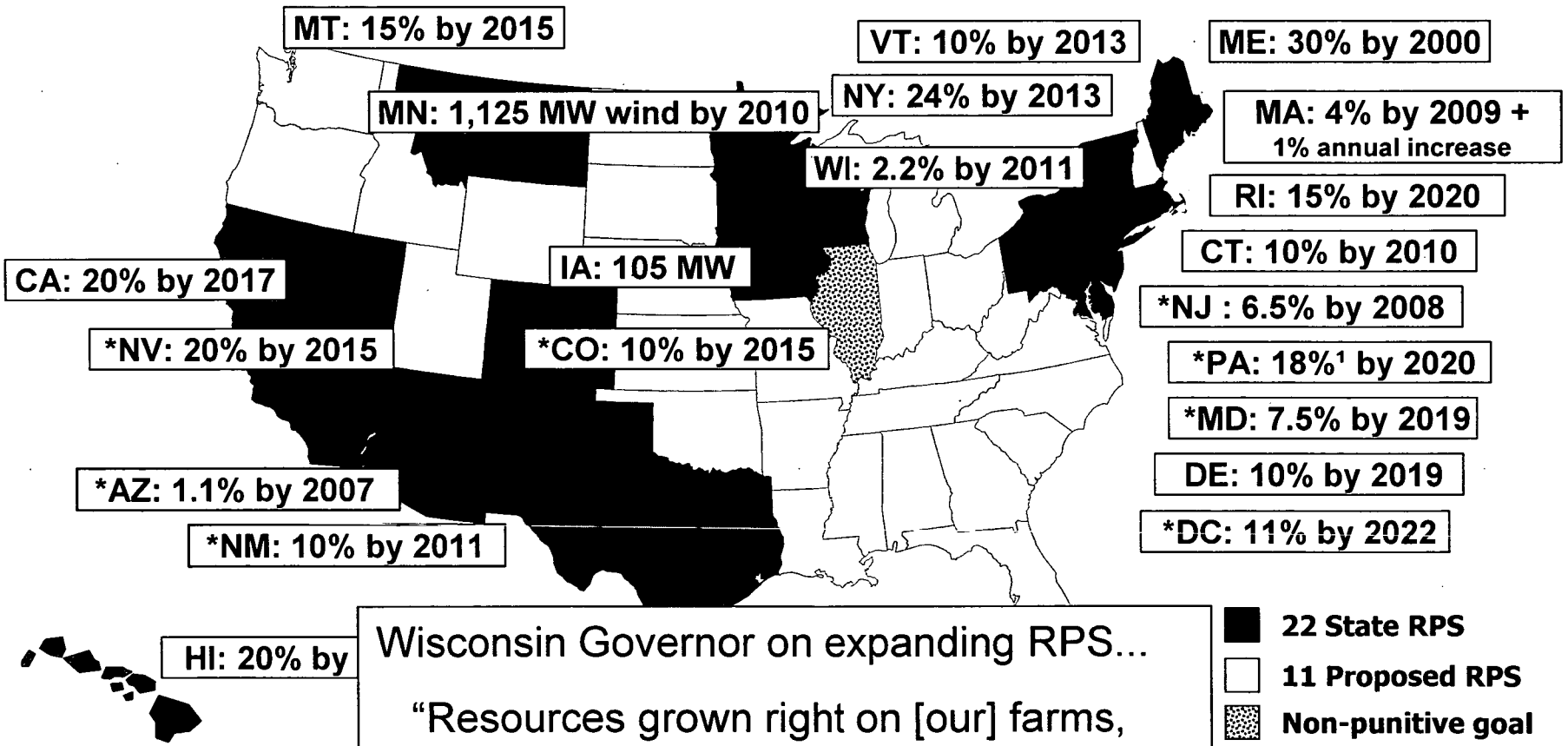
- We not only need to make our electric use more efficient...

- We need to start *generating* electricity more sensibly! ...

DSIRE: www.dsireusa.org

August 2005

Renewables Portfolio Standards



Wisconsin Governor on expanding RPS...

"Resources grown right on [our] farms, ...energy independence...keep our energy dollars in our local economies...create more good jobs right here."

Benefits of an RPS for NC

- Economic (net gain) Benefits
  - Lower rate impact than new nuclear + coal!
  - 3,000+ net jobs per year
  - $1.5 billion more in wages through 2017
  - $2.7 billion increase in Gross State Product
  - Keeps more $'s circulating in NC economy
- Social Benefits
  - Creates local wealth statewide; close to the land
  - Strengthens rural counties
- Environmental Benefits
  - Helps resolve hog and poultry waste/pollution issues
  - Improves air and water quality
  - Reduces NC's CO_2 emissions by several million metric tons

Is NC a Leader...or Economic Loser?

Will North Carolina lead the South? What's at stake?

- Rural re-industrialization, energy independence, farming heritage, higher wages, more jobs in more counties, more investments in NC
- North Carolina biomass expertise *unrealized*

United States

- Installed renewable energy capacity up 25+% to 24,020 MW from January 2005 to 2006.
- 48,202 MW more renewable capacity planned
- RPS in 21 states and the District of Columbia require **52+ GW** of renewables by 2020
- Up to $53 billion in new investment by 2020

Nuclear and Coal cost more than Biomass

Fuel (cents/kwh)	US DOE	Progress Energy
Nuclear	5.71	3.93
Coal	4.96	4.18
Natural Gas	4.97	6.13

Source: Raleigh N&O. "Putting a Price on Nuclear Power." February 19, 2006.

- 1 Shearon Harris reactor = 16% rate increase
- Rates already up to cover coal, natural gas
- RPS total rate impact over 10 years, between 2% and 10% for equivalent energy
- More jobs, more affordable, less risk if add energy efficiency

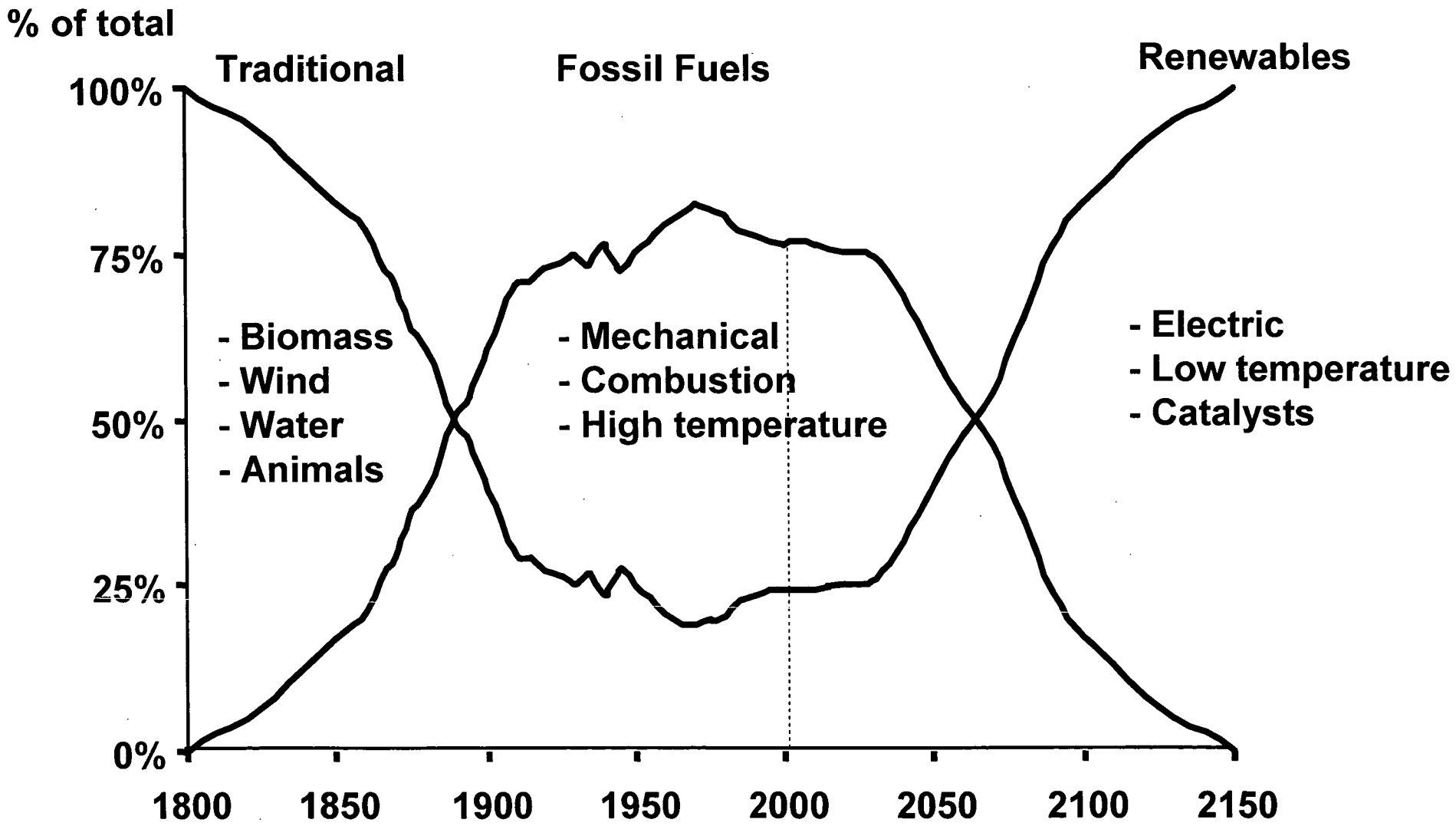
Nuclear & Coal v. Efficiency and Renewables

- Proposed: 5 nuclear, 2 coal, many natural gas = up to 10,000 MW
  - Progress underestimating cost by at least 45%!
- 5 nuclear reactors and 2 coal plants (> 10,000 MW) could cost more than $10 billion
- High financial risks, uncertainties, costs
- Only 50 years of nuclear fuel if no reprocessing
- A NC 10% Renewable Portfolio Standard (2,800 MW), including efficiency could cost between $500 million and $2 billion

Bottom line:

- RPS with energy efficiency much more affordable, probably cost less than one nuclear plant.

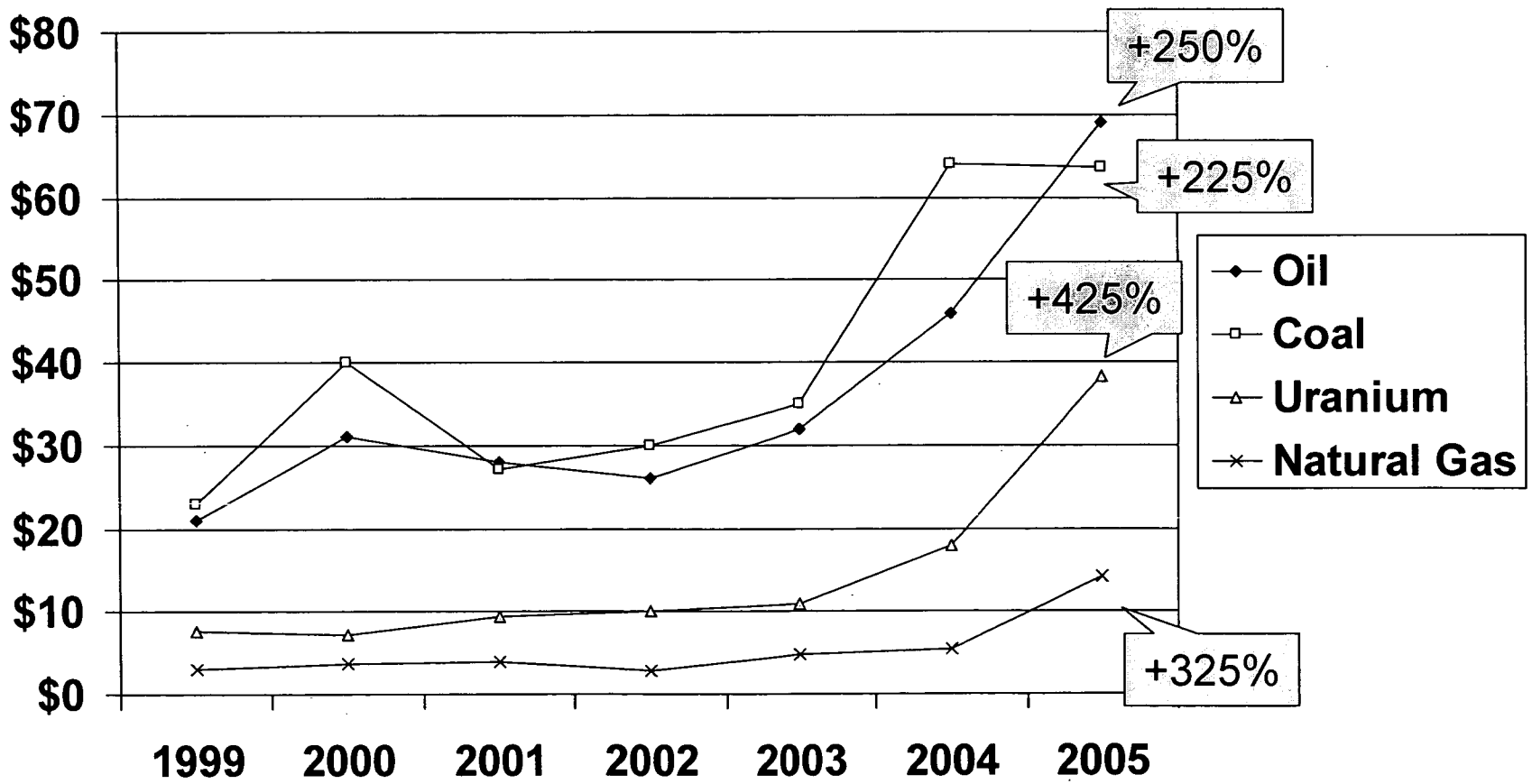
The Fossil Fuel Era is Ending



Source: Ewald Breunesse, Shell Netherlands, 14th IAMA Annual World Conference, Montreux, June 14th 2004

Inefficiency and Lack of Innovation Is Costing Us More

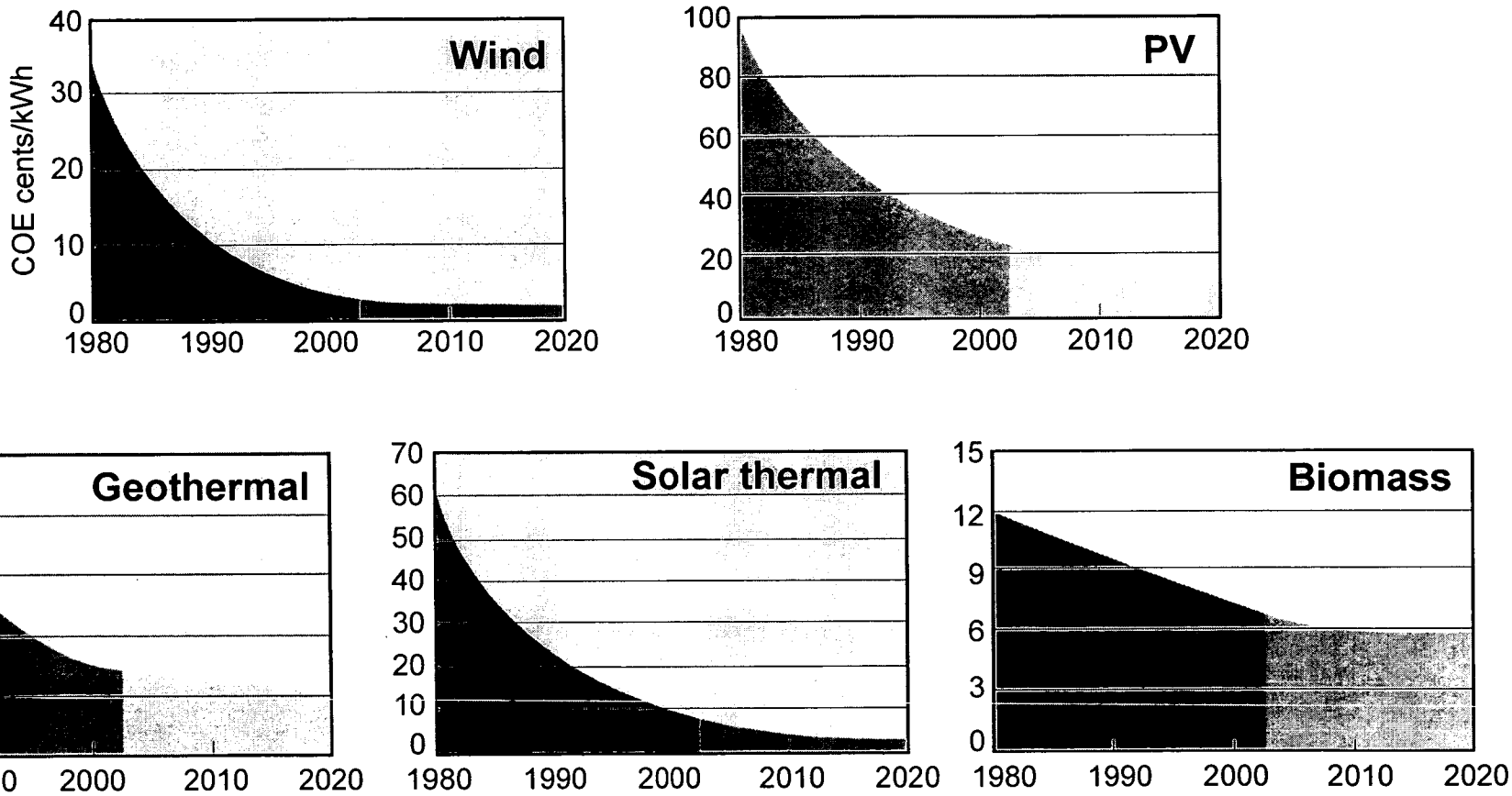
What do we gain from dependence on imported, volatile, expensive energy?



Sources: Aggregated from US Energy Information Administration Fuel Price Weeklies and Uranium Spot Market

Renewable Energy Cost Trends

Levelized cents/kWh in constant $2000[1]



Source: NREL Energy Analysis Office (www.nrel.gov/analysis/docs/cost_curves_2002.ppt)
[1]These graphs are reflections of historical cost trends NOT precise annual historical data.
Updated: October 2002

Biomass + Renewables = Rural Jobs

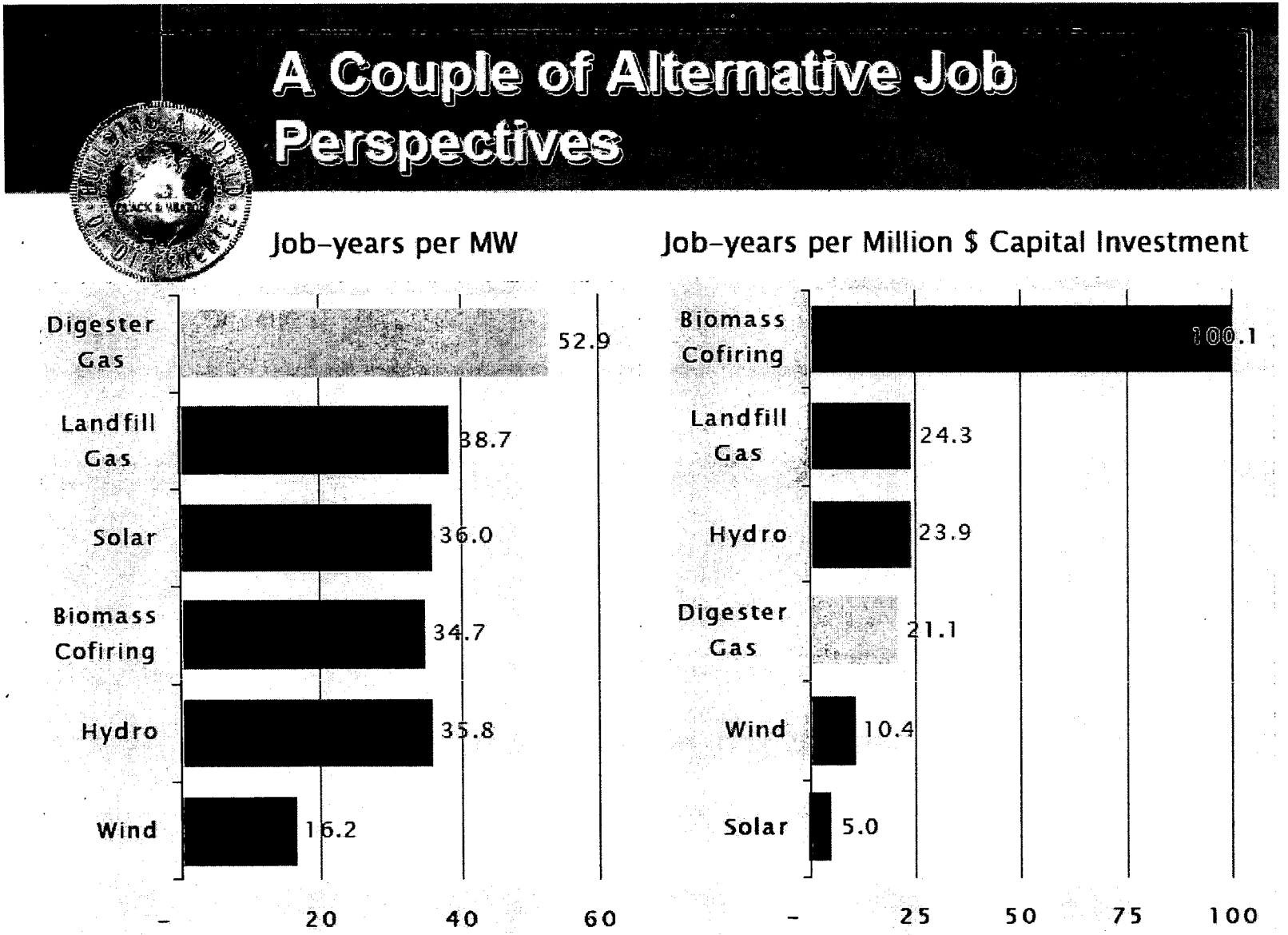
	Employment Impact	Earnings Impact	Output Impact
RPS Portfolio	129,439	$4.7 Billion	$15.5 Billion
BAU Portfolio	44,272	$1.9 Billion	$5.4 Billion
Difference	85,167	$2.8 Billion	$10.1 Billion

- We have abundant biomass and renewable resources

We need...

- New rural jobs and industry
- Jobs in 85 rural counties, not just a few
- To keep more money in local economy
- Higher wages

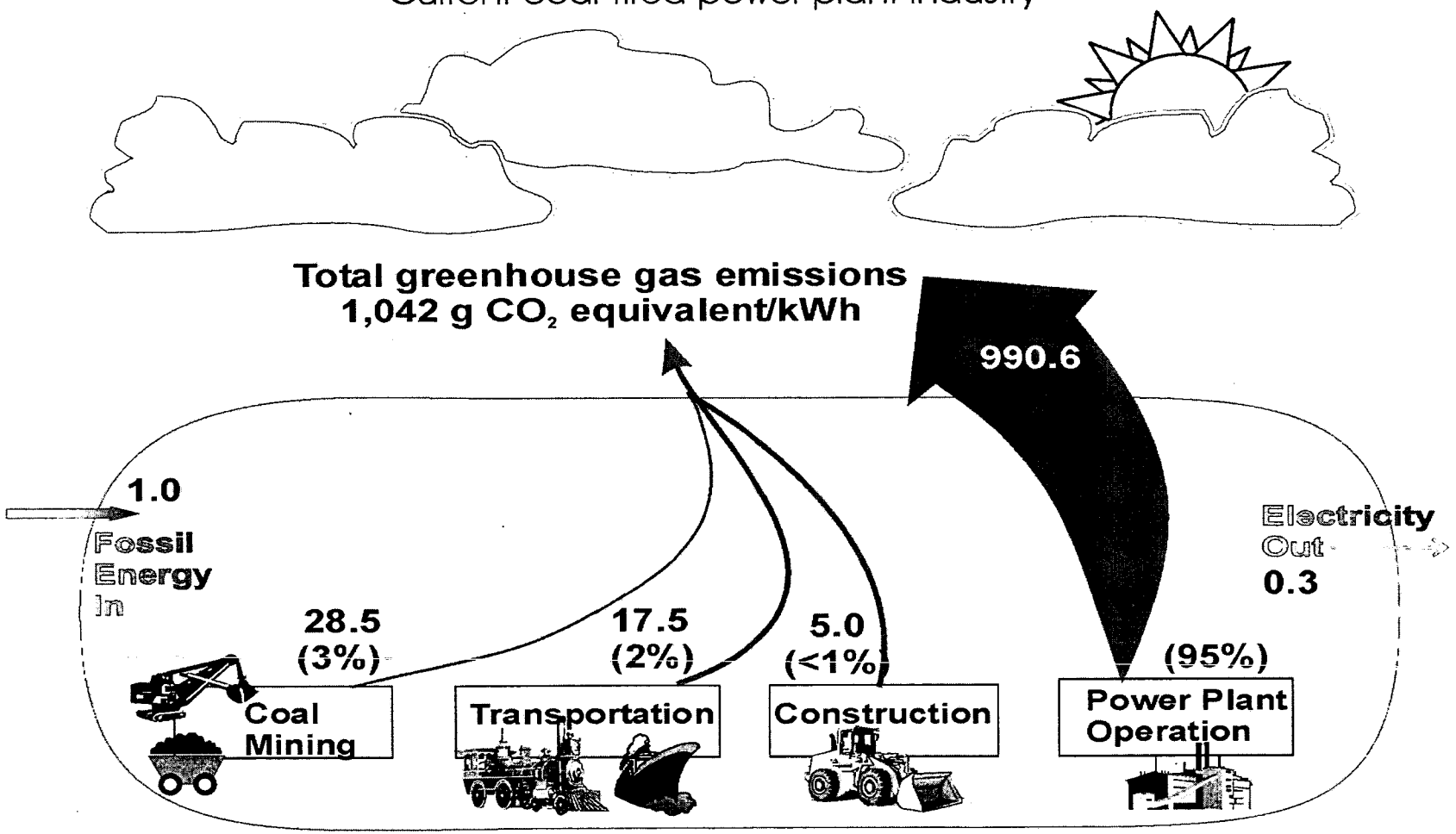
Estimated job impacts of RPS in Pennsylvania



Source: Black & Veatch. "Assessment of Potential Impacts of RPS in Pennsylvania." June, 2004.

Life Cycle GWP and Energy Balance for a Coal-fired Power System

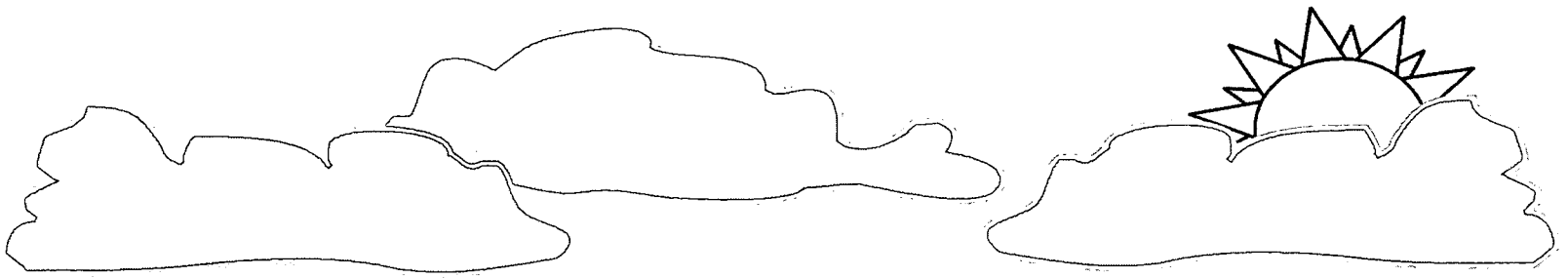
Current coal-fired power plant industry



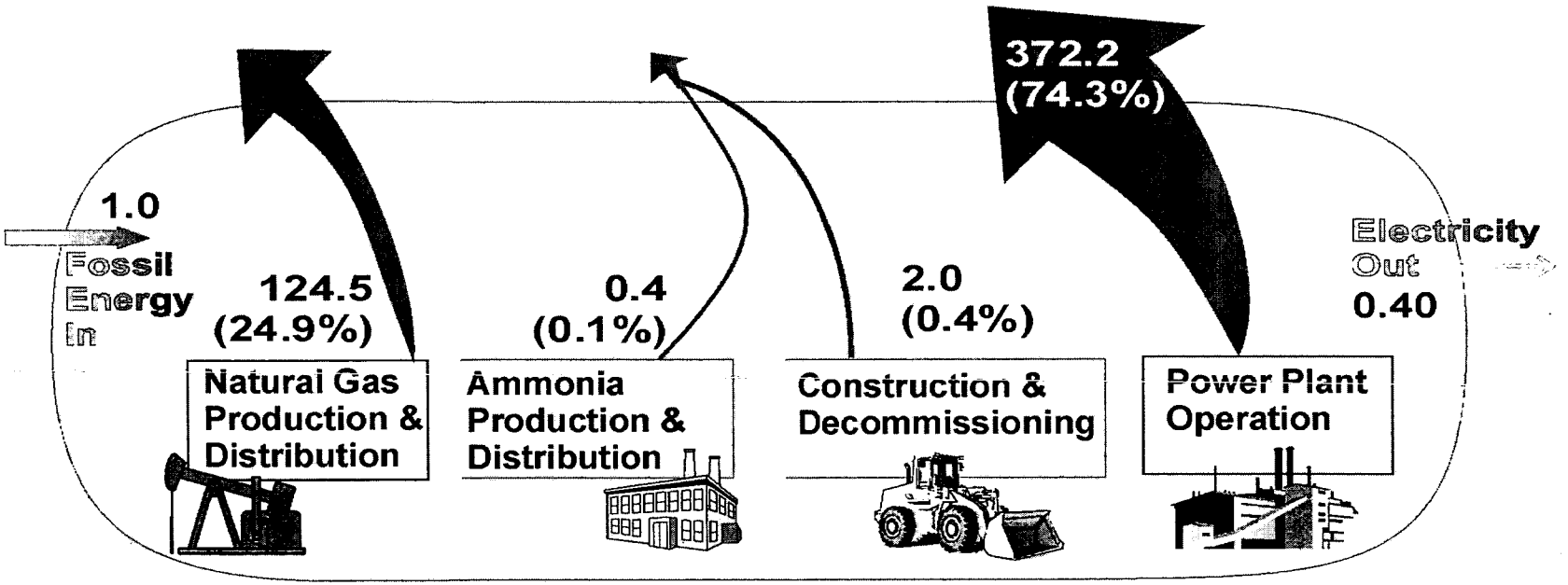
Coal Power System

0% carbon closure

Life Cycle GWP and Energy Balance for a Natural Gas Combined-Cycle System



Net greenhouse gas emissions
499.1 g CO_2-equiv/kWh of net electricity produced

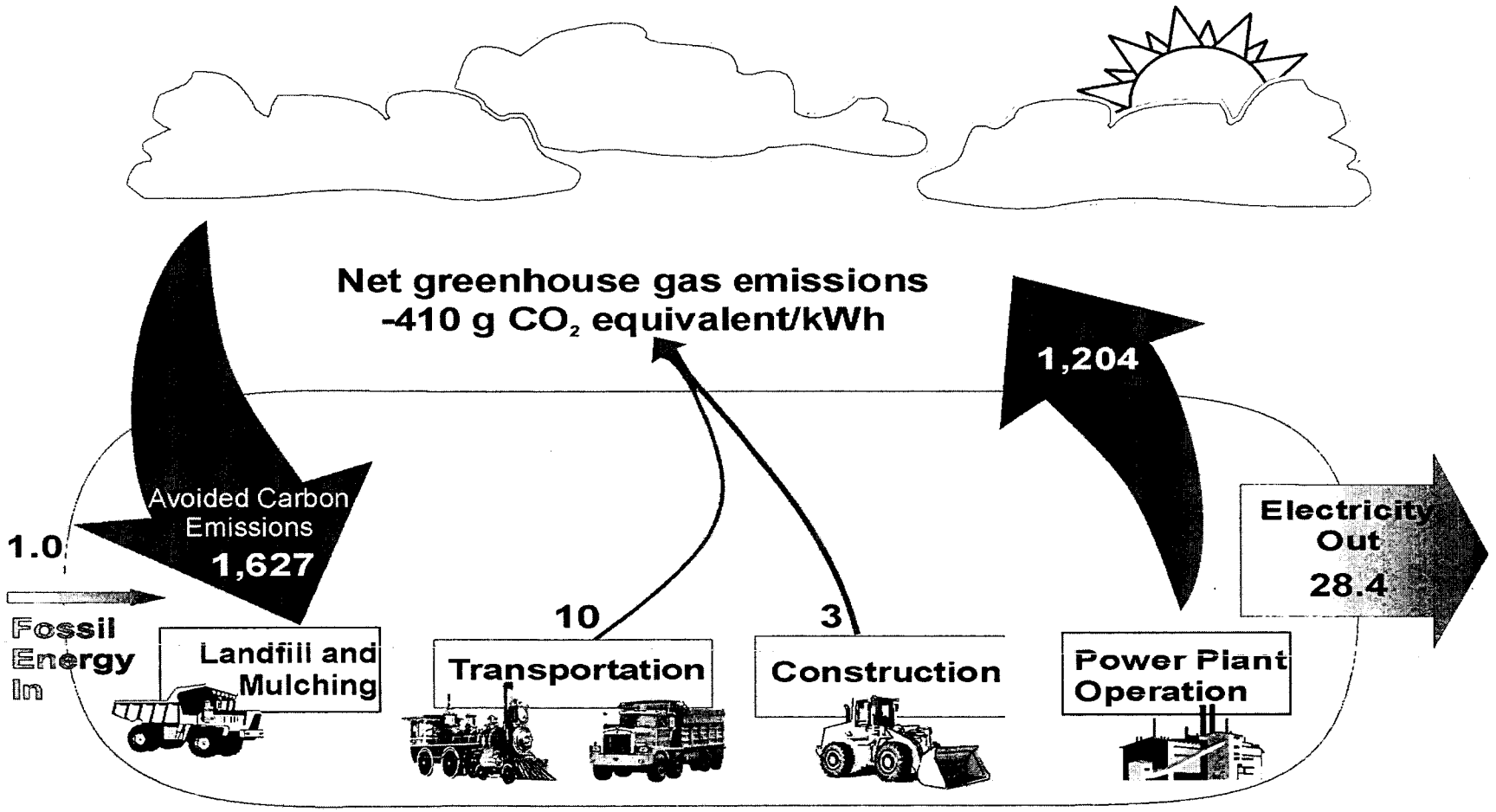


Natural Gas Combined Cycle System

0% carbon closure

Life Cycle GWP and Energy Balance for a Direct-Fired Residue-Biomass Power System

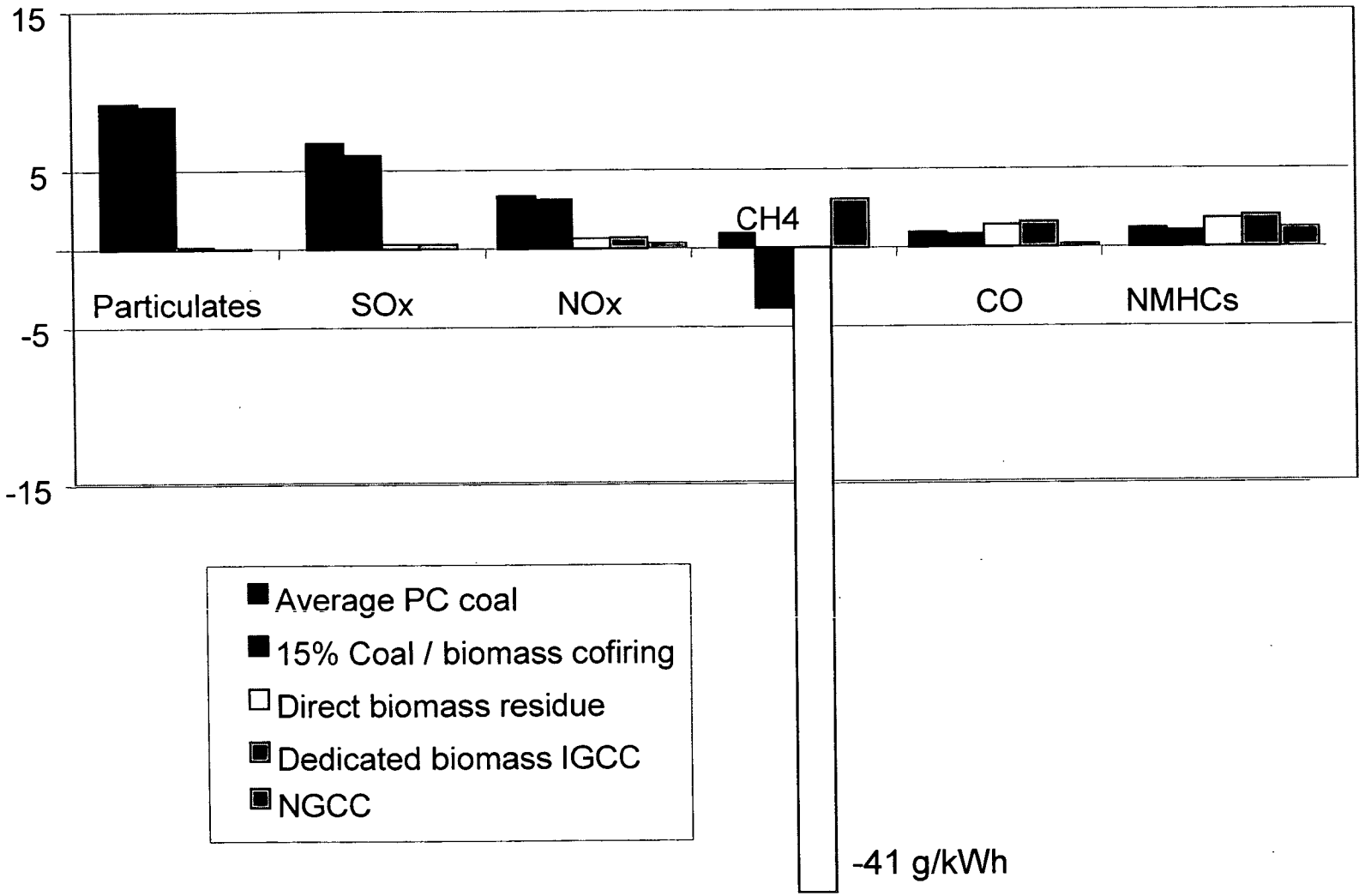
Current biomass power industry



Direct-Fired Biomass Residue System

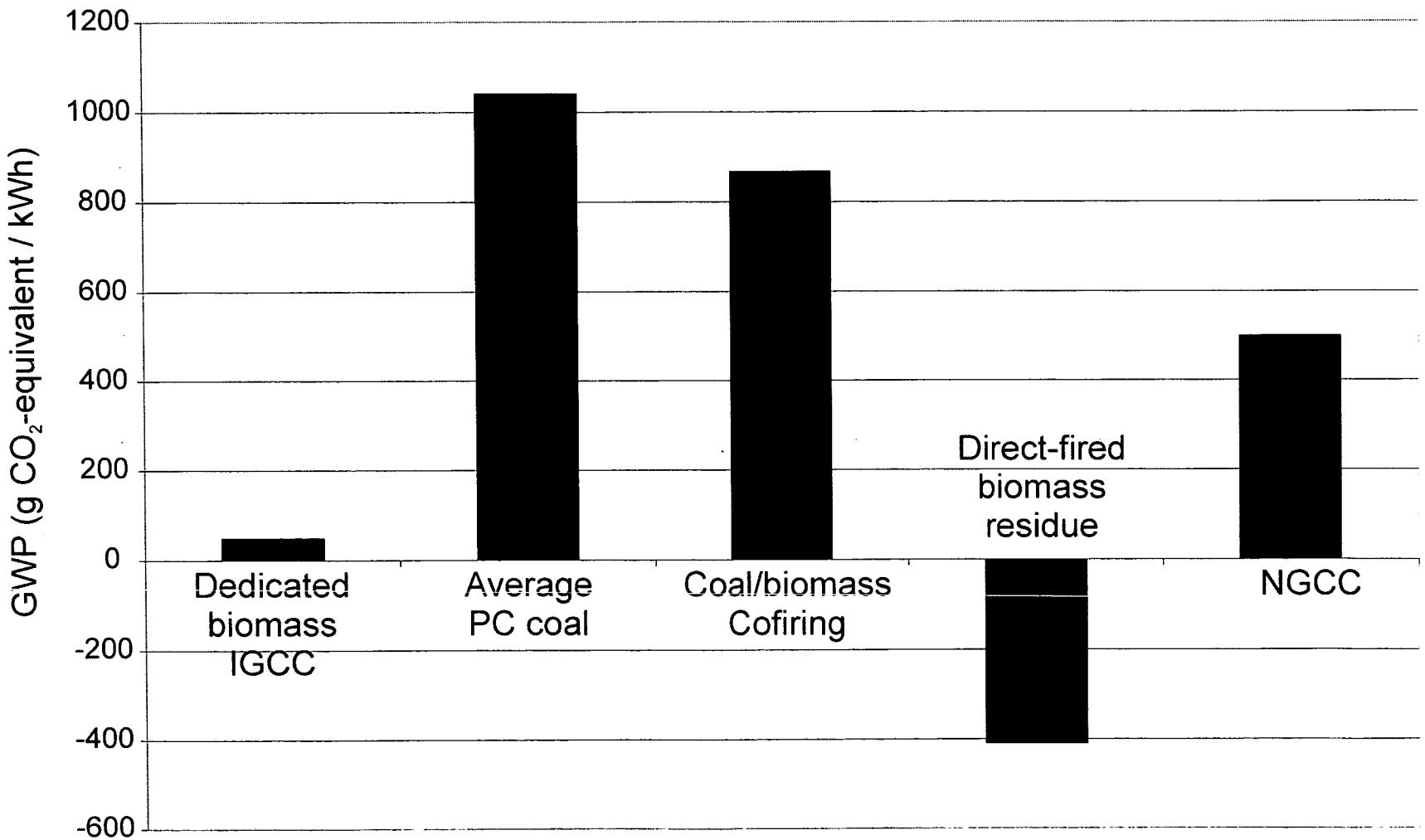
134% carbon closure

Other Air Emissions



Biomass IGCC also emits isoprene at 21 g/kWh

Life Cycle Greenhouse Gas Emissions



Summary

Greenhouse Gases:

- Biomass IGCC nearly zero net GHGs
- Average coal system: ~1,000 g CO_2-equiv/kWh
- NGCC system: ~500 g CO_2-equiv/kWh
- Today's biomass systems remove GHGs from atmosphere

Energy:

- Coal and natural gas: negative system energy balance
- Even neglecting the energy content of coal and natural gas, biomass systems are more energy efficient
- NGCC: natural gas extraction and losses account for 21% of total energy

Air emissions:

- Biomass: few particulates, SO_2, NOx, and methane
- Coal: upstream CO and NMHC emissions lower
- NGCC: system methane emissions high

Resource consumption: Biomass systems << fossil systems

Cofiring:

- 15% cofiring reduces GWP of coal system by 18%
- Reduction in emissions, resource consumption, and energy use

2006 Energy Policy Options

- **Separate Utility Profit from Revenue => more energy efficiency + renewable energy**
  - Utilities are regulated monopolies, guaranteed profit, but act competitive
  - Business-as-usual will cause job losses statewide, due to higher energy prices, no efficiency, rejected rural industrial economic development opportunities
  - Prices going up no matter what, put the money back in NC

- **Integrated Resource Planning docket, E-100, Sub 103**

- **NC Global Warming Legislative Study Commission**

- **Energy Efficiency to meet base load needs**
  - S402/H454 Water/Utilities Savings Initiative
  - S190/H445, Income Tax Credit for Energy Efficient Homes
  - Buy-in from all areas of political leadership

2006 Energy Policy Opportunities

- **Omnibus Energy Bill – will decide to either support or oppose at beginning of session**
  - State Energy Office and University Energy Centers
- **Renewable Portfolio Standard (RPS), H1511, S1085**
  - RPS Cost-Benefit Study by NCUC, up to $200,000, due Nov. 2006
  - Promotion of Biomass Energy Act, stalled
- **Moratorium on new coal and nuclear plants until evaluate and commit to great energy efficiency and use of renewable energy**
  - Must adapt to global energy changes to keep power affordable
- **Interconnection Standards docket, E-100, Sub 101**
  - 2 years to get part-way
  - Solar Center runs national Interconnection newsletter, are national experts
- **Net Metering Rule docket, E-100, Sub 83**
  - 7 years to get part-way
- **NCUC online: http://www.ncuc.commerce.state.nc.us/**

Thank you!

Ivan Urlaub
Executive & Policy Director,
NC Sustainable Energy Association
Raleigh, NC

Commissioner, NC Global Warming Study Comm.
National Policy Chair and Board of Directors, ASES

(919) 832-7601 (office/fax)
ncseapolicy@mindspring.com
www.ncsustainableenergy.org

INCLUDING PRECISION FARMING IN THE NC AGRICULTURE COST SHARE PROGRAM

David B Williams

Chief of Nonpoint Source Section

Division of Soil and Water Conservation

NCDENR

NORTH CAROLINA SOIL & WATER CONSERVATION

Cost Share Incentive Payments

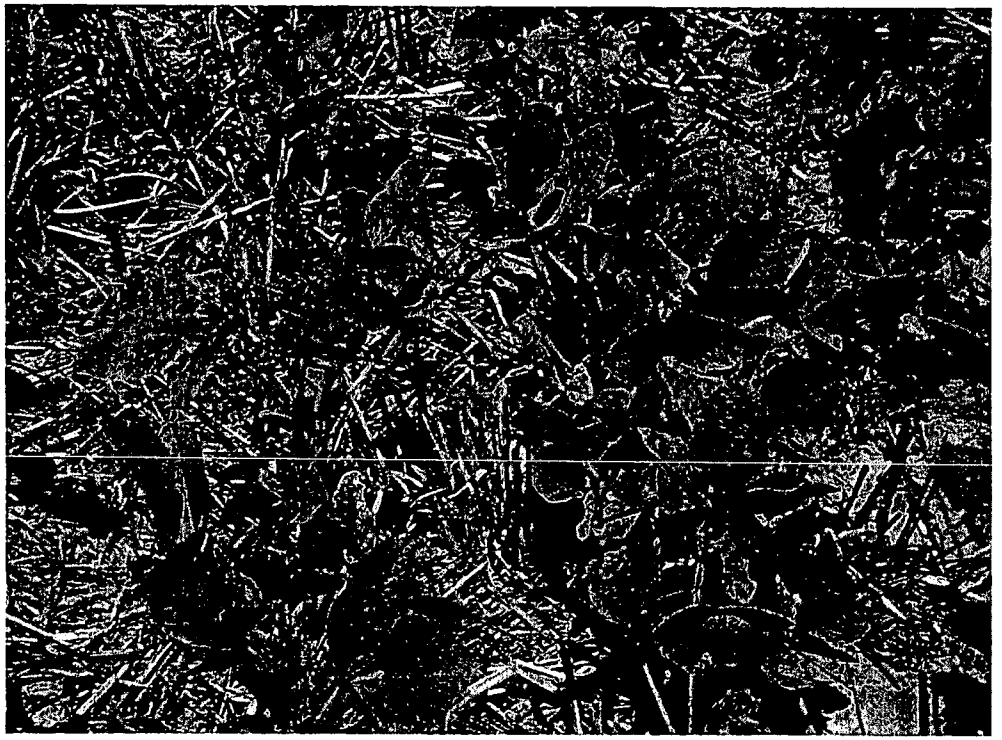
- A predetermined fixed annual payments paid to an applicant for implementing a BMP in lieu of full 75% cost share

Examples:

•Long term No-till

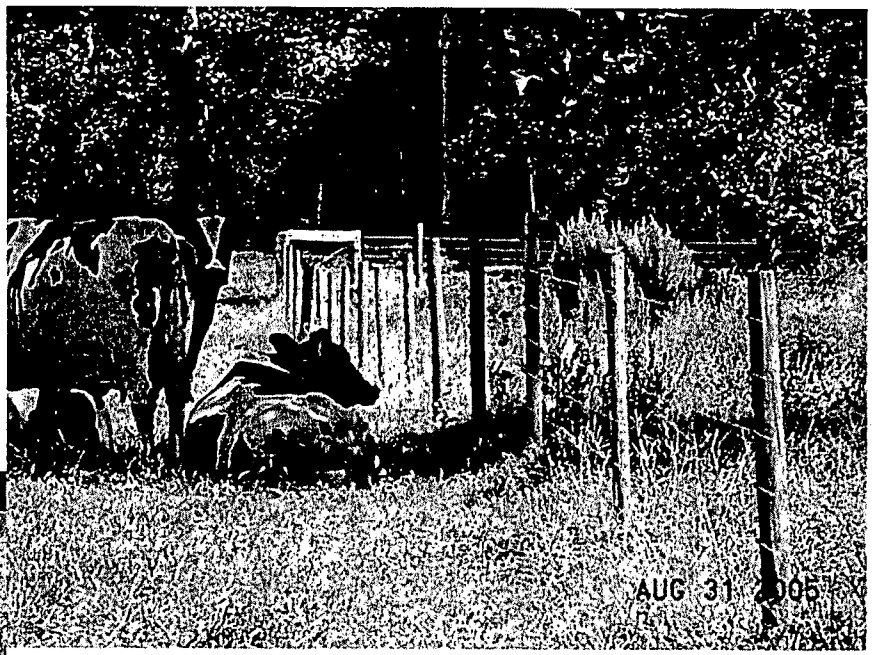
•Nutrient Management

•Sod Based Rotation



Average Cost Payments

- Payments of 75% of the average costs directly associated with the installation of a BMP.

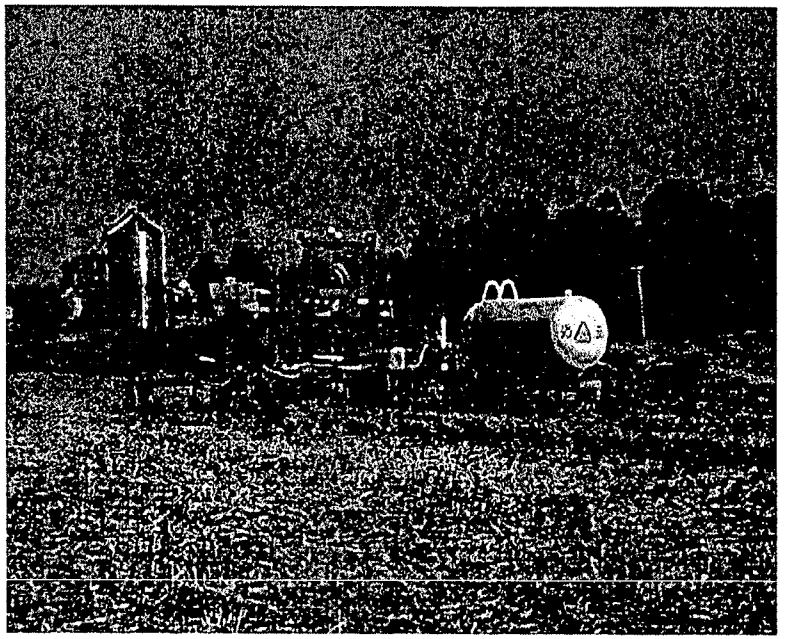


Examples include:

Water Control Structures
Livestock Exclusion
Riparian Buffers

Precision Farming Workgroup

- Began meeting in June 2005
- Workgroup Participants
  - Two NCSU Professors
    - Department of Soil Science
    - Bio. and Ag. Engineering
  - NCDA - Agronomist
  - NC Cooperative Extension Service
  - USDA-NRCS District Conservationists (2)
  - Soil and Water Conservation District Representative
  - Farmers

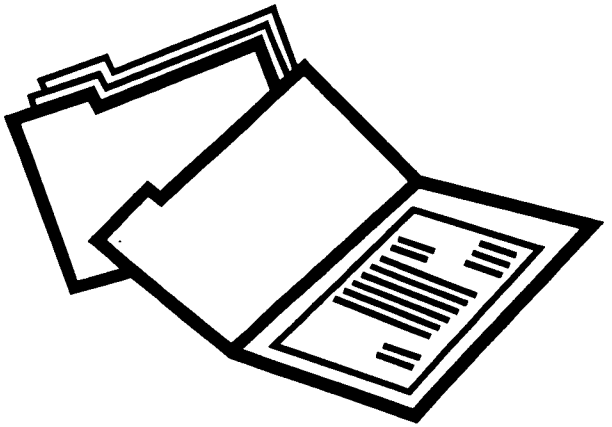


Proposed Tiered Nutrient Management Incentive

- Similar to Virginia's Multi-Layered Nutrient Management Approach
- Tier I - Nutrient Management Plans
- Tier II - Nutrient Management Plans
  + Grid Soil Sampling
  + Variable Rate Application
- Tier III – Nutrient Management Plans
  + Grid Soil Sampling
  + Variable Rate Application
  + Yield Monitoring

Proposed Tiered Nutrient Management Incentive

- Tier I – Nutrient Management Plans
  - Currently being implemented
  - Written plan based on realistic yield expectations, soil types and crops planted
  - Generic in terms of taking the predominant soil type of each field.

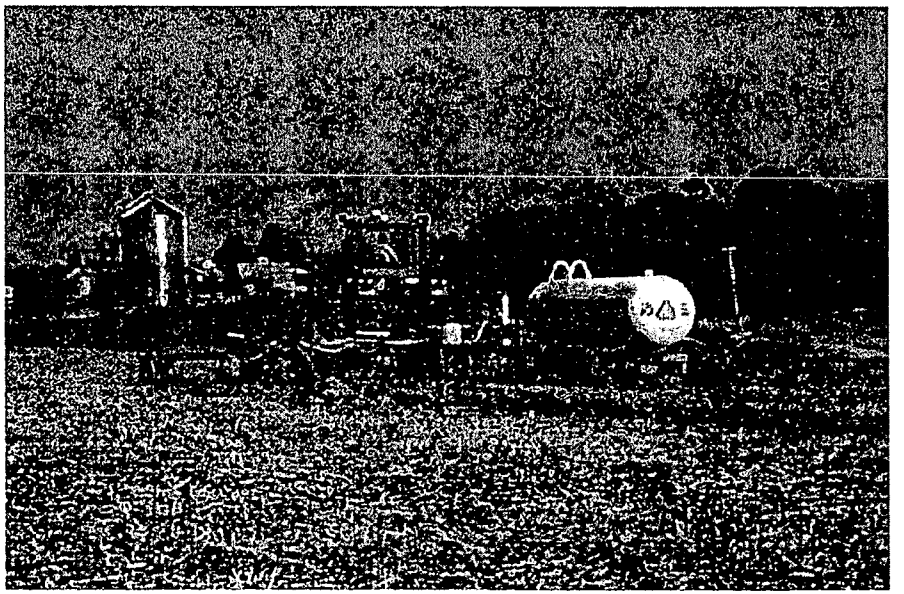


Proposed Tiered Nutrient Management Incentive

Tier II – Nutrient Management Plans
+ Grid Soil Sampling
+ Variable Rate Nutrient Application

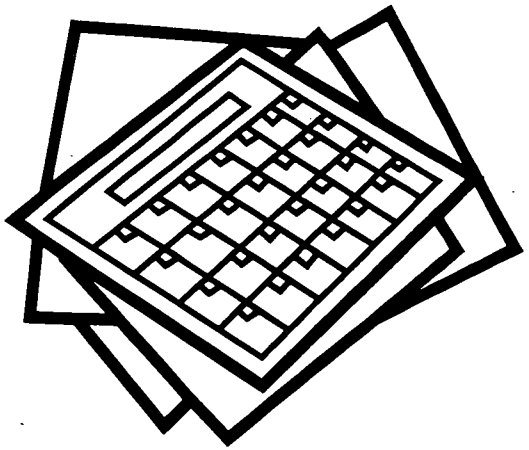
– GPS-based grid soil sampling will provide an accurate representation of the field

–Variable rate application of nitrogen and phosphorus will further reduce excess nutrients from entering surface waters.



Proposed Tiered Nutrient Management Incentive

- Tier III – Nutrient Management Plans
  + Grid Soil Sampling
  + Variable Rate Application and
  + Yield Monitoring
  - GPS-based yield monitoring records will enable the farmer to adjust precision nutrient application plans based on the actual production of the fields instead of general recommendations based on soil type.



Next Steps

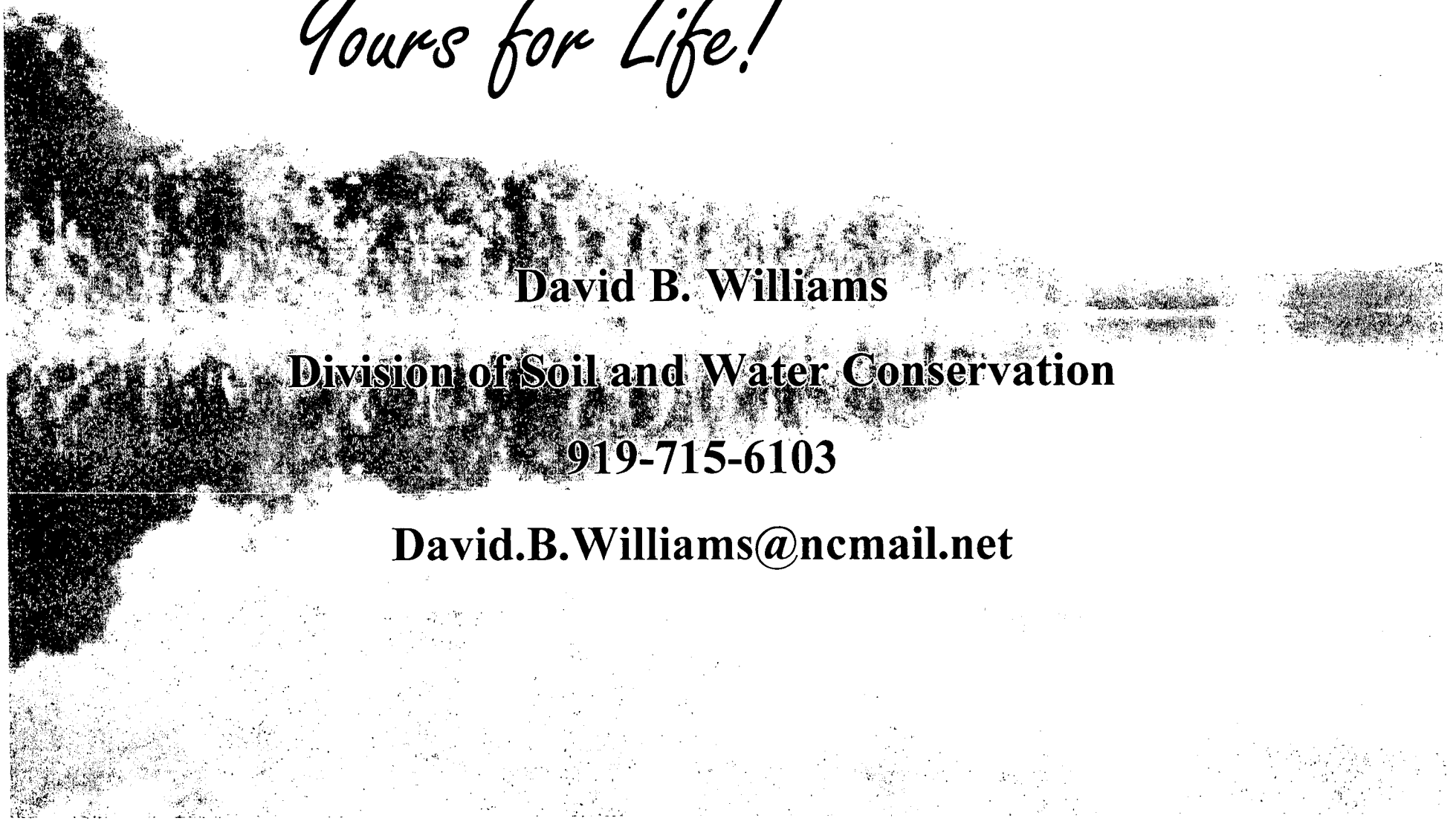
- March - Workgroup will meet again to finalize incentive cost payments
- May - Present to the Technical Review Committee
- May - Request approval by the Soil and Water Commission
- July - Available to offer to farmers Conduct Education and Outreach

Current TRC Workgroups

- Controlled Drainage for Tile Drains
- Water Conservation for Animal Operations
- Offsite Poultry Litter Utilization
- Abandoned Well Decommissioning
- Aquaculture BMPs
- Nursery BMPs/Integrated Pest Mgmt.
- Tailwater Recycling
- Conservation Tillage

Soil and Water

Yours for Life!



David B. Williams

Division of Soil and Water Conservation

919-715-6103

David.B.Williams@ncmail.net

North Carolina Department of Environment and Natural Resources
Division of Soil and Water Conservation

Michael F. Easley, Governor
William G. Ross Jr., Secretary
Manly Wilder, Director

Proposed Tiered Nutrient Management Incentive

North Carolina Agriculture Cost Share Program

Tier I — Nutrient Management

Tier II

Nutrient Management
+ Grid Soil Sampling
+ Variable Rate Application of Nitrogen and Phosphorus

Tier III

Nutrient Management
+ Grid Soil Sampling
+ Variable Rate Application of Nitrogen and Phosphorus
+ Yield Monitoring

Variable Rate Application for Nitrogen: recommendations must be based on state realistic yield expectations or the average of the highest three yield of the last five consecutive specific crop harvest.

Variable Rate Application for Phosphorus and Lime: recommendations shall be based on the soil test results.

1614 Mail Service Center, Raleigh, North Carolina 27699-1614
Phone: 919–733-2302 \ FAX: 919–715-3559 \ Internet: www.enr.state.nc.us/DSWC/

New Directions in Energy and the Environment

Joint Legislative Commission on
NC Agriculture & Forestry Awareness
March 2, 2006

Alex Hobbs, PhD, PE
NC Solar Center
www.ncsc.ncsu.edu

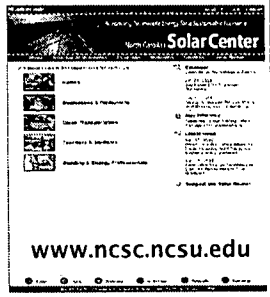
USDA Rural Development

State Energy Office Energy

North Carolina Solar Center

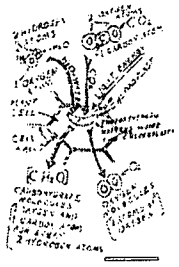
An Inclusive Interest in Energy Efficiency and Renewable Energy

- **Solar** (photovoltaics, solar hot water, passive solar, daylighting)
- **Wind**
- **Biomass** (animal waste, energy crops, landfill gas)
- **Biofuels** (ethanol, biodiesel)
- **Hydrogen & Fuel Cells**
- **Green Buildings & Sustainable Design**
- **CHP & Distributed Generation**
- **NC Industries of the Future**



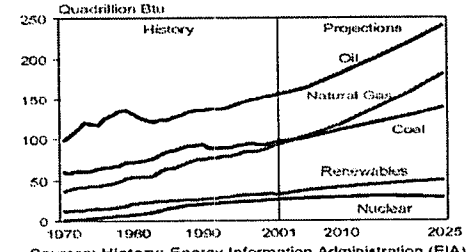
Living within our energy budget

$$6\,CO_2 + 6\,H_2O + \text{Sunlight} \xrightarrow{\text{nutrients}} (CH_2O)_6 + 6\,O_2$$



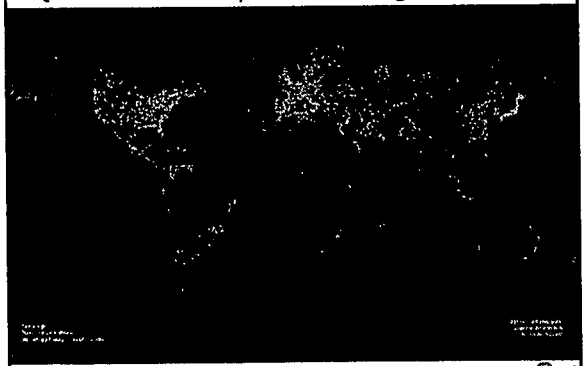
- Photosynthesis recovers 3 to 6% of the solarization and stores it as biomass
- Photosynthesis captures **15,000** times as much energy as the current global consumption rate
- US has over 1 billion dry tons of continuously sustainable biomass available for use

World energy consumption ~400 Quads

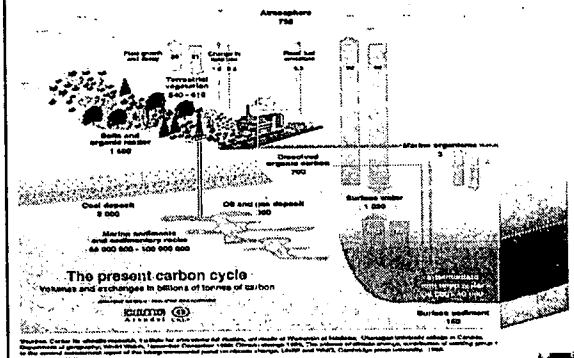


Sources: History: Energy Information Administration (EIA), *International Energy Annual 2001*, DOE/EIA-0219(2001) (Washington, DC, February 2003), web site www.eia.doe.gov/iea/. Projections: EIA, System for the Analysis of Global Energy Markets (2003).

Quick overview of who is using the energy



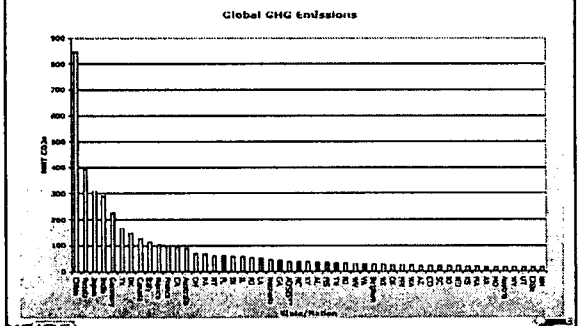
Carbon balance



6

World's 50 largest GHG producers

States = 34 of top 50 Global Emitters



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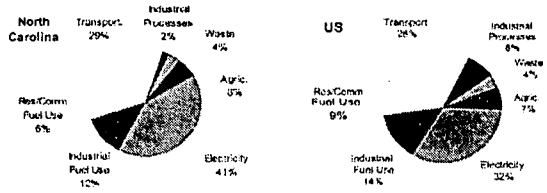
GHG emissions

- Electricity use and transportation are principal GHG emissions sources:
  - NC = 70% of state total; U.S. = 58% of national total



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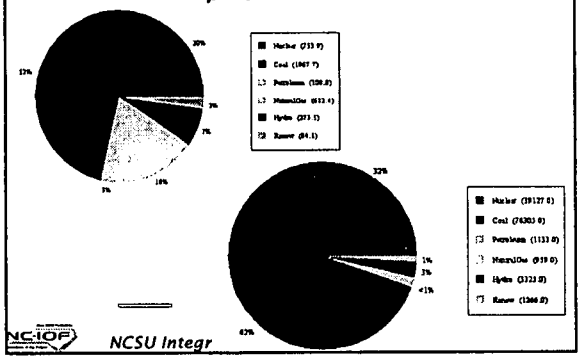
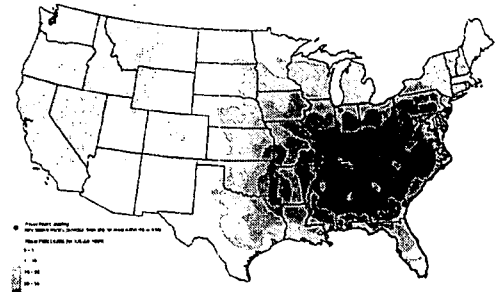
Current fuels for electrical production



NCSU Integr

Southeast has relatively cheap power

Risk of dying from coal fired power plant caused particulates



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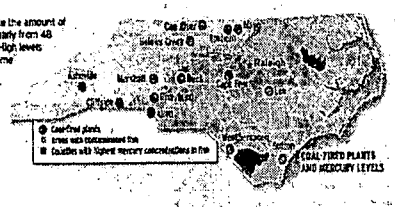
And there are other emission issues

EPA sets mercury limits

New EPA regulations would reduce the amount of mercury emitted into the air annually from 48 tons to 15 tons by the year 2018. High levels of mercury have been found in some species of fish in Eastern North Carolina, leading to health advisories on eating three species of freshwater and six species of saltwater fish



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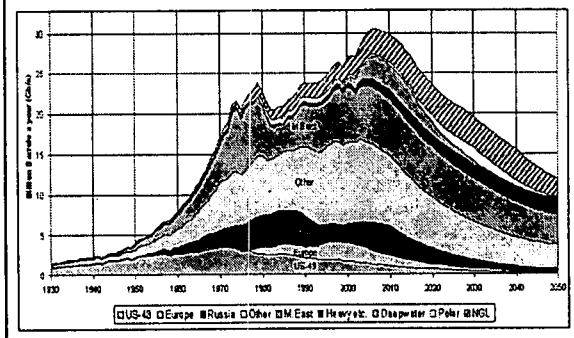
Hubbert's peak worldwide



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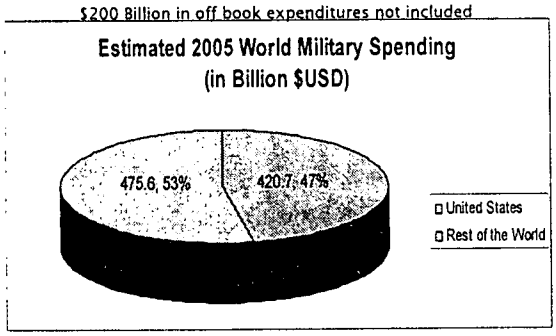
One approach to continued petroleum access

$200 Billion in off book expenditures not included



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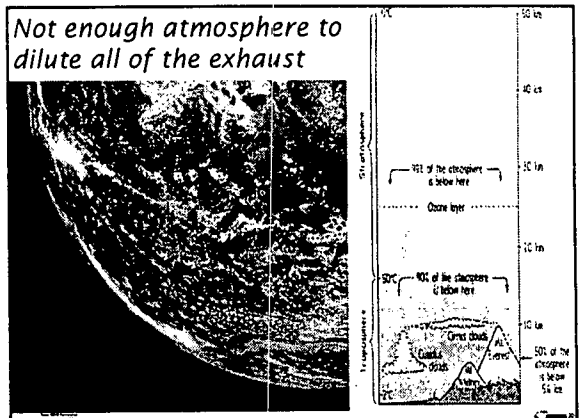
Not enough atmosphere to dilute all of the exhaust



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Let's pause for a moment

- Fossil fuel power plants are about 1/3 of the GHG problem, transportation is about 1/3 and agricultural and direct use the other 1/3
- At current energy prices and usage rates NC sends $20 billion/yr out of state to purchase fossil fuel ... coal, petroleum and natural gas
- NC ranks 49th nationally in expenditures on energy efficiency relative to energy purchases on a per capita basis

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Are renewable resources a potential solution?

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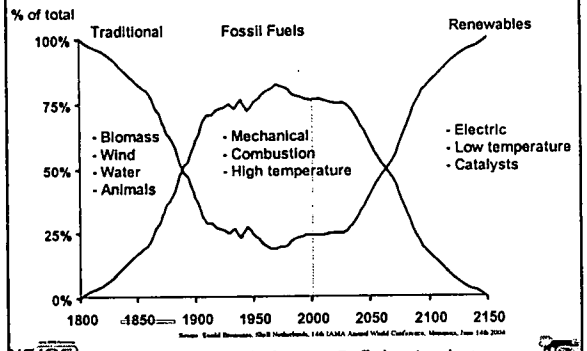
The Fossil Fuel Era worldwide



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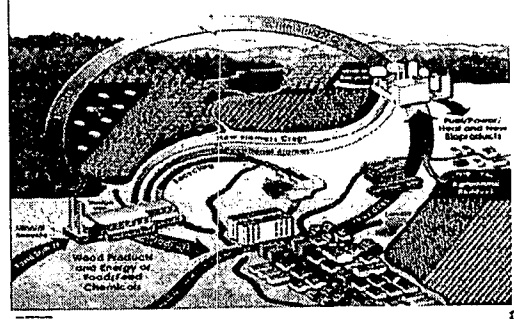
Carbon production cycle based on agricultural biomass for production of hydrocarbon based energy and products



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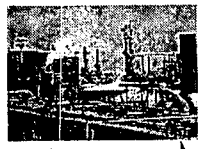
Biomass Policy Drivers

- Rural Development
- Climate Change Mitigation
- Energy Security

How do we replace fossil fuel based energy, fuels and products with home grown biobased materials?

The New Industrial Biorefinery



Biomass Feedstock

- Trees
- Grasses
- Agricultural Crops
- Agricultural Residues
- Animal Wastes
- Municipal Solid Waste

Conversion Processes

- Enzymatic Fermentation
- Gas/liquid Fermentation
- Acid Hydrolysis/Fermentation
- Gasfication
- Combustion
- Co-firing

USES

Fuels:
- Ethanol
- Renewable Diesel

Power:
- Electricity
- Heat

Chemicals
- Plastics
- Solvents
- Chemical Intermediates
- Phenolics
- Adhesives
- Furfural
- Fatty acids
- Acetic Acid
- Carbon black
- Paints
- Dyes, Pigments, and Ink
- Detergents
- Etc.

Food and Feed

Disadvantages of Biomass

- Coal has an energy content of 950,000 BTU/ft^3
- Wood has an energy content of 260,000 BTU/ft^3
- A biomass fired generation plant would need to burn 3.7 times the volume of fuel that a comparable coal fired plant would require

Advantages of Biomass

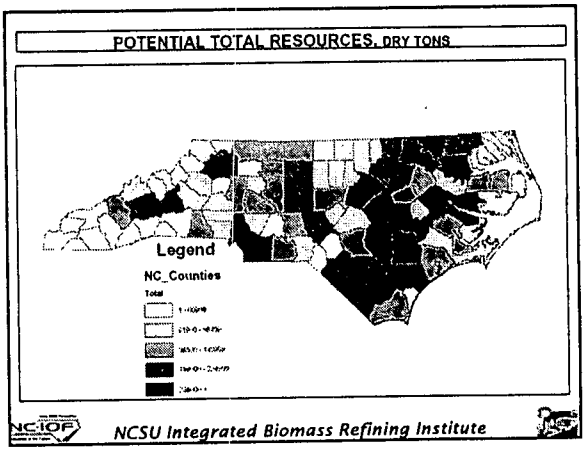
- Crude Oil => $60 / barrel
- Natural Gas => $10 / 1000 cf

  Three times the price of
- Woody Biomass => $50 / dry ton
- On a BTU basis at these prices, biomass resources are available for approximately on third the cost of oil and gas

Biomass Supply Study ORNL's County Level for NC

- Agricultural Waste
  - Corn Stover
  - Wheat Straw
- Energy Crops
  - Switchgrass
  - Hybrid Poplar
- Urban Waste
  - Construction Waste*
  - Demolition Waste*
  - Renovation Waste*
  - Municipal Solid Waste*
- Forestry Waste
  - Hardwood Logging Residues
  - Softwood Logging Residues
  - Hardwood Cull Residues
  - Softwood Cull Residues
  - Bark from Mills*
  - Fine Wood from Mills*
  - Coarse Wood from Mills*

* - No price information



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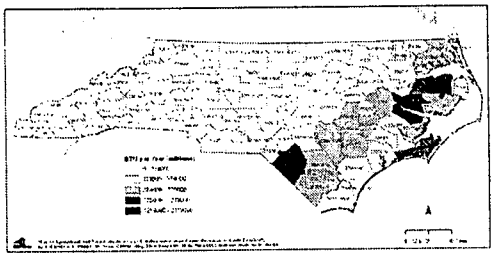
Agricultural Waste Thermal Fuel Value

Available yearly statewide at $50/dryton	17.2×10^{12} Btu/yr	574 Mw_t



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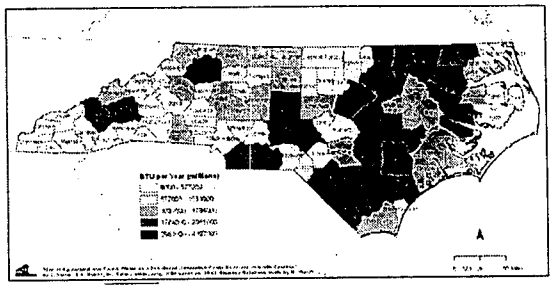
Forest Waste Thermal Fuel Value

Available yearly statewide at $50/dryton	142×10^{12} Btu/yr	4751 Mw_t



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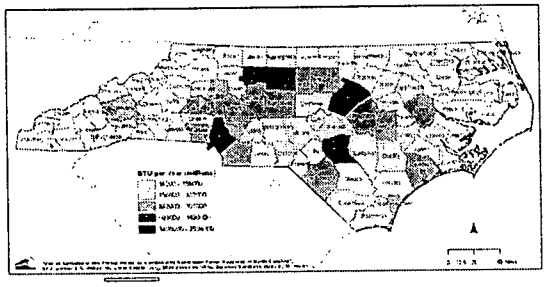
Urban Waste Thermal Fuel Value

No set price	30×10^{12} Btu/yr	998 Mw_t



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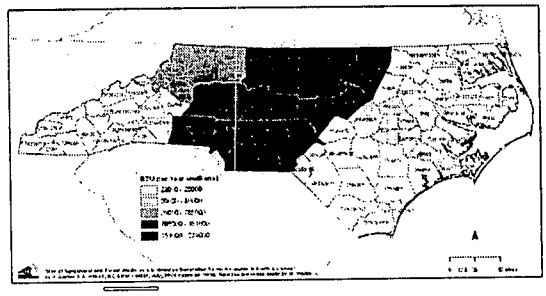
Energy Crops Thermal Fuel Value

Projected production	9.7×10^{12} Btu/yr	326 Mw_t



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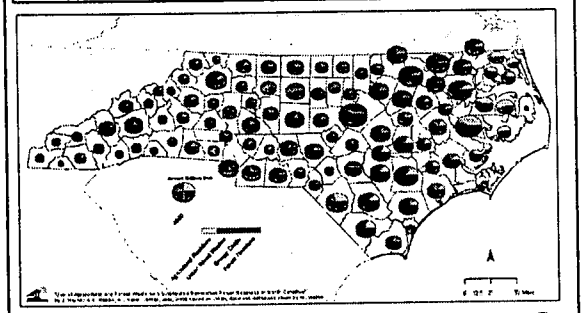
Total Biomass Thermal Fuel Value

199×10^{12} Btu/yr	6650 Mw_t	1662 Mwe



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Top 10 Biomass Counties

County	Dry Tons (<$50)	Heat Billion Btu	Power Plant Mwe	C to EtOH MMGals
Beaufort	322,439	4837	40.5	22.44
Halifax	271,037	4066	34.0	18.86
Bertie	257,011	3855	32.2	17.89
Duplin	254,271	3814	31.9	17.70
Northampton	251,302	3770	31.5	17.49
Wake	225,099	3376	28.2	15.67
Bladen	209,383	3141	26.3	14.57
Robeson	205,341	3080	25.8	14.29
Wilkes	194,787	2922	24.4	13.56
Warren	188,901	2834	23.7	13.15
Total	2,379,570	35694	298.5	165.62

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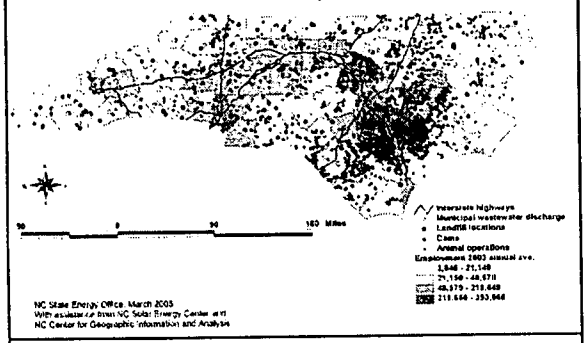
Locations of Landfills, Hydroelectric, Waste Treatment and Animal Operations



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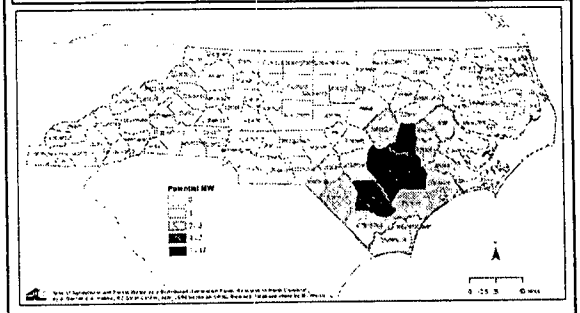
Hog Waste Thermal Fuel Value

$8.3x10^{12}$ Btu/yr	278 Mwt	79.8 Mwe



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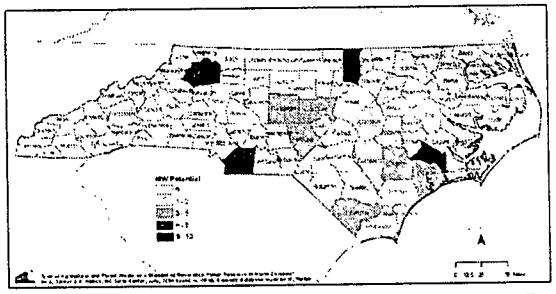
Boilers and Turkeys Thermal Fuel Value

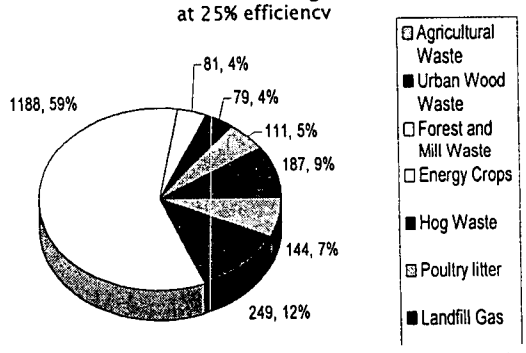
$13x10^{12}$ Btu/yr	442 Mw_t	111 Mwe



NCSU Integrated Biomass Refining Institute

Potential 2039 Mw_e Generation

at 25% efficiency



NCSU Integrated Biomass Refining Institute

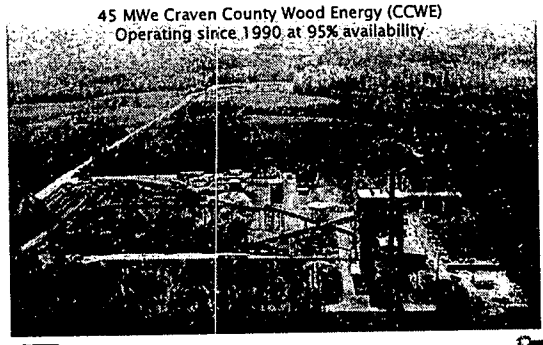
For Example

While I am interested in the technology, everyone else is interested in economics or the environment.

NCSU Integrated Biomass Refining Institute

Wood Biomass

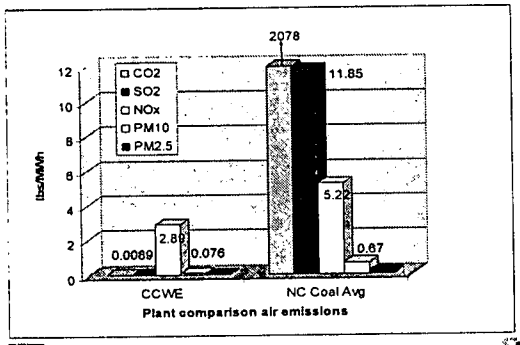
45 MWe Craven County Wood Energy (CCWE)
Operating since 1990 at 95% availability



NCSU Integrated Biomass Refining Institute

36

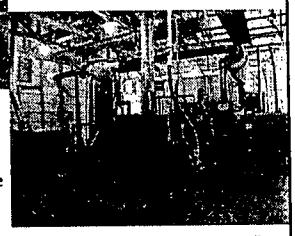
NC Wood vs. Coal Emissions



NCSU Integrated Biomass Refining Institute

Anaerobic Digester fuels CHP

- Nutrients reduction
- Biogas production
  - 16 MM BTU/day



- Produces 200kWt fuel seasonally
- Radiator and Exhaust heat exchangers
- 10,000 gallons hot water storage
- Assume 50 kWe generator

NCSU Integrated Biomass Refining Institute

Greenhouse tomatoes using nutrients from swine waste

NCSU Integrated Biomass Refining Institute

Energy Savings with CHP

Electricity not used for infrared heat	+ $36,140 per year
Electricity produced by generator	+ $11,145 per year
Propane for Boiler	- $ 9,330 per year
Total Savings	$37,955 per year

System Cost	$192,600
Simple Payback Time	~ 6 years

NCSU Integrated Biomass Refining Institute

Emissions Savings of CHP

Environmental effect of not using grid supplied power for infrared heaters while producing 50kWe from biogas on-site

CO_2	1,121,630 lbs/year
NO_x	2,505 lbs/year
SO_x	6,263 lbs/year
Particulate Matter	827 lbs/year

By using methane gas to create energy instead of releasing it into the atmosphere, overall greenhouse gas effects are reduced because methane has a GWP that is 21 times higher than carbon dioxide.

NCSU Integrated Biomass Refining Institute

Do we have some questions?

Alex Hobbs
NC Solar Center
www.ncsc.ncsu.edu

NCSU Integrated Biomass Refining Institute

42

NORTH CAROLINA FARMER EXEMPTIONS QUICK REFERENCE

Exempt from REGISTRATION:

- Farm Tractors and implements of husbandry with rubber tires and trailers or semi-trailers when attached and NOT used in for hire operations within 10 miles of the point of loading and not exceeding 35 MPH.
- Any trailer of semi-trailer drawn by a properly licensed motor vehicle when transported by a farmer or his tenant, agent or employee transporting unginned cotton, peanuts, soybeans, corn, hay, tobacco, silage, cucumbers, potatoes, fertilizers, chemicals for farming, irrigation pipes, loaders, or equipment owned by the farmer or tenant from place to place to place on the same farm, from one farm to another, from farm to gin, from farm to dryer, or farm to market.
- Tobacco hauling trailers used by the farmer

Exempt from Apportioned Registration:

- Vehicles with farm tags and other restricted plates

CDL Requirements:

See attached flow chart.

Drivers of Farm Vehicle Requirements under Federal Motor Carrier Regulations:

- All drivers of articulated motor vehicles that fall under the Federal Motor Carrier Regulation are required to possess a current medical certificate as required in §391.41 and 391.45

Vehicle Inspection:

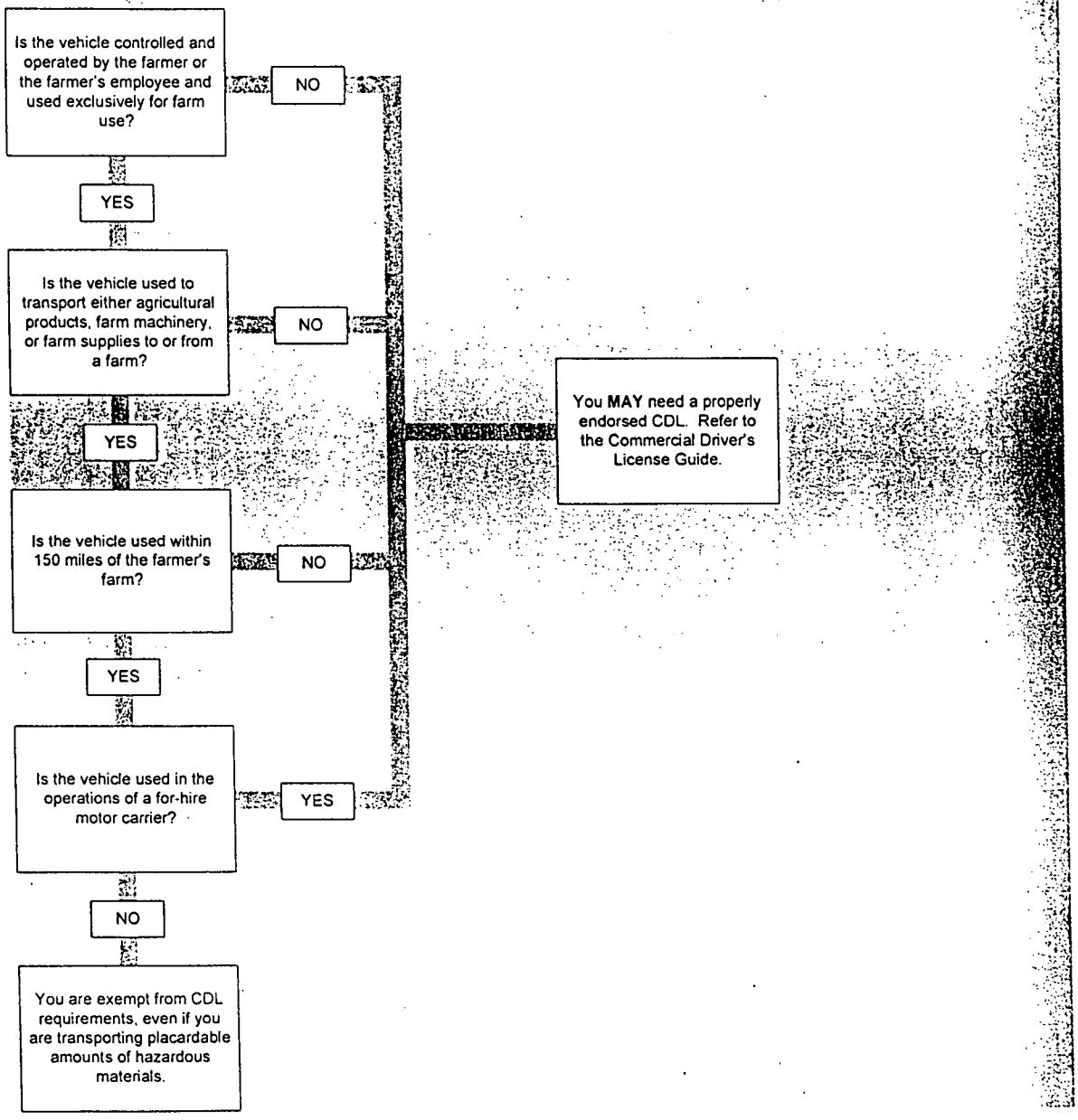
- Farm vehicles are exempt from Federal Annual Inspection (State Inspection may still apply).

Hazardous Materials:

- Farm Vehicles traveling between fields of the same farm are exempt from Hazardous Materials requirements except when transporting class 2 materials.

- Farm Vehicles traveling within 150 miles of the farmers farm are subject to all of the Hazardous Material regulations except for specific packaging, emergency response information, and Hazardous Material training, as long as the product being transported is an intrastate move, and does not exceed 1900 L (502 gallons) for liquids or gases, or 2,300 kg (5,070 lbs.) for solids, of any other agricultural product; or 7,300 kg (16,094 lbs.) of ammonium nitrate fertilizer properly classed as Division 5.1, PG III, in a bulk packaging.

A farmer may need a CDL to operate a farm vehicle. Follow the questions below to determine if you are exempt from CDL requirements.



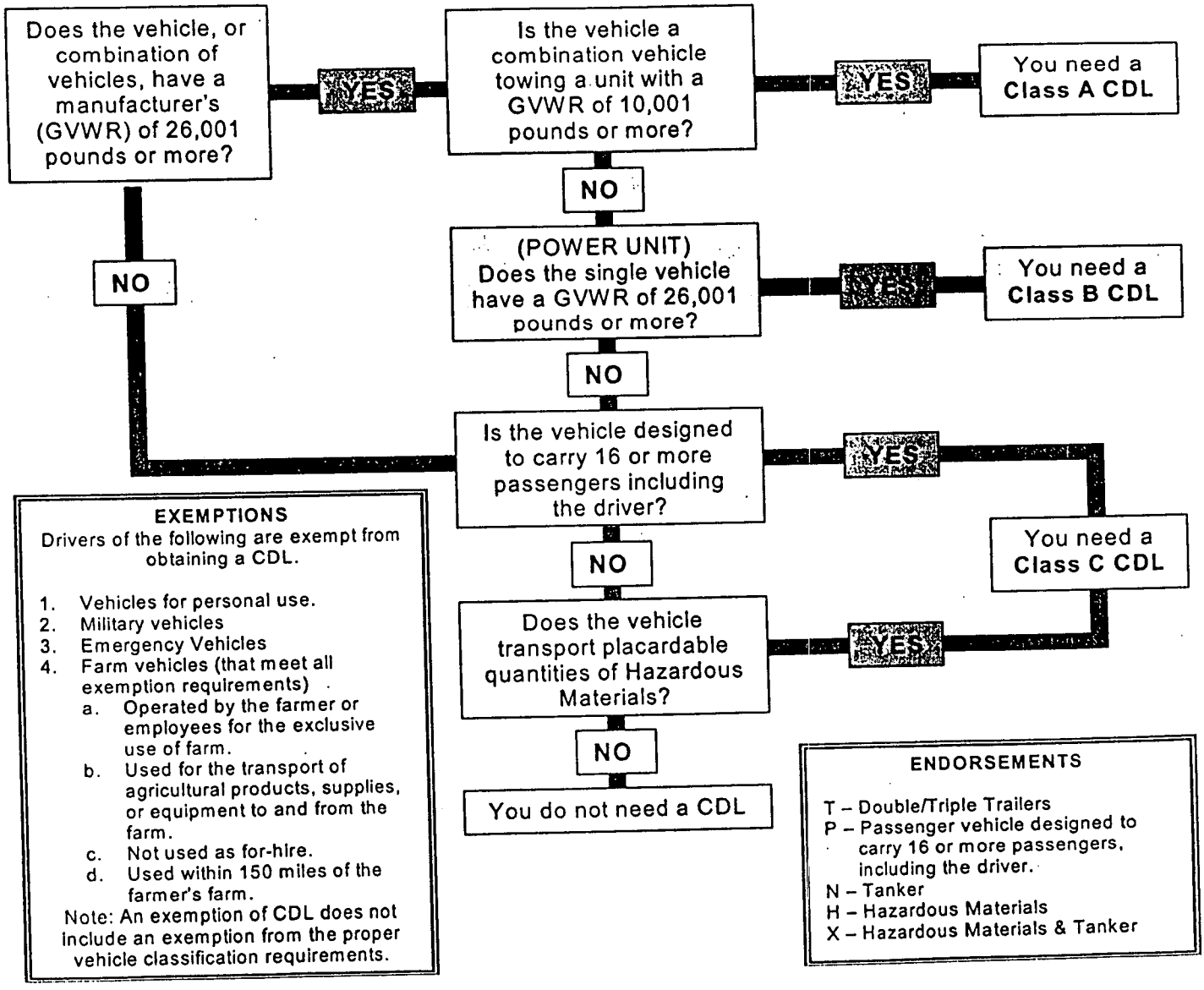
COMMERCIAL DRIVER'S LICENSE GUIDE

There are three types of commercial driver's license: Class A, B, and C. Drivers of light vehicles, passenger cars and pick up trucks will be issued operator's license providing the vehicle does not transport any Hazardous Materials that are required to be placarded according to the Hazardous Materials Regulations (49 CFR part 172, subpart F). A driver with a class A, B, or C license will be able to drive any vehicle included in that class of license and any vehicle included in a lesser class, except a vehicle for which a specific endorsement is required.

Class A- Combination of vehicles with a gross combined weight rating (GCWR) of 26,001 pounds or more, provided the gross vehicle weight rating (GVWR) of the unit being towed is 10,001 pounds or greater.

Class B- Single vehicles with a GVWR of 26,001 pounds or more and towing any such unit with a (GVWR) less than 10,001 pounds.

Class C- Vehicles with a GVWR less than 26,001 pounds and designed to transport 16 or more passengers, including the driver.



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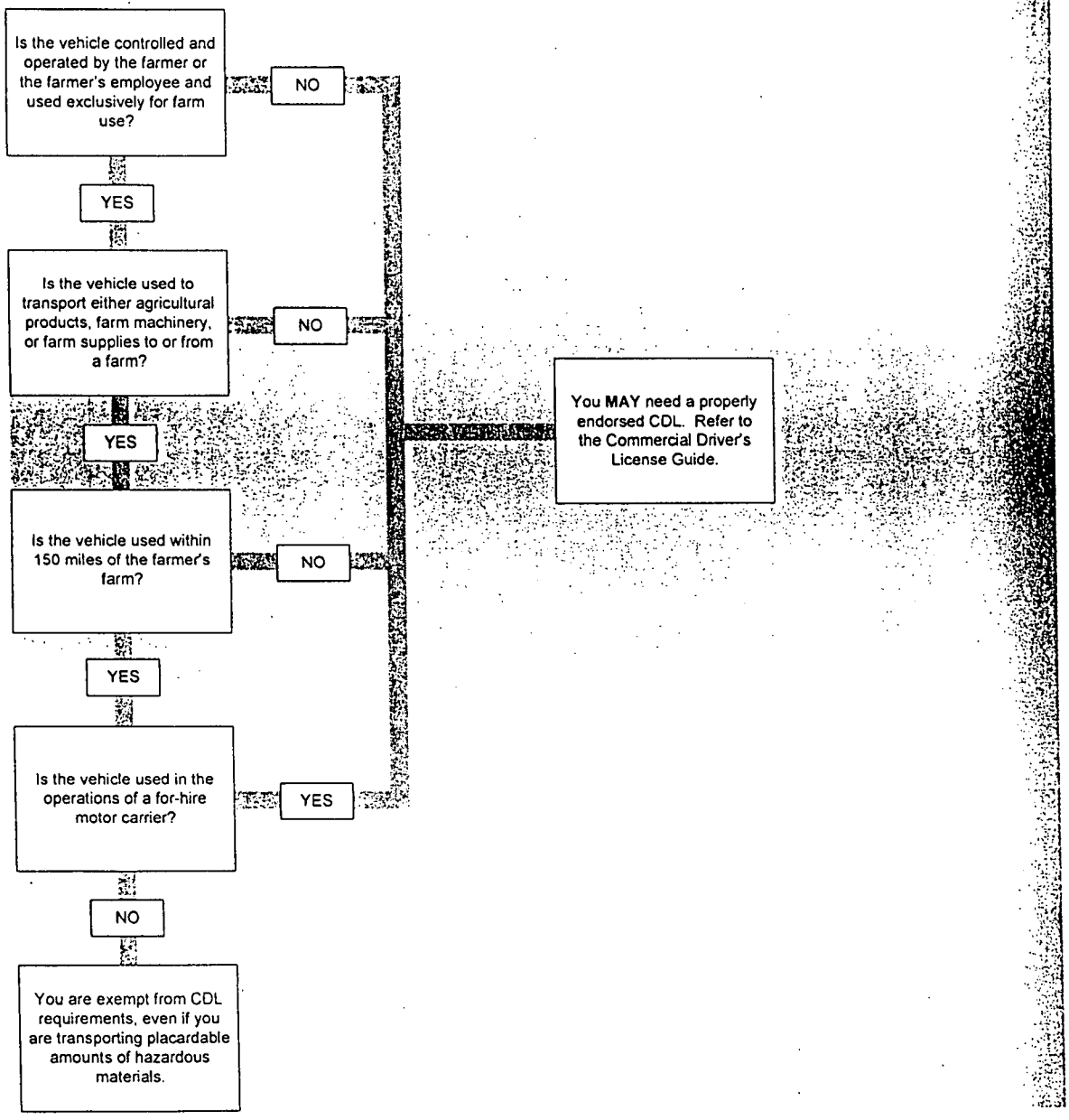

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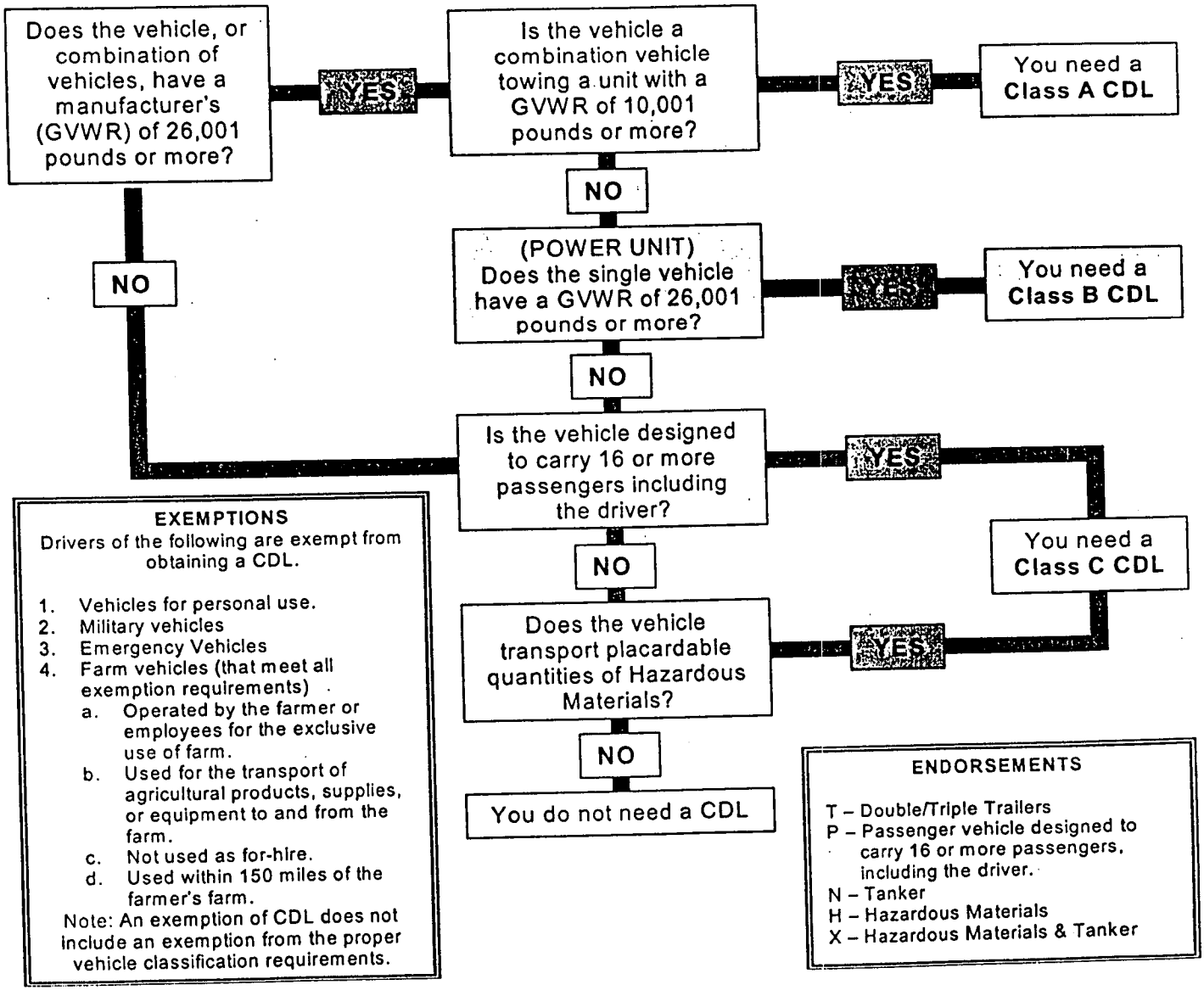

VISITOR REGISTRATION SHEET

NC Ag & Forestry Awareness — 3-2-06

Name of Committee — **Date**

VISITORS: PLEASE SIGN IN BELOW AND RETURN TO COMMITTEE CLERK

NAME	FIRM OR AGENCY AND ADDRESS
Ivan Urlaub	NC Sustainable Energy Association
Alex Hobbs	NC Solar Center NCSU
David Meredith	NC State Grange
Jeny Dozier	Office of Cons. + Com Asst.
Natalie Jones	Div of Soil + Water Conservation
David Williams	DENR - Div. of Soil & Water Cons.
Paul A Gupton Page	NC 7B
Debbie Hamrick	NC 7B
Art VanWingerden	Metrolina Greenhouses
Sheila Yancy	The Wallace Enterprise
J. Franklin Williams	Duplin Co. Farm Bureau

VISITOR REGISTRATION SHEET

NC Ag & Forestry Awareness — 3-2-06

Name of Committee — **Date**

VISITORS: PLEASE SIGN IN BELOW AND RETURN TO COMMITTEE CLERK

NAME	FIRM OR AGENCY AND ADDRESS
Robert Norville	N.C. Wildlife Resources Comm.
Eric West	NACS / Duplin SWCD
Curtis Fountain	NCSU - NCCE - Duplin Co.

VISITOR REGISTRATION SHEET

NC Ag & Forestry Awareness — 3-2-06

Name of Committee — **Date**

VISITORS: PLEASE SIGN IN BELOW AND RETURN TO COMMITTEE CLERK

NAME	FIRM OR AGENCY AND ADDRESS
Erica Peterson	NC Agribusiness Council

JOINT STUDY COMMISSION ON

AGRICULTURE & FORESTRY AWARENESS

November 13, 2006

MINUTES

The Joint Study Commission on Agriculture & Forestry Awareness met on Monday, November 13, 2006 at 9:30 A.M. in Whiteville, North Carolina at Southeastern Community College. Legislative members present were Sen. Charlie Albertson, & Rep. Dewey Hill. Public members and appointees present Mrs. Jo Ann Stroud, Mr. Warren Hepler, Mr. David Burns, Mr. Robert Harrell, Mr. David McLeod, Mr. Jerry Dorsett, Mr. Kendall Hill and Mrs. Martha Warner.

I. WELCOME

Rep. Dewey Hill called the meeting to order and welcomed everyone. Sen. Albertson made opening remarks to welcome members and visitors. Each member introduced themselves.

II. AGRICULTURE IN BRUNSWICK COUNTY

Mr. Al Hight, Interim County Extension Director, NC Co-op Extension Service gave a power point presentation. (Attachment A). He gave facts of the per capita income for Brunswick County of $24,000 and the break-down of crops and horticulture is $20 million, Forestry is $41,000 million, and Livestock is $12,000 million for the area. Tourism is $336,000 million now. Increased home construction is taking away from farm land and farm production. Farmers have some concerns that are affecting their industry. Environmental impacts are one of the contributing factors, storm water issues, water quality, and green development. The Extension offices are continuing to work hard to help their farmers make transitions as the development increases.

Sen. Albertson questioned the 40,000 acres of farmland and what the farm tax is. Mr. Hight said there will be another evaluation next year and they do expect the rates to drop. Ms. Riley asked him to elaborate on the incubator concept. This was an idea that hasn't been fully developed but they have worked with a few people that are already in the business. This will allow more farming for relative small acreages if they can find people who are interested in doing this where the farm land is decreasing. They are exploring possibilities to work together with the Nature Conservative to maintain the quality of life for farmers. Mr. Dorsett asked if they have studied impact fees. Mr. Hight said they have worked on these and it continues to be a topic of discussion in most meetings. Ms. Erica Peterson questioned the age of those getting out of farming. Mr. Hight said a fair

statement is that some of the people are coming in from out of state to retire and not farm. Ms. Warner added that the people who are moving in are more interested in fresh fruit stands and vegetables. They also want to know why there are not county fairs in this area.

Rep. Hill recognized Ms. ????? who helped start the agri-biology.

III. AGRICULTURE IN COLUMBUS COUNTY

Ms. Jaqueline Roseboro, County Extension Director, Columbus County gave a power point presentation. (Attachment B) Columbus County too has faced challenges in the farming industry. There remain some strengths; weaknesses, opportunities, and threats, however there are alternatives to traditional agriculture. The average age of the farmer is 53 and there are a decreasing number of young people interested in farming. On the horizon for Columbus County is the equine industry, organic soybeans, Dole foods, Lumber River Regional Growers Assoc., and value added and alternative crops. The Cooperative Extension will also continue to assist their area farmers and the agriculture community.

Sen. Albertson asked which town was the largest populated. Ms. Roseboro said Whiteville. Mr. Hight said Leland is probably the largest in Brunswick County. Sen. Albertson told members of the legislation that he introduced on the Agrarian Growth Zone to allow smaller counties to be included for qualifying for tax credits because of how Duplin County wasn't included in the discussions with Dole Foods due to its size. Sen. Albertson asked what the tax rate is for Columbus County. Ms. Roseboro said it is .77. Ms. Riley asked if there are currently any farmers growing under contract. Ms. Roseboro said none are working under contract yet. This could be changed when Dole foods moves in. Mr. Dorsett asked future purchases of farmland. Mr. Kendall Hill told of the situation in Green County when it was time to purchase land for a new prison there and how the price of the land there was changed.

IV. AGRICULTURAL BIO-TECHNOLOGY PROGRAM – SOUTHEASTERN COMMUNITY COLLEGE.

Ms. Rebecca Westbrooks, Instructor, Biology & Environmental Science, addressed members. (no attachments). She said when she located to this area she was fascinated with Venus Flytraps and that generated the interest in this new two-year program at Southeastern. This includes some new courses that have never been offered at SECC. Bio-ethics is new to the community college system and is being well received by the students. This is a 76 hour program that takes two years to complete. Tissue culturing and greenhouses are important to the biotechnology program. They are working to train students to be prepared in the future programs of research and biotechnology. SECC has a new modular technology room and two new greenhouses which should all be ready by January 2007. Bee-keeping and bio-diesel will be offered in the spring courses. There will be cross-training within surrounding counties community college systems. There is

a certain enzyme in the Venus Flytrap that has been found to help cure cancer. One of their greenhouses will enable the teaching and developing of doing amazing things.

Ms. Erica Peterson said she has heard that tobacco plants are good bio plants. Ms. Westbrooks said she knew that NCSU was doing some studies on this. Sen. Albertson said the tobacco plant is the most adaptable plant to do other things with. Biotechnology offers many good things.

V. VALUE ADDED & ALTERNATIVE AGRICULTURE

Ms. Annette Dunlap, Extension Associate Agriculture & Resource Economics, NCSU gave a power point presentation. (Attachment C). She spoke about opportunities for alternative agriculture in Southeastern North Carolina. She defined how this could happen. There are some anticipated trends such as population pressures, higher incomes, desire for locally-produced foods and some interest in recreational opportunities closer to home. Her presentation included the web site for the NCSU Value-Added information. This is a helpful tool for small businesses getting started. North Carolina has 67% of farm sizes. We are 63% in farm sales. Her overview of how that Tobacco Trust Fund has helped include grants to grape growers, support for organic corn for milling into grits for Columbus County, and support for growth of truffles in Robeson County. There are opportunities for agro-entrepreneurship. Educating current farmers is important. Policy considerations include a need for low-cost capital for investment and /or expansion. The legislature needs to give this strong consideration. Regulations are also important to ensure they are protected without being prohibitive. Opportunities include berry productions, expansion of wine industries, development of hunting, camping and fishing preserves and increased interest in floriculture and development of vermiculture. In summary education is needed, there is need for support and capital and the legislature should offer direction to facilitate growth and expansion of opportunities.

Sen. Albertson told members about the task force to study biodiesel fuels. This is a potential for farmers to use more of their crops to produce fuel for energy.

VI. SOUTHEAST DISTRICT AGRI-TOURISM INITIATIVE

Mr. Ed Emory, County Extension Director, Duplin County gave a power point presentation. (Attachment D). North Carolina is the 6th most visited state in the nation. People are still interested in teaching their children how food is grown and produced and this has been helpful in promoting tourism. A unique partnership was forced together. They are the NC Cooperative Extension, NCArts Council and Handmade in America. Funds were provided as a group effort, not on individual efforts. The Extension's role provided technical assistance, educational programming, site identifications and trail developments. The GoldLEAF grant which began in 2001 was most instrumental with this program. There are 77 counties in the HomeGrownHandMade.com participation. This is a very informational site for looking up information by county. New entities can join the site by following the necessary criteria.

VII. COMMITTEE DISCUSSION

Sen. Albertson said he had really enjoyed today's meeting. This has been very informative. We in NC are fortunate to have our extension offices to keep us better informed. Rep. Hill told of the number of festivals in the Columbus County. Mr. Kendall Hill told members that the puree event would take place tomorrow. This is proof that new things are coming our way. Sen. Albertson asked members and attendees to keep the legislature informed of their needs. Mr. Kendall Hill told members about the Specialty Crops program and he had a handout. (Attachment E). This was funded by GoldLEAF for about four years but now they are not going to continue funding. Unless we can find some funding, this program will not exist any longer. He urged the legislature to help with funding to keep this important program in place. He has spoken to Dr. Johnny Wynn about this important issue as well.

Sen. R. C. Soles was introduced and he made brief comments about good things happening in the farming industry and Columbus County and the surrounding counties.

Meeting adjourned at 12:10. Lunch was enjoyed by everyone and was provided by Farm Bureau.

Sen. Charlie Albertson, Co-Chair Rep. Dewey Hill, Co-Chair

Cindy B. B. Davis, Comm. Clerk

General Assembly of North Carolina
Joint Legislative Commission on
NC AG & FORESTRY AWARENESS
State Legislative Building
Raleigh, North Carolina

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-CHAIR
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CO-CHAIR
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LAKE WACCAMAW NORTH CAROLINA 28450

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October 6, 2006

TO: Members of the Joint Legislative Commission on NC Ag & Forestry Awareness and Interested Parties

FROM: Senator Charlie Albertson, CoChair
Representative Dewey Hill, CoChair

RE: November 13, 2006 Meeting

The Agriculture and Forestry Awareness Study Commission will meet on Monday, November 13, 2006 in Whiteville, NC. We will meet in Room T-101 at Southeastern Community College, from 9:30 AM to 12:30 PM. Agenda items are being prepared and a formal agenda will be available at the meeting.

If you need to travel up the evening of November 12th, you may contact the Holiday Inn Express, Whiteville at 910-641-0644 for accommodations. Be sure to mention that you are with the NC General Assembly Ag & Forestry Awareness Study Commission in order to receive the rate of $60.00. Rooms need to be booked by November 1, 2006 in order to ensure room availability.

We look forward to seeing each of you in Whiteville. If you have additional questions, please feel free to contact either of us at the above numbers.

Thank you.

A Snapshot of Brunswick County

Al Hight

County Extension Director

NC STATE UNIVERSITY
A&T STATE UNIVERSITY
COOPERATIVE EXTENSION
Helping People Put Knowledge to Work

Current Situation

- 29th fastest-growing county in the United States
- Top 5 in North Carolina

BRUNSWICK COUNTY NORTH CAROLINA

NC STATE UNIVERSITY A&T STATE UNIVERSITY COOPERATIVE EXTENSION
Helping People Put Knowledge to Work

Current Situation

- Population - *90,000*
- 22% increase from 2000 to 2005
- N.C. 8% increase

BRUNSWICK COUNTY NORTH CAROLINA

NC STATE UNIVERSITY A&T STATE UNIVERSITY COOPERATIVE EXTENSION
Helping People Put Knowledge to Work

Current Situation

- 18% of population *65+ years old*
- N.C. 12%

BRUNSWICK COUNTY NORTH CAROLINA

NC STATE UNIVERSITY A&T STATE UNIVERSITY COOPERATIVE EXTENSION
Helping People Put Knowledge to Work

Current Situation

- Per capita personal income - *$24,000*
- 77% increase from 1997 to 2003

BRUNSWICK COUNTY NORTH CAROLINA

NC STATE UNIVERSITY A&T STATE UNIVERSITY COOPERATIVE EXTENSION
Helping People Put Knowledge to Work

Current Situation

- **Agricultural income - *$35 million***
  - **40,000 acres in farms**
  - **20,000 harvested acres**
  - **271 farms**

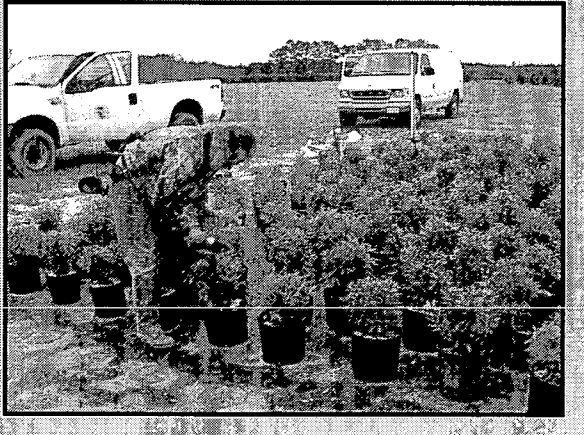
BRUNSWICK COUNTY NORTH CAROLINA

NC STATE UNIVERSITY A&T STATE UNIVERSITY COOPERATIVE EXTENSION
Helping People Put Knowledge to Work

Current Situation

- **Crops and horticulture**
  - **soybeans, corn, tobacco, vegetables, nursery**

$20 million



BRUNSWICK COUNTY NORTH CAROLINA

NC STATE UNIVERSITY
A&T STATE UNIVERSITY
COOPERATIVE EXTENSION
Helping People Put Knowledge to Work

Current Situation

- **Forestry**
  - Farm/commercial — $30 million
  - Manufacturing — $9 million
  - Wholesaling/Retailing — $2 million

$41 million

BRUNSWICK COUNTY NORTH CAROLINA

NC STATE UNIVERSITY A&T STATE UNIVERSITY COOPERATIVE EXTENSION
Helping People Put Knowledge to Work

Current Situation

- **Livestock**

  Hogs, beef cattle, horses

$12 million

BRUNSWICK COUNTY NORTH CAROLINA

NC STATE UNIVERSITY A&T STATE UNIVERSITY COOPERATIVE EXTENSION

Helping People Put Knowledge to Work

Obvious Trends

- **Development**
  - rising land values
  - loss of farm land
- **Increasing tourism**

BRUNSWICK COUNTY NORTH CAROLINA

NC STATE UNIVERSITY
A&T STATE UNIVERSITY
COOPERATIVE EXTENSION
Helping People Put Knowledge to Work

Tourism

- **2005 - *$336 million***
- **7.8% increase from 2004**
- **9th statewide in travel impact**

BRUNSWICK COUNTY NORTH CAROLINA

NC STATE UNIVERSITY A&T STATE UNIVERSITY COOPERATIVE EXTENSION
Helping People Put Knowledge to Work

Farmer's Concerns

- Commodity prices
- Lack of control over land (most land rented)

BRUNSWICK COUNTY NORTH CAROLINA

NC STATE UNIVERSITY A&T STATE UNIVERSITY COOPERATIVE EXTENSION
Helping People Put Knowledge to Work

Farmer's Concerns

- **Farm/farmland preservation**
  - voluntary agricultural districts
  - agricultural and nature-based tourism
  - farm "incubator"
  - direct marketing

BRUNSWICK COUNTY NORTH CAROLINA

NC STATE UNIVERSITY A&T STATE UNIVERSITY COOPERATIVE EXTENSION
Helping People Put Knowledge to Work

Other Areas of Concern

- **Environmental Impacts**
  - dune stabilization/restoration
  - low impact/green development
  - storm water
  - septic systems
  - water quality

BRUNSWICK COUNTY NORTH CAROLINA

NC STATE UNIVERSITY A&T STATE UNIVERSITY COOPERATIVE EXTENSION
Helping People Put Knowledge to Work

Cooperative Extension is Committed to...

- Helping farmers find alternatives
- Investigating environmentally-friendly and economically-viable development methods

BRUNSWICK COUNTY NORTH CAROLINA

NC STATE UNIVERSITY A&T STATE UNIVERSITY COOPERATIVE EXTENSION
Helping People Put Knowledge to Work

HomeGrownHandMade.com

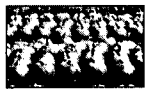
A Unique Partnership in
Education and Economic Development

Arts + Agriculture =
A New Cash Crop for North Carolina

Tourism in North Carolina

- $12 billion industry
- 6th most visited state in nation
- Tourism + 72% over 10 years in our 38 most rural counties
- Only 8% of all North Carolina tourist dollars spent in rural areas

Trends



- Cultural tourists spend more, stay longer
- AgriCultural Tourism growing
- Tourists seeking safe places to travel
- Family oriented travel on the rise
- Drive-in travel most important
- People seek "value added' packages made "just for me"

A Unique Partnership

- NC Cooperative Extension
- NCArts Council
- HandMade in America

AgriCultural Tourism

Funding provided by:
NC GoldenLEAF Foundation
focus on tobacco dependent counties

Cooperative Extension's Role

- Technical Assistance
- Educational Programming
- Facilitator of Community Coalitions
- Site Identification
- Trail Development

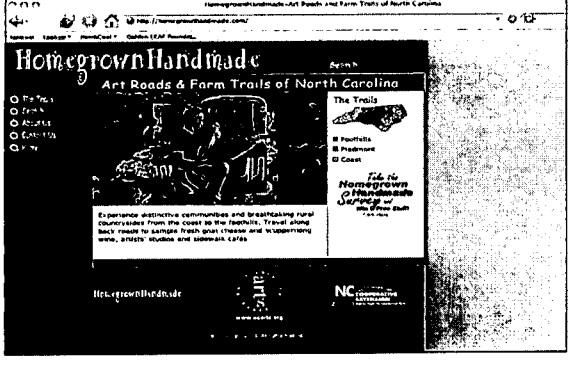
History of Southeast District...

- Formed Task Force in 1999
- Conducted first educational conference in February, 2000
- Wrote GoldenLEAF grant in 2001
- Formed Partnership in 2001
- Hired Coordinator
- Began trail development

HomeGrownHandMade.com

- Web-based AgriCultural Tourism Trails
- Trails Link Similar Counties
- Three to Five Counties per Trail
- Each enterprise, festival, fair, etc has a site

HomeGrownHandMade.com



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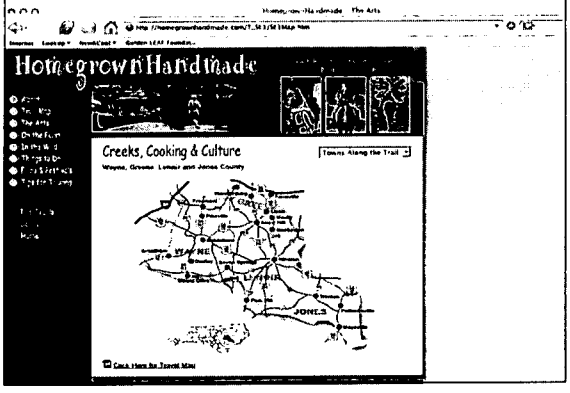

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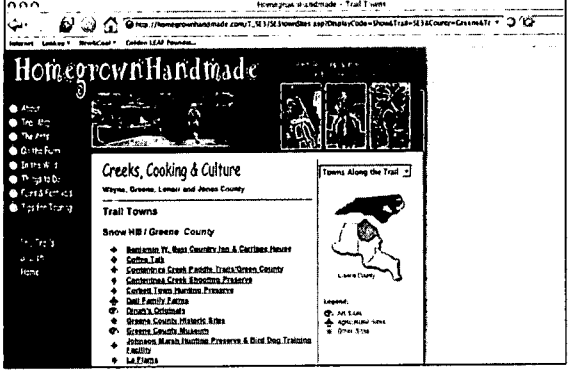
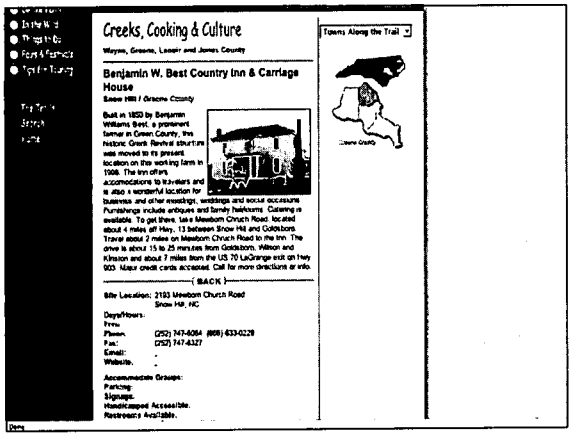
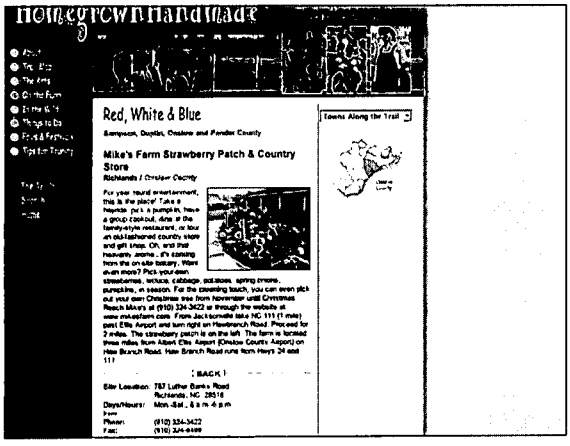


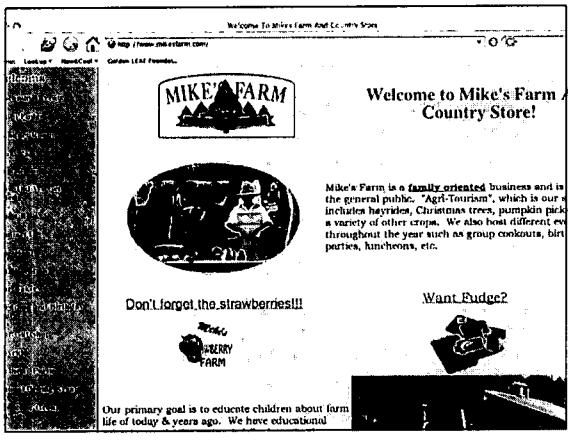



HomegrownHandmade
Creeks, Cooking & Culture
Greene County Hounds
Towns Along the Trail


HomegrownHandmade
Creeks, Cooking & Culture
Kinston Winter Bluegrass Festival
Towns Along the Trail


HomegrownHandmade
Red, White & Blue
Towns Along the Trail





Outcomes

- Process set-up for community building
- Expanded economic base for rural and farm communities
- Attract more tourists and their dollars
- "Travelers guide from the people who live here"


Site Criteria

- Standard hours of operation
- Interpretation
- Safe, clean, tidy
- Significant proportion of North Carolina merchandise
- No shops that feature imports
- Welcoming to people from outside the community
- Related to cultural, heritage, agricultural, and natural resources
- Focus on authenticity and quality
- Compliant with Americans with Disabilities Act
- Directional Signage

Restaurant Criteria

- Shows local art on the walls/display cases and/or uses handcrafted items as tableware
- Has interpretive materials that tells all about the arts on premises and/or the history of the place.
- Regularly has live music.
- Features locally grown produce.
- Offers a selection of North Carolina indigenous food.
- Serves North Carolina indigenous recipes.
- Has offerings authentic to the establishment.
- Is in an architecturally significant building.
- Is popular with locals.
- Has a unique, authentic regional claim to fame, such as "NC's oldest restaurant."

Testimonies

"This past year has been a hard one for commercial fishermen, if it had not of been for the RiverFront Farmers Market and HomeGrownHandMade.com as an outlet for my wife's goat cheese and herbs, we would have not made it through the winter."

-Nature's Way Farm

Testimonies

"What a positive impact the AgriCultural Tourism Project has created in our area! The hard work, the organization, and networking have pulled together artists, farms, businesses and cultural sites all to a mutual benefit. The results are very encouraging for those of us plodding along here in the east. I see lots of oppurtunities if we continue to pull together."

Meg Shelton, Shelton's Herb Farm

User Testimonies

"I plan youth educational trips for the NC State Grange. This site is wonderful! I will definitely use it to help find new places for our youth to visit."

"Your site is just what I've been looking for...I'm a member of NC TarWheels and we are always on the lookout for new and interesting places to take our bicycling group."

User Testimonies

"Thank you for including handicap accessibility as a component of your website...I work with the Muscular Dystrophy Association, and we are continually looking for places to visit that we can recommend to our parents."

"I home-school my children... this website will help me provide some hands-on arts and agriculture outings."

Testimony

"Our farm is on the website. We are so excited to be a part of HomeGrownHandMade.com...before you came along, we had no web presence at all."

Testimonies

"Since your AgriCultural Tourism awareness tour of my store last month, I've had many repeat customers. In fact, several ladies are making weekly trips from Wilmington to buy our milk, breads, and cheeses. Thanks for helping increase our customer base!"

Owner, Bulk and More Store

HomeGrownHandMade.com

HomegrownHandMade

Art Roots & Farm Trails of North Carolina

The Face of Agriculture In Columbus County

Jacqueline D Roseboro, County Extension Director
November 13, 2006

The face has changed

Commodity	1985	1990	1995	2000	2005
Traditional Row Crops	1st	1st	1st	2nd	2nd
Livestock	2nd	2nd	2nd	1st	1st
Fruits & Vegetables	3rd	3rd	4th	4th	4th
Forestry	4th	4th	3rd	3rd	3rd
Greenhouse & Nursery	5th	5th	5th	5th	5th

Strengths

- Land ownership/availability
- Equipment ownership
- Knowledge of crop production
- Production of high quality crops
- Strong work ethic

Weaknesses

- Knowledge of global markets
- Business/Risk management
- Independence/ lack of collaboration between farmers
- Traditional farming/resistance to change

Opportunities

- Global Marketing
- Development and Growth of Value-Added and New Alternative Crops
- Agritourism
- Agribusiness
- Agricultural Biotechnology

Threats

- Decrease in Government Support
- Health Issues
- Regulatory Issues
- Lack of interest of young farmers
- Housing development
- High costs/debt

Alternatives to Traditional Agriculture

- Grapefull Sisters
- Daddy Joes
- Strickland Corn Maze
- Community Farmers Market
- Edmund Farms
- Organic Production
- Greenhouse Strawberries
- Green Industry
- Landscape Business/The Cement Barn

On the Horizon

- Equine Industry
- Organic Soybeans
- Dole Foods
- Lumber River Regional Growers Association
- Value Added and Alternative Crops

Future ?

Without agriculture we would all be homeless, hungry, and naked.

Representative Dewey [illegible]

Garner our Resources

NC COOPERATIVE EXTENSION

Opportunities for Alternative Agriculture in Southeastern North Carolina

Annette Dunlap
Extension Associate
Value-Added & Alternative Agriculture
North Carolina State University
Raleigh, North Carolina
November 13, 2006

NC STATE UNIVERSITY

Program Outline

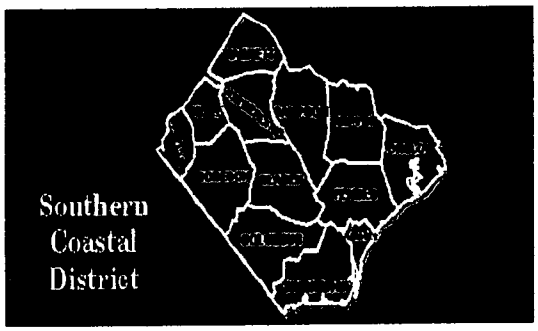
- Value-added & alternative agriculture – Definitions
- Trends in Southeastern NC
- Current alternative agriculture activities
- Opportunities for agro-entrepreneurship
- Enabling the opportunities

2

Value-Added & Alternative Agriculture

1. A process that adds or retains value in agriculture for a particular geographic region.
2. A process that helps the producer capture a larger share of consumer expenditures on agricultural products or products derived from agricultural products.
3. A crop or agricultural-based product that is grown, harvested or processed in a way that differs from commodity and industry-based practices

3



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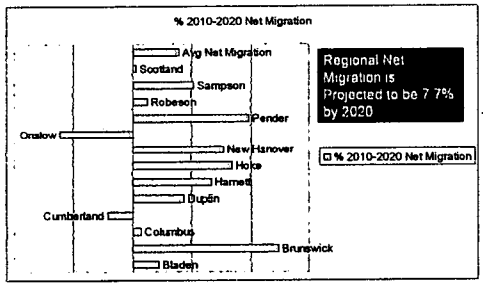
Population Projections for Southeastern NC



Source: NC Office of State Demographics

5

Anticipated Trends

- Population pressures will increase demand for land and resources
- Higher income consumers will demand more quality foods
- Desire for locally-produced foods will increase
- With increasing energy costs, consumers will look for recreational opportunities closer to home

6

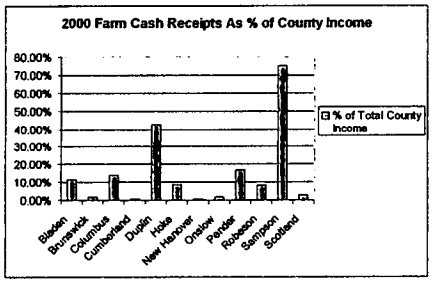
Current Value-Added & Alternative Agriculture Activities

- Development of wineries and related agritourism activities
- Increase in pick-your-own berries operations
- Development of aquaculture
- Growth of floriculture
- Growing interest in grass-fed beef, pasture pork, free-range poultry

7

2000 Farm Cash Receipts As Percent of County Income

Includes crops, livestock, aquaculture, ornamentals, turf



Source: NCSU College of Ag & Life Sciences, Compiled by Dr. Michael Walden

8

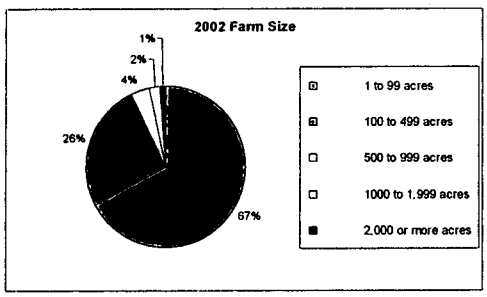
NCSU Value-Added Web Site: cals.ncsu.edu/value-added

Information to help farmers pursuing value-added & alternative agriculture opportunities:

- Guides for business plan development
- Case study information
- Links to other web sites

9

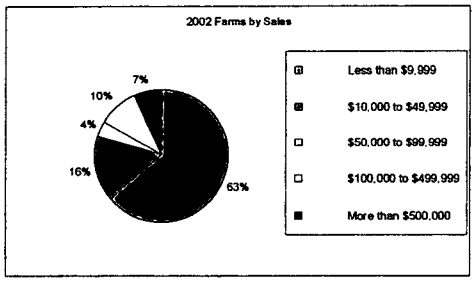
NC Farm Sizes



Source: USDA Economic Research Service

10

NC Farms by Sales



Source: USDA Economic Research Service

11

Tobacco Trust Fund Value-Added and Alternative Initiatives

- Grants to grape growers
- Support for organic corn for milling into grits (Columbus County)
- Support for growth of truffles (Robeson County)

12

Opportunities for Agro-entrepreneurship

- The "family farm" is still a reality
- Farm owners are interested in exploring entrepreneurial activities
- New forms of agriculture are gaining acceptance by both farmers and consumers

13

Enabling the Opportunities

- Reposition southeastern NC on the state's agricultural "map" as a center for value-added & alternative agriculture
- Facilitate market development with creation and support of local farmers' markets
- Strengthen Goodness Grows and Got-to-be-NC programs to support value-added & alternative agriculture efforts
- Recognize the entrepreneurial nature of value-added & alternative agriculture

Policy Considerations

- Need for low-cost capital for investment and/or expansion
- Review of relevant regulations to ensure they are protective without being prohibitive
- Create access to markets through encouraging formation of co-ops and other support structures
- Ensure timely and accurate data reporting for use in decision-making

Other Value-Added & Alternative Agriculture Opportunities

- Increase in berry production
- Development of aquaculture (prawns, catfish)
- Expansion of wine industry and related agritourism
- Development of hunting, camping and fishing preserves
- Increased interest in floriculture
- Development of vermiculture

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Summary

- Value-added and alternative agriculture represent the future direction of small NC farms
- Enterprises are entrepreneurial in nature
- Population pressures require support and capital for success in this type of agro-enterprise
- Legislative direction should facilitate appropriate growth and expansion of opportunities

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VISITOR REGISTRATION SHEET

NC Ag & Forestry Awareness — 1-13-06

Name of Committee — **Date**

VISITORS: PLEASE SIGN IN BELOW AND RETURN TO COMMITTEE CLERK

NAME	FIRM OR AGENCY AND ADDRESS
Rebecca Westbrooks	Southeastern Community College Ag Biotech Program, Env. Sci. Tech. Prog., Biology
ANNETTE DUNLAP	VALUE-ADDED & ALT. AG. CRC - AGRI RESOURCE ECON DEPT COLLEGE OF AG & LIFE SCIENCES, NCSU RALEIGH, NC
Ed Emory	Duplin Co Cooperative Extension PO Box 949 Kenansville, NC 28349
Jimmy Stroud	retired farmer
Erica Peterson	NC Agribusiness Council
Jacqueline Roseboro	NCCES
Howard Wallace	NCCES
Larry Wright	NCCES
Phyllis Creech Mooring	NCCES
Dalton Dockery	NCCES
ROSSIE H WARD	WARD'S NUTS & HONEY 1182 CHADBOURN CLARENDON ROAD CHADBOURN NC 28431

VISITOR REGISTRATION SHEET

NC Ag & Forestry Awareness — **Name of Committee**

1-19-06 — **Date**

VISITORS: PLEASE SIGN IN BELOW AND RETURN TO COMMITTEE CLERK

NAME	FIRM OR AGENCY AND ADDRESS
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Lindsay Hewett	Cape Fear Farm Credit P.O. Box 1739 Shallotte NC 28459 lhewett@capefearfarmcredit.com
Colinda Long Hewett	Advantage Insurance & Financial 3546 Whiteville Rd Ash, NC 28420
MILTON PARKER	RETIRED AG. EXT. AGENT (COLUMBUS CO.) ~~P.O. BOX~~ 622 WEDGEWOOD DR WHITEVILLE, N.C. 28472.
WELDON EDMUND	EDMUND FARMS, 4197 ANDREW JACKSON HWY. CHADBOURN, NC 28431
Kathy Matlock	Southeastern Com. Col.

VISITOR REGISTRATION SHEET

NC Ag & Forestry Awareness — 11-13-06

Name of Committee — **Date**

VISITORS: PLEASE SIGN IN BELOW AND RETURN TO COMMITTEE CLERK

NAME	FIRM OR AGENCY AND ADDRESS
John Milton Blake	
J. Page	NC FB

JOINT COMMISSION ON

AGRICULTURE & FORESTRY AWARENESS

MINUTES

March 19, 2008

The Joint Commission on Agriculture & Forestry Awareness met on Wednesday, March 19, 2008, in Room 643, Legislative Office Building, Raleigh, NC at 10:00 a.m. Legislative members present were Sen. Charlie Albertson, Representative Dewey Hill, and Rep. Arthur Williams. Public members present were Ms. Martha Warner, Jo Ann Stroud, Phillip Hudson, and David Burns. Ex-Officio members Mr. Bob Slocum-NC Forestry Service, Mr. Steve Woodson-NC Farm Bureau, Mr. Jimmy Gentry-NC State Grange, Mr. Jerry Dorsett-NCDENR, and one representative from the Department of Agriculture.

I. OPENING REMARKS

Sen. Albertson called the meeting to order. He reported that the Highway Patrol has held Farmer's Forums to keep them informed of the motor vehicle laws for farm equipment on our highways. In Sampson County there were 300 people in attendance; Duplin County 275 people; Plymouth 50-60 people. Meetings are being planned for Robertson County and other counties. Rep. Dewey Hill welcomed members and told them that recently Brunswick County honored 34 families that have been farming for over 100 years and Commissioner Troxler, Commissioner of Agriculture was present for the ceremony.

II. PRODUCE SAFETY IN NORTH CAROLINA

Ms. Debbie Hamrick, Director of Specialty Crops, NC Farm Bureau gave the overview for today's agenda

III. THE PRODCE SAFETY ISSUE AND INCIDENTS

Mr. Trevor Phister, Food Processing & Nutrition Sciences, NC State University provided a power point presentation. (Attachment A). Food safety is important in order to prevent illness. People loose time from work and often times have to seek professional medical care when they are served unsafe foods. There are 76 million cases of foodborne illness per year. Pathogens outbreaks affect crops too. The strawberry industry lost an estimated $50 million in 1996 after mistakenly being indicated as the source of pathogens in outbreaks. Viruses count as the largest cause of illness; bacteria and parasites also cause illness. From 1973 to 1997 there have been increases in outbreaks of pathogens. Main produce outbreaks include leafy greens, tomatoes, sprouts, berries and melons. This problem is not just in North Carolina but all over the southeast. This does not

include animal products. Salmonella and E. coli are the leading harmful outbreak causes. There was a large spinach recall a couple of years ago and part of the cause of the problem was that swine were able to get in some of the fields. Irrigation from low wells may also have contributed to the problem. Recalls cause large economic losses. Some of the solutions to these pathogen problems are in the packing houses where products are washed and cleaned. Good agricultural practices (GAP's) are the best way to ensure food product safety. GAP's involving water, fertilizer, animal feces, worker health and hygiene, and transportation are ways to help improve safety. In conclusion currently the best method to prevent illness is through preventing contamination.

IV. OVERVIEW/CAPABILITIES OF FOOD & DRUG PROTECTION DIVISION

Mr. Joe Reardon, Division Director, Food & Drug Protection Division, North Carolina Department of Agriculture and Consumer Services (NCDA & CS) gave a power point presentation. (Attachment B) It is important to protect our economy by protecting our foods. NC leads the nation in fresh produce crops. $2.9 billion is the value of NC crops. Some of the producers in NC are Dole Foods, Del Monte, Smile Factory, and National Fruit Products. NC regulations on foods stop at the processor because they are exempt from good manufacturing practices. The USDA has worked with NCDA&CS to put together good agriculture practices and audit programs. NCDA&CS works with school systems and farmers to provide school children safe and nutritious products. There is a model to for broader implementation at medium/smaller farms/packing houses. There are several states that participate with this model. There is a global food safety initiative, the produce traceability initiative, and the T-GAP initiative to help industry. State and local programs are very important. 90% of inspections are conducted in FDA regulated facilities. The NC Food Safety and Defense Task Force was established by Executive Order 84. This allows a good frame-work for various members to come together and work together to protect our foods and products. Products are tested on a weekly basis to ensure contaminated products are taken off the market. NCDA&CS has reduced turn around time to food testing due to Rapid Microbiological Testing. Just two weeks ago there were some fungus found in fish that came in from Asia. Strengthened laboratory preparedness help detect the bacteria found in those fish. This is due to federal funds. He is proud to be a part of this program and helping keep our citizens safe.

V. THE NC FRESH PRODUCE SAFETY TASK FORCE

Mr. Chris Gunter, Dept. of Horticultural Sciences, NC State University gave his power point presentation. (Attachment C). Industry awareness is critical to food safety. The Task Force was formed in 2007 of partnerships between multiple organizations. The number one concern was water. More food safety education is needed for buyers, wholesalers, packers, retailers, employees and consumers. It shouldn't be hard for small farmers to be competitive with larger farmers. The purpose of the task force is to minimize food safety risks and enhance the economic competitiveness of NC's fresh produce industry. Training modules were put into place. These modules provide basic product knowledge and practices that farmers and packers can implement. Sampling will be done across the state for research purposes. Water quality and testing will be a place

to start this coming summer. In Clinton and Fletcher, NC there will be testing on lettuce and tomatoes. Producers that use good agricultural practices can minimize microbial food safety hazards in fresh fruits and vegetables. Water quality, fecal contamination, organic fertilizer handling (manure), clean hands, following laws and regulations, and accountability are ways to reduce risks and insure food safety. Certification of GAPS helps ensure safety. The marketing division of the NCDA&CS has a program that works with 3rd party auditors. NC is looking into positioning for the future. Mr. Gunter thanked the committee for their interest in food safety.

DISCUSSION:

Sen. Albertson asked about the Department's need for a generator for one of the Food and Drug Division's labs. Joe said the one they have looked at one that will cost $400,000. Mr. Hudson asked about the GAP (good Ag practices) and the audit process. Mr. Gunter said that documentation is the most common problem. There is a possibility of putting together a food safety template or model plan for food safety for farmers to use and adoption at their own operations. Mr. Phister added that some of the resources will be done bilingually to help farmers that hire migrant workers. Rep. Williams asked how do you know what kind of water quality needs do you need to use on your farm? Mr. Reardon said this is still in a research mode and there is no specific answer at this time. Mr. Gunter said that if manure is used there are some guidelines for this but they are not currently research guidelines yet. Rep. Williams said he heard that gray water might be used but it doesn't sound safe to him. Mr. Phister said that it would be best to use drinkable water and not all recycled water is acceptable yet. Sen. Albertson asked if there are other ways that could be helpful to prevent contamination from streams and waters where animals are kept. Mr. Reardon said this is a broad spectrum that they are looking at. A major thing that needs to be worked on is the international market that doesn't use safety standards. It's important to have our federal government set strong standards. Ms. Riley asked about the process for grants that can be used for farmer audits. Mr. Reardon said this is important because of food requirements but he's not sure where the funds come from for this. Rep. Hill thanked all the speakers for this program. He mentioned a lot a food recalls that he's had at his grocery stores and it hurts the markets when a recall is announced. Sen. Albertson asked if the Ag Mart has any connection to this topic. Mr. Reardon said the pesticides are the cause of the Ag Mart issue. Pesticide testings are significant to food safety. Mr. Dorsett told members that the Soil and Water is meeting and it would be good for these men to attend some of those members to incorporate food safety and water quality. Sen. Albertson asked members if they would like to include into their report the request for the generator. Mrs. Stroud moved that we include this in our report. Rep. Williams seconded. The vote was taken and so moved to include funding for this generator. Sen. Albertson asked if the committee would like to draft a letter to Congress on behalf of this Commission to request stronger food safety regulations. Rep. Hill moved and Rep. Williams seconded that staff draft this letter. Mr. Bob Slocum said that in 2000 the General Assembly enacted a tax credit for businesses to use our state ports. This will sunset in January 2009 and he recommends that our committee include this also in our report to the short session

General Assembly. We want to keep our NC members using our ports in Wilmington and Morehead City. Ms. Riley, Staff Counsel said this would be easy to present. Mr. Slocum moved and Mr. Burns seconded. Vote was taken and so moved to include this in our report.

Meeting adjourned at noon.

Sen. Charlie Albertson, Co-Chair

Cindy Davis, Committee Clerk

General Assembly of North Carolina
Joint Legislative Commission on
NC AG & FORESTRY AWARENESS
State Legislative Building
Raleigh, North Carolina

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136 HENRY DUNN PICKET ROAD
BEULAVILLE, NORTH CAROLINA 28518

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February 28, 2008

TO: Members of the Joint Legislative Commission on NC Ag & Forestry Awareness and Interested Parties

FROM: Barbara Riley, Commission Counsel
Cindy J. Davis, Commission Clerk

RE: March 19, 2008 Meeting

The Joint Legislative Commission on NC Ag & Forestry Awareness will hold a meeting on Wednesday, March 19, 2008 at 10:00 a.m. in Room 643, Legislative Office Building, Raleigh, NC. Agenda items will be forth coming. Please mark your calendars.

We look forward to seeing each of you in Raleigh.

Thank you.

NORTH CAROLINA AGRICULTURE AND FORESTRY AWARENESS STUDY COMMISSION

March 19, 2008
Legislative Office Building
Room 643
10AM

Opening Remarks
Senator Charles W. Albertson, CoChair
Representative Dewey L. Hill, CoChair

PRODUCE SAFETY IN NORTH CAROLINA

OVERVIEW
Debbie Hamrick, Director of Specialty Crops
North Carolina Farm Bureau

The Produce Safety Issue and Incidents
Trevor Phister, PhD.
Food Processing and Nutrition Sciences
North Carolina State University

Overview/Capabilities of the Food and Drug Protection Division
North Carolina Department of Agriculture and Consumer Services
Joe Reardon, Division Director
Food and Drug Protection Division
NCDA&CS

The North Carolina Fresh Produce Safety Task Force
Chris Gunter, PhD
Department of Horticultural Sciences
North Carolina State University

AFDOS National Model Code Project
Joe Reardon, Division Director
Food and Drug Protection Division
NCDA&CS

Committee Discussion
Instructions to Staff

NC AG & FORESTRY AWARENESS
STUDY COMMISSION
2007-2008

Pro Temp's Appointments

Sen. Charlie W. Albertson, Co-chair
136 Henry Dunn Pickett Rd.
Beulaville, NC 285189
910-298-4923

Kendall Hill
2574 Hugo Rd.
Grifton, NC 28530
252-523-9233

JoAnn Stroud
640 E. NC Hwy 24
Kenansville, NC 28349
910-296-1947
910-290-1947=cell

Gerald Warren
80 Creekside Dr.
Newton Grove, NC 28366

Speaker's Appointments

Rep. Dewey Hill, Co-chair
P. O. Box 130
Lake Waccamaw, NC 28450
910-642-6044

Martha Warner, Director
Brunswick Co. Coop. Ext.
Government Center, Box 109
Bolivia, NC 28322

Rep. Roger West
P. O. Box 160
Marble, NC 28905
828-837-5246

Rep. Arthur Williams
74 Canal Lane
Washington, NC 27889
252-946-2576

Governor's Appointments
Made 9-13-07---Expires 9-30-2009

David L. Burns
1204 Shepherd Ave.
Laurinburg, NC 28352
910-276-6287
910-462-2122=office

Phillip Lee Hudson
553 Rosin Hill Rd.
Newton Grove, NC 28366

David "Warren" Hepler
310 W. Main St.
Wallace, NC 28466
910-296-2193 Ext. 2

Dept. of Ag Appointee

Maurice K. Berry, Jr.
1157 Double Bridge Rd.
Elizabeth City, NC 27909
252-330-4333
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Ex-Officio Members

Mr. David McLeod (Comm. Troxler's Designee)
Department of Agriculture
1001 Mail Service Center
Raleigh, NC 27699
919-733-7125

Mr. Robert Slocum, Jr.
Executive Vice President
NC Forestry Association
1600 Glenwood Ave., Suite 1
Raleigh, NC 27608
919-834-3943

Mr. Steve Woodson (Designee)
NC Farm Bureau Federation
P. O. Box 27766
Raleigh, NC 27611
919-782-1705

Mr. Jimmy Gentry
NC State Grange
1734 Wilkesboro Hwy.
Statesville, NC 28625
1-800-432-4857

Mr. Jerry Doresett (Sec. Ross' Designee)
DEHNR
512 N. Salisbury St.
Raleigh, NC 27604
919-715-4102

Staff

Barbara Riley, Staff Attorney
Research Division – 919-733-2578

Cindy Brooks Davis
Commission Clerk – 919-733-5705

Updated January 2008

Protecting Fresh Produce, from Farm to Fork

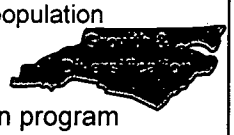
Food & Drug Protection Division
Joe Reardon, Director

Outline

- Value of fresh produce industry in NC
- Regulatory perspective
  - AFDO Model Code
- Industry programs
- North Carolina's initiatives

Protecting our Growing State

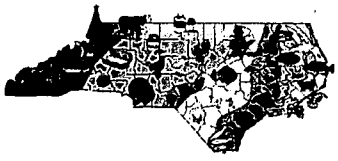
- Ranked #11 in population
  - NC: 10.1% increase 1990 – 2005
  - US: 6.4% increase 1990 - 2005
- Largest growing Hispanic population
  - 315% increase 2000 – 2005



- 465% growth of inspection program since 1993

Protecting Our Economy

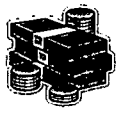
- **Agribusiness contributes over $66 billion to the state's economy yearly**
  - **19% of state's income**
  - **Employs 17% of our workforce**
- **3rd most agriculturally diverse State**



Fresh Produce in North Carolina

- Leading the nation in....
  - Sweet potato
  - Cucumbers
  - Strawberry
  - Blueberry
  - Bell pepper
  - Apple
  - Tomato

+$2.9 BILLION - Value of Crops in NC



Processors in NC

- Dole Foods in Bessemer City (Gaston Co.)
- Del Monte in Whitsett (Guilford Co.)
- Smile Factory in Hendersonville (Henderson Co.)
- National Fruit Products (brands include White House) in Lincolnton (Lincoln Co.)

Regulatory Perspective

Fresh Produce – Exempt from Good Manufacturing Practices

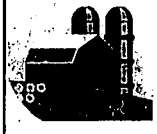
- Subpart A--General Provisions Sec. 110.19 Exclusions. (a) The following operations are not subject to this part: **Establishments engaged solely in the harvesting, storage, or distribution of one or more "raw agricultural commodities,"** as defined in section 201(r) of the act, which are ordinarily cleaned, prepared, treated, or otherwise processed before being marketed to the consuming public
- (b) FDA, however, will issue special regulations if it is necessary to cover these excluded operations.

USDA Good Agricultural Practices Audit Program

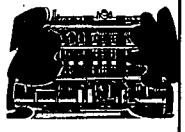
- Based on: FDA's Guide to Minimize Microbial Food Safety Hazards for Fresh Fruits and Vegetables
- Developed at request of farmers in New Jersey and New Jersey Dept. of Agriculture
  - Buyers requesting suppliers to demonstrate adherence to GAPs
- +22 farm certified in NC

NCDA&CS - Marketing Division
Grading Services
Food Safety Audit
Verfication Program

- GAP certification – industry driven
- NCDA&CS – one of first to offer GAP audits
- Grant to assist growers
  - Defray cost of a first time GAP audit
  - Funded by USDA Specialty Crop Block Grant



NCDA&CS Farm to School Program



- We work with our farmers to provide school children a safe and nutritious product
  - GAP certification required

- GPS tracking system
  - Traceability and security
- Monitor trailer temperatures
  - Enhance safety

ESTABLISHED 1896
ASSOCIATION OF FOOD AND DRUG OFFICIALS

Fostering uniformity in the adoption of food safety laws, rules and regulations by uniting all stakeholders across the globe.

Why AFDO Model Code?

- Quicker than federal rule making
- Provides mechanism for states/local authorities to address specific issues unique to a locale
- Broader implementation especially at medium/smaller farms/packing houses
- Industry concern: potential patchwork of state/local laws and regulations
  - Existing guidance broad, lacks specific criteria

Who is Participating

- States: FL, CA, VA, OH, NC
- Federal: FDA, USDA
- Association of Fruit and Vegetable Inspection Standardization Agencies (AFVISA)
- Industry: Western Growers Association, United Fresh Produce Association, National Restaurant Association, Food Marketing Institute, Pacific Tomato Growers, Grocery Manufacturers Association/Food Products Association, American Trucking Association
- Academia

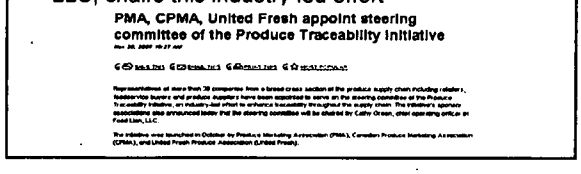
Industry Initiatives

Global Food Safety Initiative

- Umbrella of programs recognized by the international community
  - Example: Global GAP
- February 2008 – Wal-Mart first major chain to require suppliers to meet Global Food Safety Initiative standards

Produce Traceability Initiative

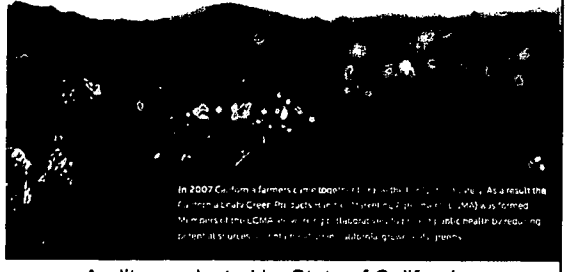
- Representing 30+ companies across the produce supply chain including retailers, foodservice buyers and produce suppliers
- Cathy Green, chief operating officer of Food Lion, LLC, chairs this industry-led effort



PMA, CPMA, United Fresh appoint steering committee of the Produce Traceability Initiative

LGMA

Leafy Greens Marketing Agreement



Audits conducted by State of California

T-GAPs

- **Tomato Good Agricultural Practices (T-GAP) and Tomato Best Management Practices (T-BMP)**
  - **Safer handling, production, and packing practices**
- **Spearheaded by Florida tomato industry**
  - **State governor signed bill for new mandatory food safety program in May 2007**

North Carolina's Initiatives

State and local programs performed more than 80% of the food safety and defense work in the United States

- **90%** of inspections conducted in FDA regulated facilities, **2.5 million** inspections
- Respond to **28,000** food emergencies
- Analyze **328,000** food samples
- Investigate **3,000** foodborne outbreaks
- Respond to **46,000** consumer complaints

NC Food Safety and Defense Task Force

- Established by Executive Order 84
- Membership includes
  - Regulatory – Federal, state, and local
  - Public Health
  - Academia
  - INDUSTRY

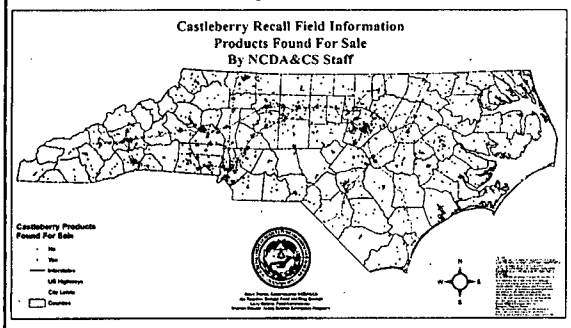
NC Food Safety and Defense Task Force

- Foundation of North Carolina's emergency response efforts
- Recent accomplishments
  - Food Emergency Response Plan
  - Crop Emergency Response Plan
  - Livestock Emergency Response Plan
  - Drought Conference for Food Processors
  - Castleberry and New Era recall responses
    - Future work – improving NC's response to a food recall

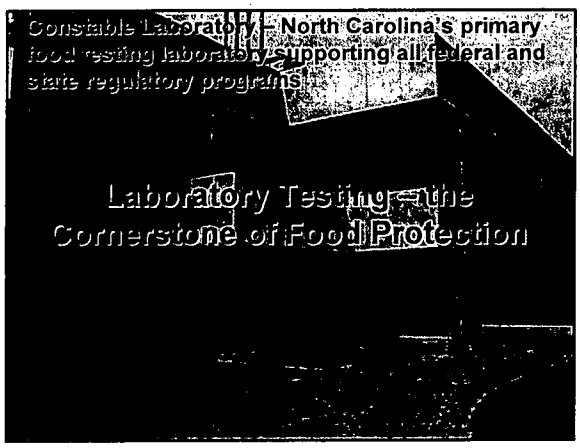
By using the Incident Command System (ICS), North Carolina coordinated the efforts of 1,000+ personnel statewide in 3 State agencies and 86 local agencies

	NC	USDA-FSIS	FDA
Sites visited	~16,000	~800	12,989
Cans removed	~35,000		13,000

Generated Using the MHTD with GPS



Funded by Congressman David Price's NC Threat Reduction Grant

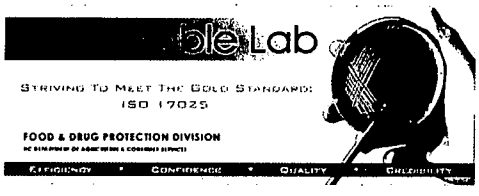


Retail Survey Program

- Bagged salads (micro/pesticides)
- Prepared salads (micro)
- Smoked fish (micro)
- Imported and soft cheese (micro)
- Allergen testing (*undeclared* sulfites, dairy, peanuts, egg)
- Hot topic (bagged spinach, imported seafood)

ISO 17025

Provides for international acceptability of results



Rapid Microbiological Testing

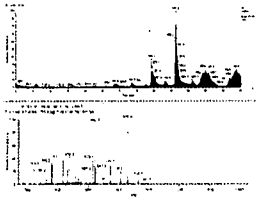
	Traditional	Today
Listeria monocytogenes	4 days	2.5 days
E. coli	2 - 3 days	1 - 2 days
E. coli 0157:H7	2 days	1 day
Staphylococcus aureus	2 - 4 day	1 day
Salmonella	2 days	1-2 days

Strengthening Laboratory Preparedness

- TRIPLE QUADRUPOLE MASS SPECTROMETER with Office of Domestic Preparedness funds
- Increased scanning sensitivity 100 fold
  - Rodenticide in a murder case
  - Pesticide residue on blueberries
  - Antibiotics in imported seafood

Strengthening Laboratory Preparedness

- Continued investment in new technology to quickly test foods with confidence



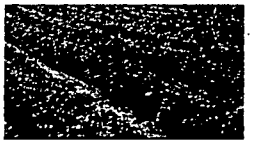
TIME OF FLIGHT MASS SPECTROMETER Tests for 200,000 compounds in a single scan

Current Funding Requests

- Emergency Preparedness Committee
- Expansion of staff – inspection, compliance, and laboratory
  - First lines of defense
- Emergency generator
  - Protect multi-million dollar investment

Protecting Fresh Produce, from

Farm to Fork



Joe Reardon, Director
Food & Drug Protection Division

The Produce Safety Issue and Incidence

Trevor Phister, PhD
Assistant Professor
Department of Food, Bioprocessing and Nutrition Sciences
Trevor_Phister@ncsu.
NC COOPERATIVE EXTENSION

Why Should We Care?

Every year foodborne illnesses result in an estimated:

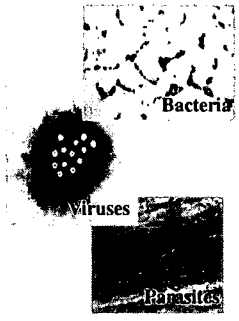
- **76 million cases of foodborne illness.**
- **325,000 people hospitalized for foodborne illness.**
- **5,200 needless deaths each year.**
- **Economic losses between 10-83 billion dollars.**

Produce Associated Outbreaks Affect Business

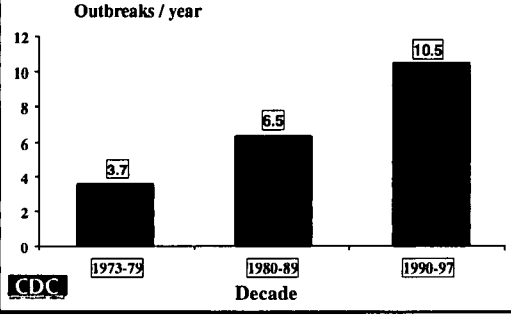
- **Strawberry industry lost an estimated $50 million in 1996 after mistakenly being indicated as the source of pathogens in an outbreak.**
- **Odwalla shareholder value dropped approximately 41% ($12.4 million) in six months after outbreak.**
- **Work against produce promotions campaigns.**

Microbes That Cause Foodborne Illness

- **Bacteria** – Single-celled organisms that live independently.
- **Viruses** - small particles that live and replicate in a host.
- **Parasites** - intestinal worms or protozoa that live in a host animal or human.



Number of Produce Associated Outbreaks by Decade, 1973 - 1997



Main produce items

- Leafy greens
- Tomato
- Sprouts
- Berries
- Melons

It is a local problem!

- 19 produce related outbreaks
  - 2003-2005 FL, Georgia, North and South Carolina and Tennessee
- Over 1,413 people became ill
- Largest single out break 425 school children
- Most common source was leafy greens and the agent was norovirus

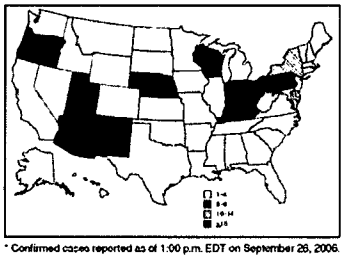
Harmful Microorganisms & Outbreaks Associated with Produce

Pathogen	Produce
E. coli O157:H7	Iceberg lettuce, radish sprouts, unpasteurized apple cider/juice
Salmonella spp.	Tomatoes, bean sprouts, sliced watermelon, sliced cantaloupe, coleslaw & onions, alffa sprouts, root vegetables, dried seaweed
L monocytogenes	Cabbage
B. cereus	Sprouts
Hepatitis A virus	Iceberg lettuce, raspberries, strawberries
Cryptosporidium	Apple cider
Cyclospora	Raspberries

Spinach outbreak

- 205 confirmed cases
- 103 patients hospitalized
- 3 deaths

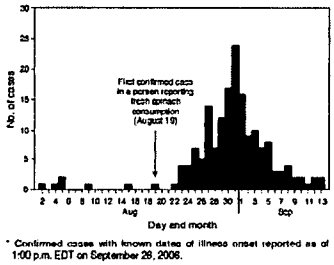
FIGURE 1. Number of confirmed cases (N = 183)* of *Escherichia coli* serotype O157:H7 infection, by state — United States, September 2006



* Confirmed cases reported as of 1:00 p.m. EDT on September 28, 2006.

MMWR Sep 29, 2006

FIGURE 2. Number of confirmed cases (n = 171)* of *Escherichia coli* serotype O157:H7 infection, by date of illness onset — United States, August–September 2006



* Confirmed cases with known dates of illness onset reported as of 1:00 p.m. EDT on September 28, 2006.

MMWR Sep 29, 2006

Harvest

CalFart Report, 2007

CalFart Report, 2007

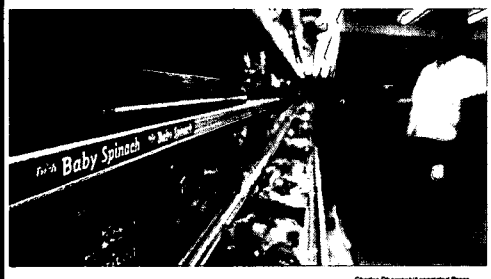
Wild pig tracks

CalFart Report, 2007

Conclusion

- Cannot tell for sure if it was
  - wild pigs
  - cattle
  - Lower water level in well as compared to river

Still a problem



Charles Dharapak/Associated Press

North Carolina production

- 2006 NC harvested 2,700 acres of tomatoes
- Estimated production value approximately 28 million dollars
- If an outbreak occurred in North Carolina our producers would stand to **lose around 15.7 million dollars**

What can we do?

The packing houses

Enter in plastic totes

↓

Transferred in refrigerated truck

↓

Cooled for 72h from 41 to 36°F

↓

Dump on mixing line

↓

Enter into wash flume
(water chlorinated maintained at low pH

Monitored wash for turbitidy

↓

Exit over dewatering belt packed in centrifuge barrels

↓

Weighed and packed into bags

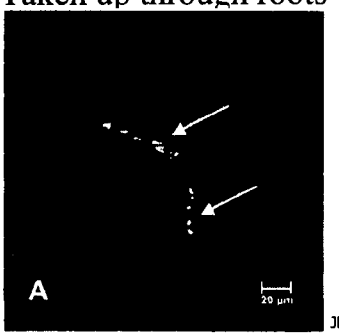
↓

Run through metal detector

↓

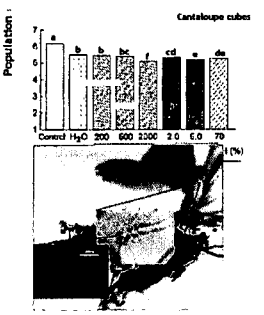
Palletized stored below 41°F

Taken up through roots



JFP vol65 p18-23

Solutions



Good Agricultural Practices

GAPs

- Water
- Fertilizer
- Animal feces
- Worker health and hygiene
- Field sanitation
- Packing facility
- Transportation
- Traceback

Conclusions

- Produce related illness is a problem in the Southeast
- Bacteria protozoa and viruses cause disease
- Currently best method to prevent illness is through preventing contamination
- Current standards are set by buyers

Resources

NCDA&CS - Marketing Division
Grading Services
Food Safety Audit
Verification Program

http://www.ncagr.com/markets/gradnreg/foodsafety/index.htm

www.extensionfoodsafety.org

NC COOPERATIVE EXTENSION

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North Carolina Fresh Produce Safety Task Force

DR. CHRIS GUNTER

NORTH CAROLINA STATE UNIVERSITY
DEPARTMENT OF HORTICULTURAL SCIENCE

TASK FORCE CO-CHAIR

Industry Awareness

Task Force Overview

- Subcommittee of Governor's North Carolina Food Safety and Defense Task Force
- Formed in April 2007
- Partners

Commodity Groups

Hearing from Those Already Off the Porch

- Producers in Eastern and Western NC
- Water #1 Priority
  - Surface Water Irrigation
- Need More Education
  - Buyers, Wholesalers
  - Repackers
  - Retailers
  - Employees
  - Consumers
- Solutions Should be Scale Neutral – Small vs Large Farms

Our Goal

North Carolina has a **competitive, vibrant, and safe** fresh produce industry supported through the **research, teaching and outreach** programs of NC State University, NC A&T State University, North Carolina Department of Agriculture and Consumer Services, Farm Bureau, and industry groups.

Our Purpose

The North Carolina Fresh Produce Safety Task Force **minimizes** food safety **risks** and **enhances** the **economic competitiveness** of NC's fresh produce industry.

Our Outputs

- Industry understands and implements Good Agricultural Practices
- Research-based guidelines to maximize produce safety
- Industry and public policy decisions informed by science-based information
- Network collaborators to address food safety incidences and concerns
- Manage and support and integrate with other initiatives though the NC Food Safety and Defense Taskforce

Actions

- County Extension Agent Training **Modules for Grower Education**
- Model Food Safety Plan
- Host a State Wide Food Safety Forum
- Interagency Emergency Response Team
- Fresh Produce Safety Web Presence
- Field **Research and Demonstrations**
- And many more!

Agent Training Modules

- Covering Key Areas of Need
  - Hazards associated with produce,
  - Hygiene,
  - Organic Fertilizer Handling,
  - Field and Packing Facility Sanitation,
  - Water Quality,
  - Traceback,
  - Supervisory and Risk Management
- Conducting Mock Audits
- Grant Funded

Water Quality Research

- Surface Water is the Only Option for Some Growers
- Water Testing Guidelines
- Water Remediation Strategies

Industry Funded



Research Plans for this summer

- Research and Demonstration Plots

What GAPs?

- **Good Agricultural Practices** = Guidelines to Minimize Microbial Food Safety Hazards in Fresh Fruits and Vegetables
- A voluntary framework, not a regulation
- #1 PREVENTION – Better than corrective action
- #2 CONTROL – Growers control areas they can

#3 Eliminate Fecal Contamination

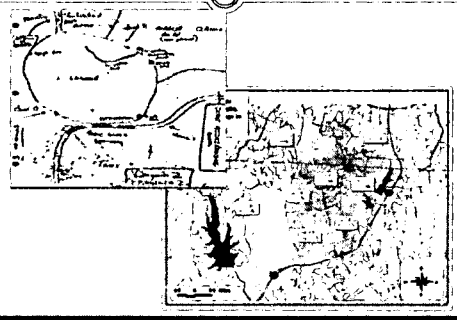
#4 Water Quality

#5 Organic Fertilizer Handling (Manure)

#6 Clean Hands

Unwashed dirty hand

#7 Follow Laws and Regulations

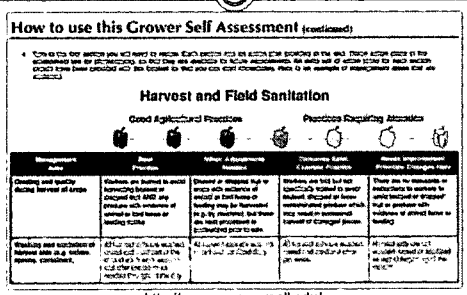


#8 Accountability

Reducing the Risk

- **Identify** crops and procedures most likely associated with foodborne illness
- **Develop procedures** to reduce outbreak
- **Monitor** procedures to keep produce safe
- **Verify** that produce is consistently safe

Certification of GAPs – Self Certified


How to use this Grower Self Assessment (continued)

Harvest and Field Sanitation

Good Agricultural Practices | Practices Requiring Attention

http://www.gaps.cornell.edu/

Certification of GAPs – 3rd Party Audit

NORTH CAROLINA
DEPARTMENT OF AGRICULTURE & CONSUMER SERVICES
Marketing Division

NCDA&CS Marketing Division

- Certified 22 Farms under USDA Fresh Produce Audit Verification Program
- Often Multiple Commodities
- GAP Certification Assistance Program - $400 to help defray costs
- 2007 – 4 Farms Participated
- 2008 – 23 Applications (so far!)
- NCDA&CS working with auditors to let growers know about the program!
- Audit Costs are on the Rise.

Data Provided by: Ross Williams, NCDA&CS

Grower Groups are Trying

CA Leafy Greens
CDFA
CERTIFIED

CALIFORNIA STRAWBERRIES

Arizona leafy green marketing agreement advances to audit stage

Positioning NC for the Future

GLOBALG.A.P.
The Global Partnership for Good Agricultural Practice

Can't Afford to React to the Problem

Must Be Ready for Action!

- Thank you to NC Fresh Produce Safety Task Force Members
  - Diane Ducharme – Kannapolis
  - Garry Grabow – Bio and Ag Engineering
- Questions?

CROPS: ACRES, YIELD, PRODUCTION AND VALUE, 2005-2006, NORTH CAROLINA

CROPS	UNIT	2005 [1]						2006 [2]					
		ACRES PLANTED	ACRES HARVESTED	YIELD PER ACRE	PRODUCTION	PRICE PER UNIT	VALUE	ACRES PLANTED	ACRES HARVESTED	YIELD PER ACRE	PRODUCTION	PRICE PER UNIT	VALUE
		Thousands		*Units*	*Thousands*	*Dollars*	*Thousand Dollars*	*Thousands*		*Units*	*Thousands*	*Dollars*	*Thousand Dollars*
FIELD CROPS													
Barley	Bu.	24	19	78	1,482	1.78	2,638	**24**	**17**	**80**	**1,360**	**1.95**	**2,652**
Corn for Grain [3]	Bu.	750	700	120	84,000	2.33	195,720	**790**	**740**	**132**	**97,680**	**2.95**	**288,156**
Corn for Silage [4]	Ton	-	45	17	765	-	-	**-**	**45**	**18**	**810**	**-**	**-**
Cotton, Upland [5]	Lb.	815	810	852	1,437	0.458	315,910	**870**	**865**	**721**	**1,300**	**0.451**	**281,424**
Cottonseed	Ton	-	-	-	469	82.00	38,458	**-**	**-**	**-**	**430**	**91.50**	**39,345**
Hay: All	Ton	-	691	2.4	1,660	66.00	109,720	**-**	**690**	**2.41**	**1,663**	**72.00**	**119,933**
Alfalfa	Ton	-	11	2.5	28	130.00	3,640	**-**	**10**	**3.1**	**31**	**131.00**	**4,061**
Other	Ton	-	680	2.4	1,632	65.00	106,080	**-**	**680**	**2.4**	**1,632**	**71.00**	**115,872**
Irish Potatoes	Cwt.	15.5	15	190	2,850	7.70	21,945	**17.7**	**15.5**	**210**	**3,255**	**10.00**	**32,550**
Oats	Bu.	50	23	73	1,679	2.06	3,459	**60**	**26**	**61**	**1,586**	**2.10**	**3,331**
Peanuts	Lb.	97	96	3,000	288,000	0.196	56,448	**85**	**84**	**3,200**	**268,800**	**0.184**	**49,459**
Sorghum for Grain [3]	Cwt.	16	13	50	650	4.00	1,456	**17**	**13**	**47**	**611**	**5.35**	**1,831**
Sorghum for Silage [4]	Ton	-	2	12	24	-	-	**-**	**4**	**13**	**52**		
Soybeans for Beans	Bu.	1,490	1,460	27	39,420	5.64	222,329	**1,370**	**1,360**	**32**	**43,520**	**6.30**	**274,176**
Sweetpotatoes	Cwt.	36	35	170	5,950	14.20	84,490	**40**	**39**	**180**	**7,020**	**16.30**	**114,426**
Tobacco: All	Lb.	-	126	2,213	278,900	1.479	412,594	**-**	**158.8**	**2,081**	**330,410**	**1.502**	**496,326**
Tobacco: Flue-cured	Lb.	-	123	2,227	273,950	1.478	404,872	**-**	**155**	**2,090**	**323,950**	**1.500**	**485,925**
Tobacco: Burley	Lb.	-	3	1,650	4,950	1.560	7,722	**-**	**3.8**	**1,700**	**6,460**	**1.610**	**10,401**
Wheat	Bu.	560	435	57	24,795	3.07	76,121	**560**	**420**	**59**	**24,780**	**3.25**	**80,783**
FRUITS AND NUTS		*Actual Acres*						*Actual Acres*					
Apples, Commercial	Lb.	-	6,800	19,100	130,000	0.12	13,859	**-**	**6,800**	**25,900**	**176,000**	**0.12**	**19,799**
Blueberries	Lb.	-	5,000	5,200	26,000	1.41	36,702	**-**	**4,700**	**5,430**	**25,500**	**1.91**	**48,745**
Grapes	Ton	-	1,300	3	3.9	937.00	3,653	**-**	**1,300**	**3.52**	**4.58**	**1,030.00**	**4,624**
Peaches	Ton	-	1,200	5	6	850.00	5,100	**-**	**1,200**	**5.63**	**6.0**	**967.00**	**5,115**
Pecans: All	Lb.	-	-	-	2000	0.97	1930	**-**	**-**	**-**	**600**	**1.25**	**750**
Improved	Lb.	-	-	-	1650	1.00	1650	**-**	**-**	**-**	**500**	**1.35**	**675**
Seedlings	Lb.	-	-	-	350	0.80	280	**-**	**-**	**-**	**100**	**0.75**	**75**
VEGETABLES													
FRESH MARKET		*Actual Acres*						*Actual Acres*					
Bell Peppers	Cwt.	4,700	3,700	120	444	24.00	10,656	**4,900**	**4,800**	**120**	**576**	**27.00**	**15,552**
Cabbage, All	Cwt.	7,000	6,500	220	1,430	11.00	15,730	**8,000**	**7,700**	**230**	**1,771**	**11.00**	**19,481**
Cucumbers	Cwt.	7,000	5,000	105	525	16.00	8,400	**7,000**	**6,500**	**110**	**715**	**18.60**	**13,299**
Snap Beans, All	Cwt.	6,800	5,000	50	250	30.00	7,500	**7,200**	**7,000**	**55**	**385**	**30.00**	**11,550**
Squash	Cwt.	4,000	3,400	100	340	29.00	9,860	**4,300**	**4,100**	**100**	**410**	**28.00**	**11,480**
Strawberries, All	Cwt.	1,600	1,500	130	195	95.00	18,525	**1,700**	**1,600**	**135**	**216**	**90.00**	**19,440**
Sweet Corn	Cwt.	7,700	7,000	92	644	17.50	11,270	**8,300**	**8,000**	**95**	**760**	**18.00**	**13,680**
Tomatoes	Cwt.	2,700	2,500	320	800	28.00	22,400	**2,800**	**2,700**	**340**	**918**	**31.00**	**28,458**
Watermelons	Cwt.	6,600	6,100	170	1,037	7.00	7,259	**7,400**	**7,200**	**200**	**1,440**	**9.00**	**12,960**
PROCESSING													
Cucumbers	Ton	16,200	16,000	4.3	68.8	290.00	19,952	**11,100**	**9,500**	**4.0**	**38.0**	**270.00**	**10,260**

[1] Revised. [2] Preliminary. [3] Planted for all purposes. [4] Green-weight. [5] Production in 480-lb. net weight bales.

CROPS: ACRES, YIELD, PRODUCTION AND VALUE, 2005-2006, NORTH CAROLINA

CROPS	UNIT	2005 [1]						2006 [2]					
		ACRES PLANTED	ACRES HARVESTED	YIELD PER ACRE	PRODUCTION	PRICE PER UNIT	VALUE	ACRES PLANTED	ACRES HARVESTED	YIELD PER ACRE	PRODUCTION	PRICE PER UNIT	VALUE
		Thousands		*Units*	*Thousands*	*Dollars*	*Thousand Dollars*	*Thousands*		*Units*	*Thousands*	*Dollars*	*Thousand Dollars*
FIELD CROPS													
Barley	Bu.	24	19	78	1,482	1.78	2,638	**24**	**17**	**80**	**1,360**	**1.95**	**2,652**
Corn for Grain [3]	Bu.	750	700	120	84,000	2.33	195,720	**790**	**740**	**132**	**97,680**	**2.95**	**288,156**
Corn for Silage [4]	Ton	-	45	17	765	-	-	**-**	**45**	**18**	**810**	**-**	**-**
Cotton, Upland [5]	Lb.	815	810	852	1,437	0.458	315,910	**870**	**865**	**721**	**1,300**	**0.451**	**281,424**
Cottonseed	Ton	-	-	-	469	82.00	38,458	**-**	**-**	**-**	**430**	**91.50**	**39,345**
Hay: All	Ton	-	691	2.4	1,660	66.00	109,720	**-**	**690**	**2.41**	**1,663**	**72.00**	**119,933**
Alfalfa	Ton	-	11	2.5	28	130.00	3,640	**-**	**10**	**3.1**	**31**	**131.00**	**4,061**
Other	Ton	-	680	2.4	1,632	65.00	106,080	**-**	**680**	**2.4**	**1,632**	**71.00**	**115,872**
Irish Potatoes	Cwt.	15.5	15	190	2,850	7.70	21,945	**17.7**	**15.5**	**210**	**3,255**	**10.00**	**32,550**
Oats	Bu.	50	23	73	1,679	2.06	3,459	**60**	**26**	**61**	**1,586**	**2.10**	**3,331**
Peanuts	Lb.	97	96	3,000	288,000	0.196	56,448	**85**	**84**	**3,200**	**268,800**	**0.184**	**49,459**
Sorghum for Grain [3]	Cwt.	16	13	50	650	4.00	1,456	**17**	**13**	**47**	**611**	**5.35**	**1,831**
Sorghum for Silage [4]	Ton	-	2	12	24	-	-	**-**	**4**	**13**	**52**		
Soybeans for Beans	Bu.	1,490	1,460	27	39,420	5.64	222,329	**1,370**	**1,360**	**32**	**43,520**	**6.30**	**274,176**
Sweetpotatoes	Cwt.	36	35	170	5,950	14.20	84,490	**40**	**39**	**180**	**7,020**	**16.30**	**114,426**
Tobacco: All	Lb.	-	126	2,213	278,900	1.479	412,594	**-**	**158.8**	**2,081**	**330,410**	**1.502**	**496,326**
Tobacco: Flue-cured	Lb.	-	123	2,227	273,950	1.478	404,872	**-**	**155**	**2,090**	**323,950**	**1.500**	**485,925**
Tobacco: Burley	Lb.	-	3	1,650	4,950	1.560	7,722	**-**	**3.8**	**1,700**	**6,460**	**1.610**	**10,401**
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[1] Revised. [2] Preliminary. [3] Planted for all purposes. [4] Green-weight. [5] Production in 480-lb. net weight bales.

VISITOR REGISTRATION SHEET

Jt. Legislative Education Oversight Committee — DEC. 4, 2006

Name of Committee — **Date**

VISITORS: PLEASE SIGN IN BELOW AND RETURN TO COMMITTEE CLERK

NAME	FIRM OR AGENCY AND ADDRESS
Wendy Campbell	NCDA +CS 4000 Reedy Creek Rd, Raleigh
Maria Noriega	NCDA+CS 4000 Reedy Creek Rd. Raleigh
Sue Johnson-Langdon	NC Sweet Potato Commission
John W. Kimber	NC Sweet Potato Commission Foundation
Gardner Payne	McGuireWoods Consulting
Fran Preston	N.C. Retail Merchants Asso
Kelly Jeffer	NCDA+CS
Sharon Stewart	NCDA+CS - Emergency Programs
[illegible]	NCFB
[illegible]	[illegible] & Assoc

VISITOR REGISTRATION SHEET

NC Ag & Forestry Awareness — 3-19-08

Name of Committee — **Date**

VISITORS: PLEASE SIGN IN BELOW AND RETURN TO COMMITTEE CLERK

NAME	FIRM OR AGENCY AND ADDRESS
Tom BEAN	NC EDF
	NCFB
Jay Hicks	NCDA+CS
Edgar Miller	CTNC

General Assembly of North Carolina
Joint Legislative Commission on
NC AG & FORESTRY AWARENESS
State Legislative Building
Raleigh, North Carolina

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May 6, 2008

The Honorable Elizabeth Dole
555 Dirksen Office Building
Washington, D.C. 20510

RE: Safety Standards for Imported Foods

Dear Senator Dole:

The Agriculture and Forestry Awareness Study Commission was established by the North Carolina General Assembly in 1983 and charged with studying the influence of the agriculture and forestry industries on North Carolina's economy, identifying barriers to growth, and developing plans to expand opportunities and support for agriculture and forestry. Recent meetings of the Commission have focused on food safety issues, and, in particular produce safety, and efforts underway to further ensure the integrity of fresh produce grown in the State.

Agribusiness leads North Carolina's economy contributing over $66 billion to the economy and employing almost one in five people. We are the 3rd most agriculturally diverse state in the nation leading in the production of pork, poultry, eggs, sweet potatoes, cucumbers, and so forth. The nation depends on North Carolina for a variety of safe meats and produce.

Americans are fortunate to enjoy one of the safest and most affordable food supplies in the world. A safe food supply is the foundation of public health and a strong economy. Since the enactment of the Food, Drug, and Cosmetic Act of 1906, the United States has led the world in food safety. However, food safety practices are not universally equivalent across the globe. Currently the United States is importing more food than we are exporting, an alarming trend first seen in 2004. Approximately 15% of our food supply is now imported, including ingredients used in countless other food items and ready-to-eat foods. As noted by the U.S. Food and Drug Administration (FDA) "Today, foods that are inherently more likely to pose risks, such as ready-to-eat food products, fresh produce, and seafood, account for an increasing proportion of imported foods." (FDA Food Protection Plan, p. 8).

Exacerbating the safety issues raised by the lack of equivalent standards is the fact that the FDA often has very limited information regarding the conditions under which food is produced in foreign countries. By not requiring exporting countries to meet standards equivalent to those set in the United States, we jeopardize the safety of our food supply and place our domestic producers at a competitive disadvantage. Further, major recalls, food borne illness outbreaks, and import alerts all serve to undermine consumer confidence and create economic instability in the marketplace. In April 2008, an outbreak of Salmonella linked to cantaloupe grown in Honduras sickened over 50 people in the United States and Canada. Such outbreaks erode consumer confidence in the safety of all fresh produce, including that domestically produced. They also hamper domestic food safety initiatives such as the Good Agricultural Practices (GAPs) certification for farmers.

Similar concerns can be expressed about the safety of imported seafood, which represents almost 85% of seafood consumed in the US, and its effect on domestic producers. Congressman Walter Jones introduced the Foreign Seafood Safety Act of 2007 that would require nations exporting to the US have equivalent safety and inspection programs. "As the aquaculture industry continues to grow and compete with wild-caught seafood products, concerns regarding the use of unapproved animal drugs and unsafe chemicals and the misuse of animal drugs in aquaculture operations have increased substantially." (Import Alert IA16131, p. 2). In 2005, the US shrimp industry won an anti-dumping case against six countries for exporting shrimp to the United States rejected by other countries below market value.

The Agriculture and Forestry Awareness Study Commission requests your support in enacting legislation that would require countries exporting to the United States, at minimum, to have food safety and inspection programs equivalent to the United States. Food safety requires continuous investment, training, and resources. The lack of uniform global food safety standards clearly places our producers at an economic disadvantage and jeopardizes public health. By requiring exporters to the United States to meet our food safety standards at a minimum, we can help ensure Americans continue to enjoy the safest food supply in the world and promote economic stability.

Thank you for your attention to this matter.

Sincerely,

Charles W. Albertson

Senator Charles. W. Albertson

Dewey L. Hill

Representative Dewey L. Hill

Co-Chairs, Agriculture and Forestry Awareness Study Commission

General Assembly of North Carolina
Joint Legislative Commission on
NC AG & FORESTRY AWARENESS
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May 6, 2008

The Honorable Richard Burr
217 Russell Senate Office Building
Washington, D.C. 20510

RE: Safety Standards for Imported Foods

Dear Senator Burr:

The Agriculture and Forestry Awareness Study Commission was established by the North Carolina General Assembly in 1983 and charged with studying the influence of the agriculture and forestry industries on North Carolina's economy, identifying barriers to growth, and developing plans to expand opportunities and support for agriculture and forestry. Recent meetings of the Commission have focused on food safety issues, and, in particular produce safety, and efforts underway to further ensure the integrity of fresh produce grown in the State.

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Thank you for your attention to this matter.

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May 6, 2008

The Honorable G. K. Butterfield
413 Cannon House Office Bldg.
Washington, D.C. 20510

RE: Safety Standards for Imported Foods

Dear Representative Butterfield:

The Agriculture and Forestry Awareness Study Commission was established by the North Carolina General Assembly in 1983 and charged with studying the influence of the agriculture and forestry industries on North Carolina's economy, identifying barriers to growth, and developing plans to expand opportunities and support for agriculture and forestry. Recent meetings of the Commission have focused on food safety issues, and, in particular produce safety, and efforts underway to further ensure the integrity of fresh produce grown in the State.

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May 6, 2008

The Honorable Bob Etheridge
1533 Longworth House Office Bldg.
Washington, D.C. 20510

RE: Safety Standards for Imported Foods

Dear Representative Etheridge:

The Agriculture and Forestry Awareness Study Commission was established by the North Carolina General Assembly in 1983 and charged with studying the influence of the agriculture and forestry industries on North Carolina's economy, identifying barriers to growth, and developing plans to expand opportunities and support for agriculture and forestry. Recent meetings of the Commission have focused on food safety issues, and, in particular produce safety, and efforts underway to further ensure the integrity of fresh produce grown in the State.

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Americans are fortunate to enjoy one of the safest and most affordable food supplies in the world. A safe food supply is the foundation of public health and a strong economy. Since the enactment of the Food, Drug, and Cosmetic Act of 1906, the United States has led the world in food safety. However, food safety practices are not universally equivalent across the globe. Currently the United States is importing more food than we are exporting, an alarming trend first seen in 2004. Approximately 15% of our food supply is now imported, including ingredients used in countless other food items and ready-to-eat foods. As noted by the U.S. Food and Drug Administration (FDA) "Today, foods that are inherently more likely to pose risks, such as ready-to-eat food products, fresh produce, and seafood, account for an increasing proportion of imported foods." (FDA Food Protection Plan, p. 8).

Exacerbating the safety issues raised by the lack of equivalent standards is the fact that the FDA often has very limited information regarding the conditions under which food is produced in foreign countries. By not requiring exporting countries to meet standards equivalent to those set in the United States, we jeopardize the safety of our food supply and place our domestic producers at a competitive disadvantage. Further, major recalls, food borne illness outbreaks, and import alerts all serve to undermine consumer confidence and create economic instability in the marketplace. In April 2008, an outbreak of Salmonella linked to cantaloupe grown in Honduras sickened over 50 people in the United States and Canada. Such outbreaks erode consumer confidence in the safety of all fresh produce, including that domestically produced. They also hamper domestic food safety initiatives such as the Good Agricultural Practices (GAPs) certification for farmers.

Similar concerns can be expressed about the safety of imported seafood, which represents almost 85% of seafood consumed in the US, and its effect on domestic producers. Congressman Walter Jones introduced the Foreign Seafood Safety Act of 2007 that would require nations exporting to the US have equivalent safety and inspection programs. "As the aquaculture industry continues to grow and compete with wild-caught seafood products, concerns regarding the use of unapproved animal drugs and unsafe chemicals and the misuse of animal drugs in aquaculture operations have increased substantially." (Import Alert IA16131, p. 2). In 2005, the US shrimp industry won an anti-dumping case against six countries for exporting shrimp to the United States rejected by other countries below market value.

The Agriculture and Forestry Awareness Study Commission requests your support in enacting legislation that would require countries exporting to the United States, at minimum, to have food safety and inspection programs equivalent to the United States. Food safety requires continuous investment, training, and resources. The lack of uniform global food safety standards clearly places our producers at an economic disadvantage and jeopardizes public health. By requiring exporters to the United States to meet our food safety standards at a minimum, we can help ensure Americans continue to enjoy the safest food supply in the world and promote economic stability.

Thank you for your attention to this matter.

Sincerely,

Charles W. Albertson

Senator Charles. W. Albertson

Dewey L. Hill

Representative Dewey L. Hill

Co-Chairs, Agriculture and Forestry Awareness Study Commission

General Assembly of North Carolina
Joint Legislative Commission on
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May 6, 2008

The Honorable Walter Jones
2333 Rayburn House Office Bldg.
Washington, D.C. 20510

RE: Safety Standards for Imported Foods

Dear Representative Jones:

The Agriculture and Forestry Awareness Study Commission was established by the North Carolina General Assembly in 1983 and charged with studying the influence of the agriculture and forestry industries on North Carolina's economy, identifying barriers to growth, and developing plans to expand opportunities and support for agriculture and forestry. Recent meetings of the Commission have focused on food safety issues, and, in particular produce safety, and efforts underway to further ensure the integrity of fresh produce grown in the State.

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May 6, 2008

The Honorable David Price
2162 Rayburn House Office Bldg.
Washington, D.C. 20510

RE: Safety Standards for Imported Foods

Dear Representative Price:

The Agriculture and Forestry Awareness Study Commission was established by the North Carolina General Assembly in 1983 and charged with studying the influence of the agriculture and forestry industries on North Carolina's economy, identifying barriers to growth, and developing plans to expand opportunities and support for agriculture and forestry. Recent meetings of the Commission have focused on food safety issues, and, in particular produce safety, and efforts underway to further ensure the integrity of fresh produce grown in the State.

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May 6, 2008

The Honorable Virginia Foxx
430 Cannon House Office Bldg.
Washington, D.C. 20510

RE: Safety Standards for Imported Foods

Dear Representative Foxx:

The Agriculture and Forestry Awareness Study Commission was established by the North Carolina General Assembly in 1983 and charged with studying the influence of the agriculture and forestry industries on North Carolina's economy, identifying barriers to growth, and developing plans to expand opportunities and support for agriculture and forestry. Recent meetings of the Commission have focused on food safety issues, and, in particular produce safety, and efforts underway to further ensure the integrity of fresh produce grown in the State.

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May 6, 2008

The Honorable Howard Coble
2468 Rayburn House Office Bldg.
Washington, D.C. 20510

RE: Safety Standards for Imported Foods

Dear Representative Coble:

The Agriculture and Forestry Awareness Study Commission was established by the North Carolina General Assembly in 1983 and charged with studying the influence of the agriculture and forestry industries on North Carolina's economy, identifying barriers to growth, and developing plans to expand opportunities and support for agriculture and forestry. Recent meetings of the Commission have focused on food safety issues, and, in particular produce safety, and efforts underway to further ensure the integrity of fresh produce grown in the State.

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May 6, 2008

The Honorable Mike McIntyre
2437 Rayburn House Office Bldg.
Washington, D.C. 20510

RE: Safety Standards for Imported Foods

Dear Representative McIntyre:

The Agriculture and Forestry Awareness Study Commission was established by the North Carolina General Assembly in 1983 and charged with studying the influence of the agriculture and forestry industries on North Carolina's economy, identifying barriers to growth, and developing plans to expand opportunities and support for agriculture and forestry. Recent meetings of the Commission have focused on food safety issues, and, in particular produce safety, and efforts underway to further ensure the integrity of fresh produce grown in the State.

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May 6, 2008

The Honorable Robin Hayes
130 Cannon House Office Bldg.
Washington, D.C. 20510

RE: Safety Standards for Imported Foods

Dear Representative Hayes:

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May 6, 2008

The Honorable Sue Myrick
230 Cannon House Office Bldg.
Washington, D.C. 20510

RE: Safety Standards for Imported Foods

Dear Representative Myrick:

The Agriculture and Forestry Awareness Study Commission was established by the North Carolina General Assembly in 1983 and charged with studying the influence of the agriculture and forestry industries on North Carolina's economy, identifying barriers to growth, and developing plans to expand opportunities and support for agriculture and forestry. Recent meetings of the Commission have focused on food safety issues, and, in particular produce safety, and efforts underway to further ensure the integrity of fresh produce grown in the State.

Agribusiness leads North Carolina's economy contributing over $66 billion to the economy and employing almost one in five people. We are the 3rd most agriculturally diverse state in the nation leading in the production of pork, poultry, eggs, sweet potatoes, cucumbers, and so forth. The nation depends on North Carolina for a variety of safe meats and produce.

Americans are fortunate to enjoy one of the safest and most affordable food supplies in the world. A safe food supply is the foundation of public health and a strong economy. Since the enactment of the Food, Drug, and Cosmetic Act of 1906, the United States has led the world in food safety. However, food safety practices are not universally equivalent across the globe. Currently the United States is importing more food than we are exporting, an alarming trend first seen in 2004. Approximately 15% of our food supply is now imported, including ingredients used in countless other food items and ready-to-eat foods. As noted by the U.S. Food and Drug Administration (FDA) "Today, foods that are inherently more likely to pose risks, such as ready-to-eat food products, fresh produce, and seafood, account for an increasing proportion of imported foods." (FDA Food Protection Plan, p. 8).

Exacerbating the safety issues raised by the lack of equivalent standards is the fact that the FDA often has very limited information regarding the conditions under which food is produced in foreign countries. By not requiring exporting countries to meet standards equivalent to those set in the United States, we jeopardize the safety of our food supply and place our domestic producers at a competitive disadvantage. Further, major recalls, food borne illness outbreaks, and import alerts all serve to undermine consumer confidence and create economic instability in the marketplace. In April 2008, an outbreak of Salmonella linked to cantaloupe grown in Honduras sickened over 50 people in the United States and Canada. Such outbreaks erode consumer confidence in the safety of all fresh produce, including that domestically produced. They also hamper domestic food safety initiatives such as the Good Agricultural Practices (GAPs) certification for farmers.

Similar concerns can be expressed about the safety of imported seafood, which represents almost 85% of seafood consumed in the US, and its effect on domestic producers. Congressman Walter Jones introduced the Foreign Seafood Safety Act of 2007 that would require nations exporting to the US have equivalent safety and inspection programs. "As the aquaculture industry continues to grow and compete with wild-caught seafood products, concerns regarding the use of unapproved animal drugs and unsafe chemicals and the misuse of animal drugs in aquaculture operations have increased substantially." (Import Alert IA16131, p. 2). In 2005, the US shrimp industry won an anti-dumping case against six countries for exporting shrimp to the United States rejected by other countries below market value.

The Agriculture and Forestry Awareness Study Commission requests your support in enacting legislation that would require countries exporting to the United States, at minimum, to have food safety and inspection programs equivalent to the United States. Food safety requires continuous investment, training, and resources. The lack of uniform global food safety standards clearly places our producers at an economic disadvantage and jeopardizes public health. By requiring exporters to the United States to meet our food safety standards at a minimum, we can help ensure Americans continue to enjoy the safest food supply in the world and promote economic stability.

Thank you for your attention to this matter.

Sincerely,

Charles W. Albertson

Senator Charles. W. Albertson

Dewey L. Hill

Representative Dewey L. Hill

Co-Chairs, Agriculture and Forestry Awareness Study Commission

General Assembly of North Carolina
Joint Legislative Commission on
NC AG & FORESTRY AWARENESS
State Legislative Building
Raleigh, North Carolina

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May 6, 2008

The Honorable Heath Shuler
512 Cannon House Office Bldg.
Washington, D.C. 20510

RE: Safety Standards for Imported Foods

Dear Representative Shuler:

The Agriculture and Forestry Awareness Study Commission was established by the North Carolina General Assembly in 1983 and charged with studying the influence of the agriculture and forestry industries on North Carolina's economy, identifying barriers to growth, and developing plans to expand opportunities and support for agriculture and forestry. Recent meetings of the Commission have focused on food safety issues, and, in particular produce safety, and efforts underway to further ensure the integrity of fresh produce grown in the State.

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Charles W. Albertson

Senator Charles. W. Albertson

Dewey L. Hill

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Co-Chairs, Agriculture and Forestry Awareness Study Commission

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May 6, 2008

The Honorable Brad Miller
1722 Longworth House Office Bldg.
Washington, D.C. 20510

RE: Safety Standards for Imported Foods

Dear Representative Miller:

The Agriculture and Forestry Awareness Study Commission was established by the North Carolina General Assembly in 1983 and charged with studying the influence of the agriculture and forestry industries on North Carolina's economy, identifying barriers to growth, and developing plans to expand opportunities and support for agriculture and forestry. Recent meetings of the Commission have focused on food safety issues, and, in particular produce safety, and efforts underway to further ensure the integrity of fresh produce grown in the State.

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Senator Charles. W. Albertson

Dewey L. Hill

Representative Dewey L. Hill

Co-Chairs, Agriculture and Forestry Awareness Study Commission