

# REGIONAL AGRICULTURE STRATEGY

U.S. Environmental Protection Agency Region 4

Fiscal Year 2008

J. I. Palmer, Jr., Regional Administrator



## **Purpose**

The EPA Region 4 Agricultural Strategy provides coordination with EPA's National Strategy for Agriculture, summarizes the Region's priority activities related to agriculture, and describes the Region's approach for working with agricultural interests to (1) reduce any adverse impacts from agricultural activities on the environment; (2) improve communications with agricultural interests regarding policies, rules, requirements, and programs; and (3) increase the Region's understanding of agricultural perspectives on environmental issues.

## **Vision**

EPA Region 4 will work with agricultural interests, other federal agencies, states, tribes, and other interested parties to achieve continual environmental improvement and promote sustainable production of safe, abundant supplies of food, fiber, horticultural, and energy products.

## **Background**

EPA Region 4 serves the citizens of eight southeastern states, Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina and Tennessee, and six federally recognized Native American tribes. Areas in these states and tribes represent very diverse landscapes and resource treasures. The bluegrass of Kentucky, the Gold Coast of the Gulf of Mexico, the barrier reef off the Florida Keys and the black-water swamps of the Okefenokee are just a few of these cherished treasures, all worthy of protection.

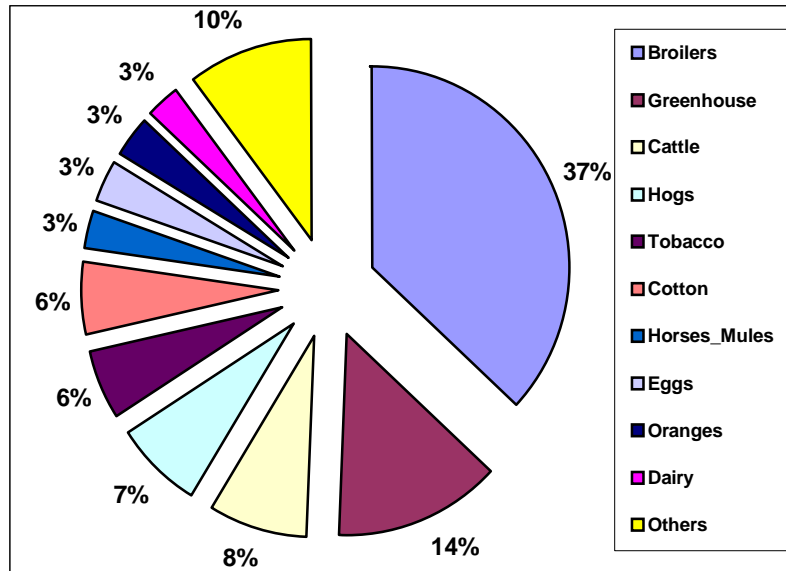
## **Agriculture**

Agriculture is a vital part of the economy, culture, and history of the Southeast. From an economic perspective, farmers and ranchers provide food, feed, fiber, and some fuel using plants, animals and their by-products.

The direct and indirect economic impacts of agricultural production in the Southeast are significant, totaling over \$ 40 billion in sales in 2006. Southeast growers produce more chicken meat, catfish, oranges, sweet potatoes and thoroughbred horses than producers in any other region and are second in hog production. States in Region 4 also provide a wide range of fruits and vegetables, sugarcane, soybeans, cotton, peanuts, horticultural products and turf grasses.

Agriculture also constitutes the largest land use in the Southeast, including 107 million acres in cropland (9.4 percent), 147 million acres in pasture and hayfields (12.9 percent), and 528 million acres in private and public forests (46.4 percent).

As the Southeast continues to grow and urbanize, this land base is shrinking. Land conversion can have significant environmental impacts. In addition to the loss of food, fiber, feed and fuel production capabilities, conversion may also diminish myriad other amenities, such as open space, wildlife habitat, biodiversity, and carbon storage. Maintaining healthy farmlands and ranchlands is vital to the Region's environmental and economic future.



**Figure 1. 2001 Cash Receipts in Region 4 States (Others category - includes turkeys, tomatoes, cane, peanuts, catfish, and corn; all at less than 2 percent of receipts).**

**Resource Concerns**

Agricultural production can have potential adverse impacts on water quality and quantity, native ecosystems, air quality, land resources, and farm workers. Across the Region, agricultural producers have taken significant steps to reduce these adverse impacts; however, challenges remain.

Improper agricultural production practices can result in surface and ground water quality impairment, primarily resulting from non-point source pollution. Surface runoff from eroding cropland fields enters nearby streams and rivers to degrade waters. Although pesticide use in the Southeast can produce beneficial results, increases in accidental exposure and misuse have also resulted in water quality and human health problems. Moreover, livestock waste from animal feeding operations and associated spray fields can contribute to impaired water quality and offensive odors.

While the Clean Water Act explicitly preserves the authority of each state to allocate water among users, water use and water quality issues remain inextricably linked. Agricultural production is a substantial user of surface and ground water resources. In several sections of Region 4, the need for water to support agricultural production competes with other uses for potable water. In times of water shortage, agriculture producers have relied on irrigation to sustain crop yields thereby intensifying the struggle for the remaining water resources among competing uses. The agriculture sector continues to be challenged to improve irrigation efficiency and to conserve as much of this precious resource as possible.

Reductions in water quality and water availability can also adversely affect native aquatic ecosystems. In addition to thousands of miles of rivers and streams, six of the eight Region 4 states have coastal areas. Overall, the freshwater, marine, and estuarine ecosystems contain some of the highest species diversity in the world. The

continued health and biodiversity of these systems depends on the maintenance of high-quality terrestrial and aquatic habitat. Loss and degradation of these habitats from residential, commercial, and industrial growth and development and changes in production agriculture are among the key environmental challenges facing coastal states.

Region 4 is home to more than 30 percent of the nation's remaining freshwater wetlands, including the Everglades in southern Florida, the second largest wetland in the world. These areas have important hydrological, chemical, biological and socioeconomic functions, which add value to plant and animal habitats and help ensure a clean water supply. Through federal farm programs, conversion of wetland areas for agricultural production has been all but eradicated, and in some cases, wetlands in agricultural areas are being restored.



The agriculture sector also contributes to air resource concerns. Diesel emissions from off-road equipment, including farm vehicles and machinery, can be a factor in fine particulate matter and air toxics levels. Dust generated from agricultural activities is also high in particulates. Odors associated with livestock operations and spray fields continues to produce complaints from some residents. Airborne chemical drift from farming operations has sometimes negatively impacted the public, farm workers, and nearby aquatic and terrestrial ecosystems in Region 4 states.

### **EPA Responsibilities**

Region 4 recognizes that farmers and ranchers manage large parcels of rural lands. They make daily decisions about tillage practices and pesticide and nutrient use. As good stewards, farmers and ranchers have generally demonstrated their commitment to protect land and water resources and their way of life through implementation of voluntary programs.

Upon appointment, President Bush charged EPA Administrator Steve Johnson with accelerating the pace of environmental protection while maintaining our nation's economic competitiveness. In April 2006, the Administrator released EPA's National Strategy for Agriculture. This strategy provides a set of goals to protect the nation's food, water, land, and air for generations, primarily through better communication, collaboration and innovation. As a result, EPA Region 4 personnel have actively engaged to effectively collaborate with farmers, ranchers and agribusinesses to meet the Agency's mission.

EPA is responsible for the effective implementation of numerous environmental laws which apply to agricultural activities. Among those laws are the Clean Air Act;

Clean Water Act; Safe Drinking Water Act; Federal Insecticide, Fungicide and Rodenticide Act; and Food Quality Protection Act. Where necessary, EPA develops policies, regulations, and guidance to implement these statutes.

Region 4 shares regulatory responsibilities with state and tribal governments by authorizing appropriate agencies to implement and enforce programmatic requirements, in accordance with federal law. Departments of environmental protection and departments of agriculture provide day-to-day implementation of programs for permitting agricultural activities; monitoring ambient resources; providing technical, financial, and compliance assistance; and assuring compliance. Region 4 provides financial support and program oversight for these state and tribal activities.

Region 4 supports voluntary efforts to protect human health and the environment by providing technical assistance and funding for innovative demonstration and applied research projects. Funds have been made available through the Regional Geographic Initiative/Regional Environmental Program Priority, Regional Applied Research Effort and the Strategic Agriculture Initiative programs.



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Additionally, the National Environmental Performance Track (NEPT) program is open to the agriculture sector. The NEPT program encourages continuous environmental improvement through the use of environmental management systems, local community involvement, and measurable results. Through Performance Track, EPA recognizes and rewards members that demonstrate strong environmental performance beyond current requirements. Region 4 will continue to use these types of collaborative approaches and incentives to enhance environmental stewardship.

### **Fiscal Year 2006-2007 Activities**

Region 4 must use existing authorities while crossing programmatic and organizational boundaries to help the agriculture sector address environmental protection concerns. This approach requires improved internal communication and expanded collaboration with many external stakeholders.

In April 2006, Region 4 hired its first Agricultural Coordinator, Denise Tennessee. Denise, who has more than 16 years experience with the Natural Resources Conservation Service, reports directly to the Regional Administrator. She serves as the chair of the Region's agricultural task force, which effectively facilitates regional activities by bringing together staff implementing programs affecting agriculture. Denise also serves as a principal point of contact with the Administrator's Agricultural Counselor and state and tribal agriculture programs. Denise has also been heavily involved with regional agricultural outreach efforts to growers and academic institutions.

During Fiscal Year 2007, EPA Region 4 focused on the following agricultural activities within the priorities established by the Regional Administrator in May 2006.

### **1. Reduce Public Exposure to Ozone and Particulate Matter**

- Worked with agriculture partners to promote biodiesel use and retrofit installation with the sector.

### **2. Promote Environmentally Sustainable Energy Technologies and Energy Conservation**

- Identified low cost/low technology biodigesters to produce energy from swine or dairy waste structures.
- Provided funding for research into creation of new biofuels from sewer sludge and continued to work on creating bio-oil from chicken litter.

### **3. Improve Water Quality**

- Worked with State Nonpoint Source (NPS) Programs and local stakeholders utilizing Section 319 funds to reduce NPS pollution (pathogens, nutrients and sediment) and restore impaired waters and wetlands in agricultural watersheds;
- Sponsored a Nutrient Criteria Workshop for the State Divisions of Water and agriculture partners;
- Participated in Natural Resources Conservation Service (NRCS) State Technical Committee Meetings encouraging the reporting of environmental results from the implementation of USDA Farm Bill Programs in priority watersheds; and
- Partnered with nonprofit organizations, state agencies, universities and other interested parties to identify and promote innovative, economical technology to reduce reliance on lagoons and spray fields for treatment and disposal of animal manure, especially when facilities are poorly sited.

### **4. Ensure Compliance**

- Produced a compliance assistance video for swine growers in eastern North Carolina;
- Provided Animal Feeding Operation (AFO) and Confined Animal Feeding Operation (CAFO) compliance assistance in Georgia, Florida and North Carolina;
- Conducted 13 federal CAFO inspections and 13 joint State/EPA CAFO inspections;

- Conducted 2 workshops for CAFO environmental assistance providers;
- Concluded 2 administrative enforcement actions at CAFO facilities; and
- Developed a national training module titled *Breaking Barriers: A Pesticide Inspectors' Manual for Interviewing Spanish Speaking Agricultural Workers* and associated materials. Conducted three week-long courses and nine abbreviated courses. The training is targeted to ensure state, territory and grower compliance with Worker Protection Standards.

## **5. Promote Environmental Excellence**

- Promoted the use of Environmental Management Systems for agricultural operations to improve overall compliance (e.g., North Carolina's program); and
- Co-sponsored training for North Carolina swine growers that focuses on innovative technologies for water and energy conservation, energy production, nutrient management, and environmental stewardship.

## **6. Enhance Collaboration with Partners**

- Sponsored agriculture field tours for Region 4 and the EPA Office of Research and Development employees to learn about the beneficial aspects of agriculture in improving human health and the environment. These tours also helped improve the employees understanding of diverse agriculture operations;
- Developed the Regional Agriculture Strategy in consultation with other federal, state and local agencies; commodity groups and the livestock sector; universities and others;
- Encouraged new partners to submit proposals for Region 4 and EPA Headquarters grants that support agriculture pollution prevention, environmental stewardship, pesticide stewardship and risk reduction and innovative technologies; and
- Planned the Organic Arsenicals Listening Tour providing a forum to discuss proposed pesticide re-registration decisions that would impact cotton and sod farmers in the Southeast.

## **7. Other Issues**

- Facilitated discussions among Georgia crop specialists to address emerging pesticide resistance management issues in fruits, nuts and vegetable crops and identified action items; and

- Awarded a competitive grant to the South Carolina Department of Agriculture for the purpose of conducting a pesticide and container disposal program.

### **Priority Activities for FY 2008**

The Regional Administrator has identified the following priorities as major fields of focus for fiscal year 2008. Activities, objectives and tasks are described for each priority, along with responsibilities and measure for the activities.

#### **1. Promote Clean and Safe Water through Watershed Protection**

**Activity 1-1:** Support watershed planning and implementation in priority watersheds.

**Strategic Plan Objective:** 2.2.1 Improve Water Quality on a Watershed Basis.

**Task 1:** Work with capacity building organizations to deliver watershed tools and technical support to the agricultural community in targeted watersheds so that they can manage their lands effectively to benefit water quality.

**Responsibility:** Water Management Division, Office of the Region Administrator

**Measures:** Number of grants and projects supported by EPA in conjunction with capacity building organizations (including the Watershed Centers of Excellence) that deliver watershed tools and technical support to the agricultural community in targeted watersheds; and

Project-level monitoring for load reductions and/or trend analyses that indicate a reduction in pollutants of concern, or monitoring that indicates a decreasing trend line in pollutants of concern over time.

**Task 2:** Engage primary external partners (e.g., NRCS and Cooperative Research Extension and Education Service (CREES)) to focus support to targeted watersheds or water bodies for the purpose of achieving and documenting environmental results (i.e., waterbody restoration/protection or watershed improvement) from the implementation of watershed projects which effectively prevent, abate and control agricultural water quality pollution.

**Responsibility:** Watershed Management Division, Office of the Regional Administrator

**Measures:** Number of targeted watersheds or water bodies with specific efforts by primary agricultural partners that contribute either financial support or technical support to specific restoration efforts (i.e., water body restoration/protection or watershed improvement);



Number of NRCS State Technical Committee meetings attended;

Number of NRCS District Offices visited for the purpose of targeting efforts;

Financial commitments (funds) to specific water quality improvement projects; and

Project monitoring for load reductions and/or trend analyses that indicate a reduction in pollutants of concern, or monitoring that indicates a decreasing trend line in pollutants of concern over time.

**Task 3:** Engage local watershed partners to focus support (federal, technical assistance) to targeted sub-watersheds that have been identified as potential high nutrient contributors via the USGS's SPARROW model. The desired results included achieving and documenting nutrient load reductions (nitrogen and phosphorus) from the implementation of watershed projects which effectively prevent, abate and control agricultural water quality pollution.

**Responsibility:** Water Management Division, Office of the Regional Administrator

**Measures:** Number of nutrient impaired targeted sub-watersheds with specific efforts by local watershed partners that contribute either financial support or technical support to achieve specific nutrient reduction outcomes;

Financial commitments (funds) to specific water quality improvement projects; and

Project monitoring for nutrient load reductions and/or trend analyses that indicate a reduction in nutrients of concern, or monitoring that indicates a decreasing trend line in nutrients of concern over time.

**Task 4:** Improve coordination and program integration with external partners.

**Responsibility:** Water Management Division

**Measures:** Number of NRCS State Technical Committee Meetings attended;

Cooperative Extension Liaison position; and

Number of Centers for Watershed Excellence

## **2. Reduce Public Exposure to Fine Particulate Matter and Air Toxics**

**Activity 2-1:** Provide compliance assistance tools to small agribusinesses that emit particulate matter.

**Strategic Plan Objective:** 1.1.1 Healthier Outdoor Air

**Task 1:** Include small agribusinesses that (seasonally) emit particulate matter (e.g., feed mills, cotton gins, and sweet potato washing facilities) on the mailing list to receive a Region 4 newsletter that provides pertinent information on PM2.5. Coordinate distribution with the Region 4 Small Business Liaison.

**Responsibility:** Air, Pesticides and Toxics Management Division

**Measures:** Number of small agribusinesses that receive the newsletter.

### **3. Promote Environmentally Sustainable Energy Technologies/Reduce Impact of Agriculture on Climate Change**

**Activity 3-1:** Promote activities in the agriculture sector that support sustainable energy production and use.

**Strategic Plan Objective:** 1.5.2 Industry Sector

**Task 1:** Use the Region 4 Agriculture web site to educate the public about the steps the agriculture sector is taking to support sustainable energy production and use and to reduce its carbon footprint.

**Responsibility:** Office of the Regional Administrator

**Measures:** Number of articles that are either posted on the Agriculture web site or links to applicable sites are provided.

**Activity 3-2:** Support demonstration projects and technology transfer in the agriculture sector to promote renewable energy or to reduce greenhouse gas emissions.

**Strategic Plan Objective:** 1.5.2 Industry Sector

**Task 1:** Use existing grants, to the extent possible, to support development and implementation of technology or demonstration projects to use agriculture waste or manure for energy production or sequester carbon from agriculture sources.

**Responsibility:** Office of the Regional Administrator

**Measures:** Number of projects that are funded to support a reduction in greenhouse gas emissions.

**Task 2:** Ensure that carbon credit trading programs have adopted science-based, consistent methods for calculating credits.

**Responsibility:** Office of the Regional Administrator

**Measures:** EPA guidelines on calculating carbon credit trading methods are reviewed and adopted as part of program activities.

#### **4. Ensure Compliance**

**Activity 4-1:** Ensure appropriate implementation of CAFO regulations.

**Strategic Plan Objective:** 2.2.1 Improve Water Quality on a Watershed Basis  
5.1.3 Monitoring and Enforcement

**Task 1:** In accordance with EPA's national enforcement and compliance assurance priority, Region 4 will ensure proper implementation of the CAFO regulations, effluent limitation guidelines, and permits.

**Responsibility:** Water Management Division, Office of Environmental Accountability

**Measures:** Number of states with approved CAFO regulations. Number of federal and joint State/EPA CAFO lead inspections conducted.

**Task 2:** Ensure that training is provided to state and county employees working on CAFO issues. This training should address the technical and social aspects of inspection and enforcement.

**Responsibility:** Water Management Division

**Measures:** Number of persons receiving training.

**Activity 4-2:** Provide compliance assistance to the agribusinesses on new regulations that impact the agriculture sector.

**Strategic Plan Objective:** 5.1.1 Compliance Assistance

**Task 1:** Provide a summary document outlining important rules and notices that apply to the agriculture sector. This information will be posted on the Region 4 Agriculture web site or applicable links will be provided.

**Responsibility:** Office of the Regional Administrator

**Measures:** Number of summary documents posted or applicable links provided.

**Task 2:** Partner with states to provide compliance assistance, as requested, to new renewable energy production facilities to help them comply with permits and other regulatory requirements.

**Responsibility:** Water Management Division and Air, Pesticides and Toxics Management Division

**Measures:** Number of facilities receiving compliance assistance and to the extent calculable, pounds of pollution avoided.

## **5. Promote Environmental Excellence**

**Activity 5-1:** Support environmental stewardship initiatives within the agriculture sector.

**Strategic Plan Objective:** 5.2.1 Prevent Pollution and Promote Environmental Stewardship

**Task 1:** Promote environmental stewardship success stories from the agriculture sector by posting articles on the Region 4 Agriculture web site or by providing applicable links.

**Responsibility:** Office of the Regional Administrator

**Measures:** Number of success stories posted on the web site or links provided.

**Task 2:** Continue to work with swine and poultry integrators on environmental stewardship and compliance assistance. Meet with poultry and swine integrators and trade associations to discuss environmental stewardship initiatives.

**Responsibility:** Office of the Regional Administrator

**Measures:** Number of integrators/producer meetings held; number of agricultural facilities that begin implementing environmental management systems following EPA Region 4 assistance; and to the extent calculable, pounds of pollution avoided or environmental improvements achieved as a result of implementation of environmental management systems.

## **6. Enhance Collaboration with Partners**

**Activity 6-1:** Work with agriculture partners to become aware of the environmental issues that are important to their sectors and promote voluntary, initiatives to increase and support environmental stewardship.

**Strategic Plan Objective:** Innovation and Collaboration

**Task 1:** Meet with trade organizations, grower groups, universities, industry and others to discuss the Regional Strategy for Agriculture.

**Responsibility:** Office of the Regional Administrator

**Measures:** Number of contacts touched by interactions.

**Task 2:** Sponsor field tours for the Region 4 employees and partners to share information and network with grower groups, trade organizations, universities, industry and others.

**Responsibility:** Office of the Regional Administrator

**Measures:** Number of agriculture field tours sponsored by Region 4 and the number of participants.