



FLORIDA DEPARTMENT OF AGRICULTURE AND CONSUMER SERVICES
COMMISSIONER ADAM H. PUTNAM

Compliance Economic Review

RULE NO: 5B-52.010

RULE TITLE: Cotton Stalk Destruction.

Division Contact

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Summary

This Compliance Economic Review is a good faith economic analysis that has been prepared in accordance with the requirements of §120.745(1)(b), Florida Statutes.

Rulemaking Authority: 570.07(23), 593.103(2), Florida Statutes.

Law Implemented: 593.103(13), 593.109, 593.116, Florida Statutes.

The rule describes that a cotton grower must destroy all cotton stalks by February 1 each year if requested by the Department. The destruction is verified by use of a completed form sent by the grower to the Department. If the stalks are not destroyed there is a penalty fee of \$10 per acre. The Department may apply to a court to order condemnation and destruction of the public nuisance and the grower is liable for all associated costs.

1. Provide a justification for the rule summarizing the benefits of the rule.

The purpose of this rule is to deprive the boll weevil of the means to survive from one cotton crop season to the next. Ordinarily, cotton is a perennial plant and cotton bolls and squares are ever-present and are at risk of constant boll weevil infestation. Destruction of cotton stalks at the end of each growing season disrupts this host plant and weevil cycle. Also, destroying cotton stalks as soon as the crop has been harvested was a key element in the reduction of reducing costs for the Boll Weevil Eradication Program and in the eradication of the boll weevil from Florida. It is essential that this cultural strategy remain in place in the event of any future initial re-introduction of the weevil into Florida in that an incipient population would again be denied host plants to feed on after a growing season. Constant vigilance is important with this pest.

The boll weevil (*Anthonomus grandis*) is a beetle which feeds on cotton buds and flowers. Thought to be native to Central America, it migrated into the US from Mexico in the late

19th century and had infested all U.S. cotton-growing areas by the 1920s, devastating the industry and the people working in the southern US. During the late 20th century it became a serious pest in South America as well. Since 1978, the Boll Weevil Eradication Program in the US has allowed full-scale cultivation to resume in many regions.

The insect crossed the Rio Grande near Brownsville, Texas to enter the United States from Mexico in 1892 and reached southeastern Alabama in 1915. By the mid 1920s it had entered all cotton growing regions in the U.S., travelling 40 to 160 miles per year. It remains the most destructive cotton pest in North America. Mississippi State University has estimated that since the boll weevil entered the United States it has cost U.S. cotton producers about \$13 billion in yield losses and control costs, and in recent times about \$300 million per year.

The National Boll Weevil Eradication Program ranks close to Eli Whitney's invention of the cotton gin as one of the greatest advancements ever for the U.S. cotton industry. This federal-state-grower cost share program has helped thousands of U.S. cotton growers become more competitive and has been a plus for the environment. The program has been successful in eradicating weevils from Virginia and the Carolinas, Georgia, Florida, south Alabama, California, Arizona, and Louisiana. Efforts are ongoing to eradicate the weevil from the rest of the United States. Continued success is also based on prohibition of unauthorized cotton growing, outside of the program, and constant monitoring for any recurring outbreaks.

Florida became free of the boll weevil due to the assiduous employment of the boll weevil eradication program. The program is continued due to the ever present risk of the weevil re-entering the US and then into Florida.

In 2008, Florida cotton production was 122,000 bales (nearly 60 million lbs) harvested from 65,000 acres. The price per pound (52 cents a pound) received equated to a crop value of slightly over \$30 million. Acreage planted in 2009 (65,000 acres) is slightly less than that planted in 2008 (67,000 acres).

All Florida commercial cotton producers are required to participate in the Boll Weevil Eradication Program. The \$1.00 per acre assessment, is based on reported acreage. Cotton producers must report intended acres by April 30, 2012, have their actual acreage certified by June 30, 2012 and must pay the \$1.00 per acre assessment by the July 31, 2012 deadline. Cotton producers who fail to meet the requirement will be assessed the \$5.00 per acre fee. Cotton producers uncertain as to whether or not they are planting should submit an intended acreage form with the acreage they anticipate planting by April 30, 2012.

The assessment fees are used by the Southeastern Boll Weevil Eradication Foundation to conduct daily program activities on a statewide basis. Key components of the first years of a program are pheromone traps for detection, cultural practices to reduce the weevil's food supply and chemical treatments for control. Once eradication is achieved, pheromone survey traps and cotton stalk destruction are important strategies.

Growers benefit from eradication of the weevils by the elimination of crop damage and losses caused by the weevils and by significantly reducing the cost of production. Once eradicated, growers typically experience a gain in cotton yield of at least 10%.

2. Provide an economic analysis showing whether the rule directly or indirectly is likely to have an adverse impact on economic growth, private-sector job creation or employment, or private-sector investment in excess of \$1 million, in the aggregate, from July 1, 2011 to July 1, 2016.

The rule is not likely to have an adverse impact on economic growth, private-sector job creation or employment. In effect, the rule creates a favorable impact in those areas. The rule ensures that all cotton growers are responding to a serious cotton pest in a similar manner. The coordinated operation of the program continues to keep Florida free of the pest and minimizes as best possible any future long-term establishment of the weevil. Insofar as Texas still harbors the boll weevil, there is a risk of re-infestation in Florida and adherence to the program strategies is essential.

The cost of cotton stalk destruction ranges from \$10-15 per acre. Based on 2008 crop acreage, the cost of this activity for a five-year period would be approximately \$3.25 million to \$5.18 million. This cost is offset by several factors. Economists estimate that by eradicating the boll weevil from infested areas (achieved in part by cotton stalk destruction), cotton growers reduce insect control costs by \$30 per acre and yield increases of more than 10 percent. For the 2008 crop extended for five years, this would calculate to an increased crop value totaling \$17.5 million dollars versus \$15.6 million through increased yield.

Eradicated areas have realized a 40 to 90 percent reduction in insecticide use on cotton. In Georgia, for example, insecticide applications were reduced from 14.4 per acre (pre-eradication) to 5.4 (post-eradication). Georgia farmers also decreased their overall insect control costs from \$125 per acre (pre-eradication) (\$40.62 million) to \$66 per acre.(\$21.45 million), a savings of \$19.17 million over a five-year period. In the Southeast, where the weevil has been eradicated, the combined annual direct economic benefits from increased yields, reduced insect damage and lower insect control costs are more than \$80 million. The value of this permanent stream of benefits exceeds \$1.2 billion - a significant boost to those rural economies. A sound cotton economy is healthy for the U.S. because: 1) annual business revenue stimulated by cotton in the U.S. economy exceeds \$120 billion and 2) the production and processing of America's No. 1 value added crop employs more than 235,000 Americans.

3. Provide an economic analysis showing whether the rule directly or indirectly is likely to have an adverse impact on business competitiveness, including the ability of persons doing business in the state to compete with persons doing business in other states or domestic markets, productivity, or innovation in excess of \$1 million, in the aggregate, from July 1, 2011 to July 1, 2016.

The Plant Protection Act (PPA) 2000 became law as part of the Agricultural Risk Protection Act. The PPA consolidates all or part of 10 existing USDA plant health laws into one comprehensive law, including the authority to regulate plants, plant products, certain biological control organisms, noxious weeds, and plant pests. The PPA is necessary because of the major impact plant pests currently have and could have on the agriculture, environment, economy, and commerce of the United States.

The PPA gives the Secretary of Agriculture, and through delegated authority, USDA's Animal and Plant Health Inspection Service (APHIS), the ability to prohibit or restrict the importation, exportation, and the interstate movement of plants, plant products, certain biological control organisms, noxious weeds, and plant pests. Under the PPA, violators face harsher civil penalties than ever before for smuggling illegal plants or produce that could harbor plant pests or diseases.

The Cotton Boll Weevil Eradication Program is a cooperative effort in which the U.S. Department of Agriculture (USDA) and State officials work with cotton growers to eradicate the boll weevil, in incremental stages, from the United States. Since 1892, when it first entered this country, the boll weevil has plagued U.S. cotton farmers. Boll weevil eradication began with a successful trial program in North Carolina and southern Virginia in 1978–80. Since then, this program has expanded to include cotton acreage in South Carolina, Georgia, Florida, Alabama, Mississippi, Tennessee, Missouri, Arkansas, Louisiana, Kansas, Oklahoma, Texas, New Mexico, Arizona, California, and parts of northwestern Mexico near the U.S. border. All of the 15 million acres of U.S. cotton are involved in the program, and the weevil has been eradicated from more than 80 percent of that production area. In that program elements are common to all participating states, there is no likely adverse impact on business competitiveness.

All entities conducting business that involves cotton throughout the US, movement of seed cotton, trash from cotton gins, and harvesting equipment are to be inspected, treated as necessary and certified as pest-free before they can be moved into or through weevil-free areas according to USDA APHIS PPQ regulations.

A continued cotton boll weevil eradication program ensures that cotton growers in Florida can grow cotton free of boll weevils and remain at a competitive advantage with other growers throughout the US.

4. Provide an economic analysis showing the estimated regulatory costs, including any transactional costs¹, in the aggregate, from July 1, 2011 to July 1, 2016.

The total amount of assessment funds collected from Florida cotton producers in FY 2010-2011 was \$126,714.64. The estimated regulatory costs for the period of July 1, 2011 to July 1, 2016 are \$633,573.20. The growers pay these funds which are in turn used to operate the boll weevil eradication program through the day to day operations of the Southeastern Boll Weevil Eradication Foundation which provides pheromone trapping and scouting.

5. Estimate (with explanation) number of individuals and entities likely to be required to comply with the rule.

¹ "Transactional costs" are direct costs that are readily ascertainable based upon standard business practices, and include filing fees, the cost of obtaining a license, the cost of equipment required to be installed or used or procedures required to be employed in complying with the rule, additional operating costs incurred, the cost of monitoring and reporting, and any other costs necessary to comply with the rule. §120.541(2)(d), Florida Statutes.

For FY 2010-2011 there were 367 cotton producers who reported planting and harvesting cotton from 116,101.01 acres. Each of these producers would be required to comply with this law.

6. Provide a general description of the types of individuals likely to be affected by the rule.

Those individuals engaged in and have an economic risk in the business of producing, or causing to be produced, cotton for market, such as cotton growers.

7. Estimate (with explanation) the cost to the Department of implementing and enforcing the proposed rule.

The implementation and enforcement of the rule requires the services and infrastructure from several areas including inspection personnel as well as the support services of Division administration.

In FY 2010-11, enforcement of this rule cost the Department in excess of \$3,664.50 which included salaries and operating expenses of staff from the Plant Inspection Bureau.

8. Estimate (with explanation) the cost to any other state and local government entity of implementing and enforcing the proposed rule.

There is no specific cost to another state or local government for implementing and enforcing the rule.

9. Estimate (with explanation) the anticipated effect on Department or other state or local government revenue (if any).

The anticipated effect on the Department would be the collection of penalty fees assessed at the rate of \$10 per acre which would be based upon the amount of acreage in which the destruction activity was not conducted.

10. Estimate (with explanation) of the transactional² costs likely to be incurred by individuals and entities, including local government entities, required to comply with the requirements of the rule.

The transactional costs of cotton stalk destruction would include the operational costs incurred by the cotton producers, which ranges from \$10-15 per acre. The operational costs would include machinery, fuel, and labor costs to conduct the destruction activities.

11. Provide an analysis of the impact of this rulemaking on small businesses³. The analysis must include the basis for the agency's decision not to implement alternatives that would reduce adverse impacts on small businesses.

² See footnote 1 above.

³ "Small business" means an independently owned and operated business concern that employs 200 or fewer permanent full-time employees and that, together with its affiliates, has a net worth of not more than \$5 million or any firm based in this state which has a Small Business Administration 8(a) certification. As applicable to

The cotton boll weevil eradication program assessments have decreased significantly since the early years of the program which reached a high of \$27.00 per acres in 1990. The alternative of not continuing the program will significantly increase the probability of a widespread distribution of the weevil if it were to become re-established in Florida.

No alternatives to this rule are necessary given that no adverse impact is expected (for reasons given in #2 and #3 above).

12. Provide an analysis of the impact of this rulemaking on small counties and small cities⁴.

The rule does not impose costs on small counties or small cities.

13. Provide an explanation of the methodology used to conduct the analysis⁵.

Several reports provided the comparative data for the analysis:

1. Anonymous. 2007. Boll weevil eradication. APHIS Factsheet. 3 pp.
2. Emery, T. 2011. Annual Report. Bureau of Plant and Apiary Inspection. Florida Department of Agriculture and Consumer Services. Division of Plant Industry. 27 pp.
3. Title IV: Plant Protection Act (part of Agriculture Risk Protection Act of 2000. <http://www.gpo.gov/fdsys/pkg/PLAW-106publ224/html/PLAW-106publ224.htm>.
 - a. The Plant Protection Act is a US statute relating to plant pests and noxious weeds introduced in 2000. It is currently codified at 7 U.S.C. 7701 *et seq*. It consolidates related responsibilities that were previously spread over various legislative statutes, including the Plant Quarantine Act, the Federal Plant Pest Act and the Federal Noxious Weed Act of 1974.
 - b. The Plant Quarantine Act, originally enacted in 1912 (7 U.S.C. 151 *et seq.*), gave the Animal and Plant Health Inspection Service (APHIS) authority to regulate the importation and interstate movement of nursery stock and other

sole proprietorships, the \$5 million net worth requirement shall include both personal and business investments. §288.703(6), Florida Statutes.

⁴ “Small city” means any municipality that has an unincarcerated population of 10,000 or less according to the most recent decennial census. “Small county” means any county that has an unincarcerated population of 75,000 or less according to the most recent decennial census. §120.52(18) and (19), Florida Statutes.

⁵ A technical methodology need not be used to develop the statement of estimated regulatory costs, if the agency uses routine regulatory communications or its Internet website to reasonably survey regulated entities, political subdivisions, and local governments and makes good faith estimates of regulatory costs in conformity with recommendations from the Office of Fiscal Accountability and Regulatory Reform (“OFARR”), or from one or more legislative offices if requested by the agency and such request is approved by the President of the Senate and the Speaker of the House of Representatives.

plants that may carry pests and diseases that are harmful to agriculture. This Act has been superseded by the consolidated APHIS statute, the Plant Protection Act of 2000 (7 U.S.C. 7701 et seq.). This authority is particularly important to the agency's ability to prevent or limit the spread of harmful invasive species within or to a state or region of the United States.

- c. The Federal Plant Pest Act of 1957 (Public Law 85-36) prohibited the movement of plant pests from a foreign country into or through the United States unless authorized by USDA was superseded by the Plant Protection Act of 2000 (Public Law 106-224, Title IV). Under the new law, Animal and Plant Health Inspection Service (APHIS) retains broad authority to inspect, seize, quarantine, treat, destroy or dispose of imported plant and animal materials that are potentially harmful to U.S. agriculture, horticulture, forestry, and, to a certain degree, natural resources. (7 U.S.C. 7701 et seq.).
- d. The Federal Noxious Weed Act of 1974 (Public Law 93-629, 88 Statute. 2148, enacted January 3, 1975) established a federal program to control the spread of noxious weeds. The United States Secretary of Agriculture was given the authority to declare plants "Noxious Weeds", and limit the interstate spread of such plants without a permit. The Secretary has the authority to inspect, seize, and destroy products, and quarantine areas, if necessary to contain, or limit the spread of such weeds.

14. Any useful additional information.