DELTA F.A.R.M.
FARMERS ADVOCATING RESOURCE MANAGEMENT

# 2007 Delta F.A.R.M. Environmental Stewardship Report

B. F. Smith Foundation
Delta F.A.R.M.
433 Stoneville Rd.
P.O. Box 257
Stoneville, MS 38776

# 2007 Delta F.A.R.M. Environmental Stewardship Report

A report of the B. F. Smith Foundation and the Association of Delta Farmers Advocating Resource Management.

## B. F. Smith Foundation

Bruce Brumfield, Chairman
Kent Wyatt, Ex-Officio
Tommy Gary, Ex-Officio
R. B. Flowers, Director
Bill Kennedy, Director
Ben Lamensdorf, Director
W.A. Percy, II, Director

## Delta F.A.R.M.

Mike Sturdivant, Jr., Chairman
Dan Branton, Director
Nolen Canon, Director
Bobby Carson, Director
Jimmie Dick Carter, Director
Rob Coker, Director
Mattson Flowers, Director
W. A. Percy, II, Director
Reese Pillow, Director
Travis Satterfield, Director

# TABLE OF CONTENTS

# INTRODUCTION

The Delta F.A.R.M. Program began operation in the summer of 1998. The organization serves the farmers and landowners of the Mississippi Delta by providing technical information on conservation practices and promoting their current conservation efforts.

Membership to Delta F.A.R.M. is free, as are the services Delta F.A.R.M. provides its members. However, members are asked to submit an annual evaluation provided by the Delta F.A.R.M. staff. The staff will also provide assistance to the membership in completing the evaluation.

The Delta F.A.R.M. evaluation serves two general purposes. First, the evaluation is used by the Delta F.A.R.M. staff to document the current non-regulatory conservation efforts of its members and give farmers credit for their efforts. Second, the evaluation identifies those areas on members' lands, which may be improved through the implementation of additional conservation measures.

# ACKNOWLEDGEMENTS

Delta F.A.R.M. wishes to acknowledge the sponsors of this program. Without their support, this program or the data presented in this report would not be available.

Syngenta
Monsanto
FMC
Farmers Grain Terminal
U.S. Environmental Protection Agency
Mississippi Department of Environmental Quality

# METHODS

## Development.

With the guidance and support of the Delta F.A.R.M. Executive Committee, numerous State, Federal and private resource agencies helped to develop the Delta F.A.R.M. Program and its subsequent Evaluation. This group of farmers and resource agency personnel identified a list of recognized BMPs (Best Management Practices) for all types of agricultural production systems found in the Mississippi Delta. This list was utilized to establish the Delta F.A.R.M. Program Manual and the Evaluation.

The Program Manual provides detailed information on recognized BMPs advocated by Delta F.A.R.M. The Evaluation portion of the program serves to document all BMPs that are currently implemented on Delta F.A.R.M. member properties.

## Design.

The Evaluation takes place annually, following a cropping season. Each Delta F.A.R.M. member submits to an Evaluation through a questionnaire. The staff also makes field visits to a number of the member's farms each year to ensure the evaluations are done properly and are consistent from farm to farm. Data is collected through the questionnaire and is analyzed to develop this document, the annual Delta F.A.R.M. Environmental Stewardship Report.

## Analysis.

Each evaluation is entered into a database to form a composite data set for all Delta F.A.R.M. lands. The data yields percent utilization statistics for each recorded BMP. These statistics represent the percentage of farmers in the program that utilize a particular BMP. This statistic does not identify to what extent the BMP is being implemented, only that the BMP is being implemented at some level. Treatment area (acres) is also recorded on some BMPs to more thoroughly document the extent of BMP usage and also to track trends in conservation.

Although each farm's data is entered into a composite data set, farms are scored individually in order to recognize those producers and/or landowners who are exceptional stewards of the Delta's natural resources. All farms that score 90% or higher receive an annual Environmental Stewardship Award. Each farm is scored using a weighted system developed by cooperating natural resource agencies. Weight is given to the most important BMPs with consideration given to each BMP's economic feasibility. The weighted system is listed below.

| Best Management Practice | Weighted Score |
|---|---|
| Soil Conservation Plan | 10 |
| Filter Strips (Grass or Trees) | 50 |
| Grass Waterways | 25 |
| Terraces (when needed) | 10 |
| Conservation Tillage | 50 |
| Water Control Structures | 20 |
| Residue Management | 10 |
| Sub-soiling | 20 |
| Crop Rotation | 10 |
| Containment Levees Around Fields | 10 |
| Double Cropping | 10 |
| Cover Crop | 10 |
| Maintain Natural Riparian Areas | 10 |
| Impound Winter Water on Fields | 20 |
| 6/3 Water Management on Catfish Ponds | 20 |
| Straight Levee Rice/Bean Production | 20 |
| Water Testing for Drinking Wells | 10 |
| Tail Water Recovery System (irrigation) | 20 |
| Conversion from Ground to Surface Water Irrigation | 20 |
| Land Forming | 20 |
| Back Siphon Check Valves | 25 |
| Closed or Semi-Closed Mixing System | 25 |
| Precision Ag | 20 |
| Drift Reduction (Hooded Sprayers, etc.) | 20 |
| Integrated Pest Management | 20 |
| Recycle Pesticide Containers | 10 |
| Recycle Used Oil | 10 |
| Dispose of Used Batteries through Retailer | 10 |
| Dispose of Used Tires through Retailer | 10 |
| Recycle Polypipe | 10 |
| Wildlife Management Plan | 10 |
| Leave Crops for Wildlife | 10 |
| Food Plots | 10 |

# RESULTS

2007 General Statistics:

| | |
|---|---|
| Total Acres Evaluated: | 926,471 |
| Total Farmland in Region: | approximately 3.6 million |

Acres Enrolled:

Acres enrolled represents all acres enrolled into Delta F.A.R.M. since inception. All acres reported have been evaluated and are broken down by crop types.

| **CROP TYPE:** | **2007 ACRES:** |
|---|---|
| Cotton | 189,278 |
| Rice | 79,548 |
| Soybeans | 303,419 |
| Corn | 216,173 |
| Wheat | 28,176 |
| Milo | 16,775 |
| Catfish | 15,269 |
| Other Crops | 7,106 |
| Non-Cultivated | 81,408 |
| **TOTAL** | **926,471** |

Percent Utilization:

46 Best Management Practices have been recognized by Delta F.A.R.M. and are accounted for through the Evaluation. Each evaluated data set recognizes the utilization or non-utilization of any particular BMP. As a composite, the data is then used to calculate the percentage of Delta F.A.R.M. members' who utilize a specific BMP.

| BEST MANAGEMENT PRACTICE: | 2007 PERCENT UTILIZATION: |
|---|---|
| Soil Conservation Plans | 95.67% |
| Grass Filter Strips (Soil) | 93.44% |
| Grass Waterways (Soil) | 90.71% |
| Terracing | 18.36% |
| Conservation Tillage | 100.00% |
| Water Control Structures (Soil) | 97.83% |
| Maintain Crop Residues | 97.82% |
| Sub-Soil | 92.34% |
| Rotate Crops | 97.81% |
| Containment Levees Around Field | 42.45% |
| Double Crop | 51.93% |
| Cover Crop | 48.33% |
| Maintain Riparian Zones (WQL) | 87.84% |
| Hold Winter Water (WQT) | 92.93% |
| Grass on Exterior of Catfish Ponds | 100.00% |
| 6/3 Water Management on Catfish Ponds | 93.33% |
| Extend Drains Past the Toe of Ponds | 60.00% |
| Seining Pads for Catfish Ponds | 53.33% |
| Straight Levees | 93.65% |
| Water Control Structures (WQL) | 99.45% |
| Test Water at Wells | 15.74% |
| Tail Water Recovery System | 36.26% |
| Conversion from Ground to Surface Water Irrigation | 26.37% |
| Grass Filter Strips (WQL) | 91.84% |
| Grass Waterways (WQL) | 88.52% |
| Water Control Structures (WQT) | 95.67% |
| Land Form | 98.36% |
| Pads on the Lower End of Fields | 93.88% |

| | |
|---|---|
| Filter Strips Around Mixing Facilities | 25.60% |
| Back Siphon Check Valves | 57.06% |
| Close Mixing Systems | 85.79% |
| Precision Applications Technologies | 89.61% |
| Drift Reduction Technologies | 99.45% |
| IPM | 85.36% |
| Store Chemicals in the Proper Location | 99.40% |
| Store Pond Additives in Proper Location | 95.00% |
| Genetically Modified Crops | 100.00% |
| Recycle Pesticide Containers | 96.19% |
| Recycle Oil | 97.28% |
| Recycle Batteries | 97.29% |
| Recycle Tires | 96.21% |
| Recycle Polypipe | 94.28% |
| Wildlife Management Plan | 66.30% |
| Leave Crops for Wildlife | 92.30% |
| Manage or Maintain Riparian Areas | 91.66% |
| Food Plots | 93.98% |
| Flood for Winter Waterfowl | 94.56% |
| Manage Wildlife Habitat | 90.21% |

(Soil) references practices which are associated with soil conservation.
(WQL) references practices which are associated with water quality.
(WQT) references practices which are associated with water quantity.
(Mixing) references practices which are associated with chemical mixing.

Acres Treated:

Selected BMPs can be measured in acres affected by the practice. This can be in the form of protection, prevention, or area treated. The following represents data collected, which can be accounted for by acreage.

| BEST MANAGEMENT PRACTICE | 2007 ACRES | % OF TOTAL ACREAGE* |
|---|---|---|
| No-Tillage | 126,156 | 13.7% |
| Minimum-Tillage | 270,730 | 29.3% |
| Reduced-Tillage | 216,291 | 23.4% |
| Conventional Tillage | 313,294 | 33.9% |
| Land Formed Fields | 389,509 | 42.1% |
| Containment Levees | 224,910 | 24.3% |
| Winter Water Acres | 79,922 | 8.7% |
| Straight Levee Fields | 147,853 | 16.0% |
| Tail Water Irrigation | 53,939 | 5.9% |
| Surface Water Irrigation | 44,982 | 4.9% |
| Ground Water Irrigation | 454,345 | 49.1% |
| Wildlife Food Plots | 8,720 | 1.0% |
| Timberland | 63,141 | 6.9% |
| Riparian Zones | 6,915 | 0.8% |
| Drainage through Grass Filters | 210,044 | 22.7% |
| Drainage through WCS | 319,034 | 34.5% |

*% OF TOTAL ACREAGE = % of all evaluated acres (926,471).

2007 Overall Stewardship Level.

The annual Overall Stewardship Level of Delta F.A.R.M. reached **81.28%** in 2007. This statistic is calculated by averaging the percent utilization of all recognized BMP from all farms evaluated.

# CONCLUSION

The 2007 Membership of Delta F.A.R.M., with an overall stewardship level of 81.28%, has demonstrated their efforts to conserve, restore, and enhance the environment of this region as documented in this report. And by documenting the conservation efforts of approximately 30% of all the cropland in the region, Delta F.A.R.M. feels confident that its data is representative of the conservation efforts of the entire Yazoo-Mississippi Delta.

Through this evaluation, we can now identify areas that need to be focused on in the future. Ultimately, Delta F.A.R.M. would like to reach a stewardship level of 100%, and by focusing on those weak areas, we can reach this goal. But, as additional conservation practices are implemented and the overall stewardship level increases, Delta F.A.R.M. must also work to improve and expand existing conservation practices.