

Subpart 3-Bureau of Plant Industry
Chapter 10 – Crop Spraying and Licensing of Aerial Applicators
Subchapter 01 – Regulation of Application by Aircraft of Agricultural Substances

Applicability

100 These regulations are adopted pursuant to the authority granted in *Miss. Code Ann.* 69-21-109 and apply to the aerial application of pesticides, fertilizer and see in Mississippi. All persons engaged in such activities must comply with these regulations.

Source: *Miss. Code Ann.* §69-21-109 (Rev. 2009).

Definitions

- 101.01 As used in these regulations, the following terms shall have the meanings hereinafter ascribed to them.
1. “Aerial application” means the practice of engaging in agricultural aircraft operations.
 2. “Agricultural aircraft operation” means: Dispensing any pesticide, fertilizer or seed by aircraft;
 3. “Aircraft” means any contrivance now known or hereafter invented that is used or designed for navigation of or flight in the air over land and water, and that is designed for or adaptable for use in agricultural aircraft operations.
 4. “Applicator” means any person, as herein defined, who is licensed under this article to engage in agricultural aircraft operations, who may or may not be a pilot.
 5. “Agricultural substance” means any seed, fertilizer or pesticide that is used, applied, sprayed or administered by aircraft
 6. “Board” shall mean the advisory board of the Bureau of Plant Industry, a division of the Mississippi Department of Agriculture and Commerce.
 7. “Bureau” means the Bureau of Plant Industry, a division of the Mississippi Department of Agriculture and Commerce.
 8. “Chief Pilot” means the person designated by an applicator to serve as chief pilot and the supervisor of agricultural aircraft operations for an applicator.
 9. “Commissioner” means the Commissioner of the Mississippi Department of Agriculture and Commerce.
 10. “Defoliant” means any substance or mixture of substances intended for causing the leaves of foliage to drop from a plant, with or without causing abscission.
 11. “Department” means the Mississippi Department of Agriculture and Commerce.
 12. “Desiccant” means any substance or mixtures of substances intended for artificially accelerating the drying of plant tissues.
 13. “Herbicide” means a chemical used for killing plants or severely interrupting their normal growth processes.

14. "Hormone-Type Herbicide" - shall mean all phenoxy type herbicides and other chemicals or substances which produce physiological changes in plant tissue without producing a burning effect, such as caused by many oils, which the Department may declare to be extremely hazardous to crops or plants other than those for which the particular herbicide is intended to control, and shall include, but not be limited to the following materials:
 2,4-D (2,4-dichlorophenoxyacetic acid) 2,4-DP
 2-(2,4-dichlorophenoxypropionic acid in all forms; 2,4-DB
 4-(2,4-dichlorophenoxy) butyric acid in all forms; MCPA 4-chloro-2-methyl phenoxyacetic acid in all forms; Dicamba 2-Methoxy-3, 6-dichlorobenzoic acid in all forms, and picloram (4-amino-3,5,6-trichloropicolinic acid) in all forms.
15. "Person" shall mean any individual, corporation, firm, partnership, company, trust, association or other legal entity.
16. "Pesticide" means any substance or mixture of substances intended for preventing, destroying, repelling, mitigating or attracting any pests; and shall also include adjuvants intended to enhance the effectiveness of pesticides; and any substance or mixture of substances intended for use as a plant regulator, defoliant or desiccant.
17. "Pilot" means the operator of an aircraft used in agricultural aircraft operation; provided, however, a pilot may also be a person who is licensed as an applicator under the provisions of these regulations.
18. "Volume Median Diameter (VMD)" means the diameter of a single droplet, whose volume, when multiplied by the total number of droplets in spray, is found to equal the total spray volume. The volume median diameter is calculated by dividing the total spray volume in half.

Source: *Miss. Code Ann.* §69-21-109 (Rev. 2009).

Applicator's License

- 102 Applicator - Any person who intends to conduct, or engage in the practice of aerial application, as defined above, in the State of Mississippi shall first make application for and obtain an applicator's license from the Department on a form prescribed by the Department and said applicant shall:
1. Designate the name under which the applicant will do business;
 2. Submit proof of payment of all ad valorem and other taxes which might be applicable on aircraft and other equipment to be used;
 3. Establish proof of residency in accordance with Section 106 or appoint a resident agent for service of process in accordance with Section 107;
 4. File a proposal of intended operation or activity;
 5. Submit a copy of a photographic identification card.
 6. Designate a person who will meet serve as chief pilot and supervisor of operations, which may be the applicant, or some other person;
 7. The applicant must demonstrate competency by passing a written examination administered by the Department. The examination will cover aerial application methods and procedures in general, and include the

standards for certification of applicators as set forth in Code of Federal Regulations, Chapter 40, Section 171.4 (40 CFR §171.4).

8. Have available the services of at least one aircraft registered by the Department in accordance with Section 202.01(11) and one pilot currently licensed by the Department in accordance with Section 103.01;
9. Hold a current agricultural aircraft operator's certificate from FAA under FAR Part 137;
10. Submit proof of financial responsibility to the Department, and upon obtaining a license, such person shall maintain proof of financial responsibility at all times while such license is in effect, in accordance with Section 105;
11. Register with the Department all aircraft and pilots used in agricultural aircraft operations in Mississippi.

Source: *Miss. Code Ann.* §69-21-109 (Rev. 2009).

Pilot's License

- 103.01 Pilot - Each person who intends to personally operate an aircraft engaged in agricultural aircraft operations in or over the State of Mississippi shall first make application for and obtain a pilot's license from the Department on a form prescribed by the Department and said applicant shall:
1. Demonstrate that he is licensed as, or is employed by, a licensed applicator;
 2. Provide the name of the firm for which the applicant will act as a pilot;
 3. Provide his resume;
 4. Present a copy of a photographic identification card;
 5. Demonstrate competency by passing a written examination administered by the Department;
 6. Present his current commercial or airline transport pilot certificate from FAA;
 7. Present evidence of his current medical date and rating for type of aircraft to be operated; and
 8. Present a copy of current biennial flight review and current 2nd class medical.

103.02 Retrospective Application. Any valid pilot license issued or chief pilot designated in accordance with Section 69-23-109 (4) will be honored by the Department until March 31, 2010.

Source: *Miss. Code Ann.* §69-21-109 (Rev. 2009).

Chief Pilot Designation

- 104 Chief Pilot – In order to be designated as a chief pilot by an applicator the designee shall:
1. Be the holder of a current pilot's license issued by the department;
 2. Have at least 500 hours of commercial aerial application flying time as pilot-in-command, and two years experience either as a chief pilot or under

the direct supervision of a chief pilot in accordance with FAR 137 and in accordance with governing state laws in the state or states where the experience was gained, and be able to show proof thereof. Proof of experience may consist of a notarized affidavit from one of the following persons who has personal knowledge of the designee's experience: another applicator, a state or federal regulatory official, or an officer of a State or National Agricultural Aviation Association, or any other person as may be acceptable to the Department;

3. Hold a current commercial or airline transport pilot certificate from FAA;
4. Hold/possess a Current Second (2d) Class medical; and
5. Submit proof from FAA that the person has met the knowledge and skill tests requirement and is competent to serve as chief pilot in accordance with FAR 137.

Source: *Miss. Code Ann.* §69-21-109 (Rev. 2009).

Financial Responsibility

105.01 Each applicant for a license as an applicator in Mississippi shall submit proof of financial responsibility to the Department, and upon obtaining a license, such person shall maintain proof of financial responsibility at all times while such license is in effect.

105.02 Proof of financial responsibility shall consist of one of the following:

1. Delivery to the Department of a corporate surety bond in favor of any person or persons who may suffer damage by reason of the operation of an aerial application service, issued by a corporate surety company authorized to do business in this state, which surety bond shall be in the amount not less than \$300,000 or;
2. Delivery to the Department proof of an aircraft liability insurance policy issued by an insurance company authorized to do business in this state, insuring the licensee against liability for bodily injury or property damage resulting from the aerial application of agricultural substances, such insurance policy shall be in the minimum amount of \$100,000 for bodily injury for any one person, \$300,000 for bodily injury for any one occurrence and \$100,000 for property damage for any one occurrence for each aircraft registered with the Department.
3. Beginning January 1, 2010 all applicators must have in force an annual property damage aggregate limit of not less than \$500,000 on all liability insurance policies.

Source: *Miss. Code Ann.* §69-21-109 (Rev. 2009).

Proof of Residency

106 Resident applicators must establish proof of residency in the State of Mississippi. Proof of residency may be established by any one of the following:

1. A statement from the local circuit clerk certifying that the applicant is a qualified elector in that county;
2. A statement from the local tax assessor certifying that the applicant filed for homestead exemption for the current year;
3. A statement from the local sheriff certifying that the applicant owns, and regularly pays taxes on, real or personal property in his home county. If proof of residency cannot be established, it will be necessary for the applicant to appoint a resident agent as outlined for non-resident applicants in Section 207 of this regulation; or
4. Any other proof of residency as may be acceptable to the Department.

Source: *Miss. Code Ann.* §69-21-109 (Rev. 2009).

Licensing of Non-Resident Applicators

107 Any person who is a non-resident of this state shall obtain an applicator's license from the Department before operating as an applicator in Mississippi. In addition to obtaining an applicator's license, a non-resident applicator shall:

1. Designate and maintain a resident agent in Mississippi for service of process. The applicator shall tender to the Department with his application a copy of his Certificate of Authority from the Mississippi Secretary of State indicating the name and address of the applicator's resident agent. An unincorporated applicator shall tender a document stating the name and address of his resident agent, which shall be signed by such resident agent. By engaging in agricultural aircraft operations in the State of Mississippi, the applicator will be considered to have submitted to the jurisdiction of the courts of said state.

Source: *Miss. Code Ann.* §69-21-109 (Rev. 2009).

Fees for Licenses

108.01 A fee of One Hundred Fifty dollars \$(150.00 for each aircraft owned, operated, used and employed in aerial application by an applicator shall be paid to the Department for the issuance or annual renewal of a license for an applicator.

108.02 A fee of One Hundred Fifty dollars \$(150.00) for each pilot engaged in aerial application shall be paid to the Department for the issuance or annual renewal of a license for a pilot.

Source: *Miss. Code Ann.* §69-21-109 (Rev. 2009).

Issuance of Licenses

109.01 Upon receipt and approval of an application with appropriate related documents and payment of the applicable fees, the Department shall issue licenses as set forth below:

- 109.02 Each applicator shall be issued a license as an applicator to conduct agricultural aircraft operations in Mississippi in accordance with and subject to the provisions of *Miss. Code Ann.* §§ 69-21-101 through 69-21-128 and the regulations adopted by the Department.
- 109.03 Each aircraft shall be identified at all times by a decal supplied to the applicator by the Department.
- 109.04 Each pilot shall be issued a license, which will also serve as an identification card, identifying him or her as a registered pilot and/or chief pilot as the case may be. Each pilot shall have this card in his or her possession at all times when engaged in aerial application activities.
- 109.05 All licenses shall expire on the 31st of March of the year following their issuance and may be renewed for the ensuing year on or before that date.
- Source: *Miss. Code Ann.* §69-21-109 (Rev. 2009).

Additional Aircraft and Pilots, Deletions, and Transfers

- 110 Licensed applicators may add or delete aircraft and pilots, or transfer the registration fee to substitute aircraft, at any time during the license period in accordance with these guidelines:
1. Additional aircraft may be added by filing a form to register additional aircraft, paying the applicable registration fee, and submitting proof of financial responsibility;
 2. Aircraft may be deleted by notifying the Department;
 3. The registration fee for a deleted aircraft may be transferred to a substitute or replacement aircraft by requesting such transfer on a form prepared for that purpose and paying a transfer fee of \$10.00 for a new decal for the substitute or replacement aircraft;
 4. The registration fee and decal for an aircraft may be transferred to a new owner by requesting such transfer on a form prepared for that purpose and paying a transfer fee of \$10.00, provided the new owner is a currently registered applicator. The registration fee and decal cannot be transferred to a person who is not a currently registered applicator;
 5. Additional pilots may be added by filing a request with the Department on a form prepared for that purpose, provided that the applicant is currently licensed and registered with the Department. If the applicant does not hold a current license from the Department, the form for adding additional pilots must be accompanied by an application for a pilot's license as outlined in Section 103.01, along with the documentary evidence of compliance and the appropriate fee.
 6. A new chief pilot may be designated at any time by filing a designation with the Department on a form prepared for that purpose, provided the new chief pilot is qualified to serve in that capacity.

Source: *Miss. Code Ann.* §69-21-109 (Rev. 2009).

Renewal of Licenses

- 111 Licenses shall be effective for a period not to exceed one (1) year. Any licensee wishing to have a license renewed must submit an application for renewal with the Department at least thirty (30) days before the expiration of the license. If the applicant submits a timely and complete application for renewal, and the Department, through no fault of the applicant, fails to reissue the license on or before the expiration date of the existing license, the existing license shall remain in effect until final action on the renewal application is taken by the Department. Licenses are subject to modification, revocation or suspension for cause at any time during the effective dates of the license. In addition to submitting an application, a licensee shall:
1. Pay the applicable fees;
 2. Provide proof of maintenance of certification on an annual basis, which may consist of attendance at an approved training session, or retesting, to be determined by the Department;
 3. Provide proof of financial responsibility (applies only to applicators);

Source: *Miss. Code Ann.* §69-21-109 (Rev. 2009).

Processing of Application, Denial of License

- 112 Upon receipt of an application for a license, the Department shall review the application for compliance with the act and these regulations, and either approve or disapprove the application. If the Department disapproves the application, the applicant shall be notified in writing of the reasons therefore, and given an opportunity to amend the application. The Department shall be afforded an opportunity and reasonable time to investigate or verify any information or claims made on an application, and may ask the applicant for additional supporting information in order to assure that these regulations and the law are complied with.

Source: *Miss. Code Ann.* §69-21-109 (Rev. 2009).

Records

- 113.01 Applicators shall keep and maintain for two years all records of any applications of agriculture substances, which shall contain the following information:
1. The date the application was made;
 2. The brand name of the agricultural substances applied and the rate of application (lb/acre; quarts/acre);
 3. The crop/site to which the application was made;
 4. The target pest, if applicable;
 5. Number of acres sprayed;
 6. Location of site and owner;
 7. Wind direction and speed;
 8. Name of pilot and N No. of aircraft;

9. Any accidents, aborted loads, or unusual circumstances or occurrences during the application; and
10. EPA registration number of pesticide being applied.

- 113.02 All applicators applying glyphosate prior to January 1, 2010 in the following counties: Bolivar, Carroll, Coahoma, DeSoto, Grenada, Holmes, Humphreys, Issaquena, Leflore, Panola, Quitman, Sharkey, Sunflower, Tallahatchie, Tate, Tunica, Warren, Washington and Yazoo must utilize in each registered aircraft an on-board differentially corrected Global Positioning System (GPS) capable of electronically recording and post processing into hard copies flight information related to each application of glyphosate products. The information recorded shall include the following data:
1. Date and time of day of each application;
 2. Swath width;
 3. Physical location (latitude and longitude);
 4. Altitude;
 5. Complete tracking of aircraft from take-off to landing;
 6. Spray on/off delineation - coordinated on application map;
 7. Job location/file name;
 8. Aircraft registration number; and
 9. Pilot identification.

Beginning with date of January 1, 2010, this subsection will apply to applications of any and all pesticides applied anywhere in the State of Mississippi.

- 113.03 The data described in this section shall be provided to the Department in electronic and hard copy format upon request of the Department. Data shall be archived for 24 months from date of application.

- 113.04 Any applicator who applies glyphosate must maintain a written record of the following information stating the conditions under which all glyphosate applications will be made, for purposes of demonstrating compliance with Section 116.01(2) of this Regulation:
1. specific nozzle type and size, directions of spray as it leaves the nozzle (i.e. straight back = 0°; down-and-back at 45° = 45°; straight down = 90°; etc.);
 2. boom pressure, (psi);
 3. the name(s) and amount(s) of any additives (amount per 100 gallons of spray) in the spray tank;
 4. aircraft speed (mph) while spraying field(s);
 5. swath width (ft.);
 6. number of nozzles delivering spray; and
 7. VMD and source of VMD information.

Source: *Miss. Code Ann.* §69-21-109 (Rev. 2009).

License and Pesticide Violations

- 114 It shall be unlawful for any person to:
1. Act, operate, or do business as an applicator or pilot, or to engage in agricultural aircraft operations, without first obtaining an applicator's or pilot's license from the Department;
 2. Act, operate, or do business as an applicator or pilot in violation of any rule or regulation adopted by the Department in accordance with *Miss. Code Ann.* Section 69-21-109(1); or
 3. Violate the provisions of any other applicable law or regulation.

Source: *Miss. Code Ann.* §69-21-109 (Rev. 2009).

Disciplinary Actions for Violations

- 115 If any person shall violate the terms of *Miss. Code Ann.* §§69-21-101 through 69-21-128 or any of the regulations promulgated thereunder, the administrative procedures described in *Miss. Code Ann.* §§ 69-25-51 to 69-25-63 shall be followed. Disciplinary action may be taken by the Department if it finds that a person has committed any of the following acts or omissions, to-wit:
1. Has made a misrepresentation for the purpose of defrauding;
 2. Has made false a statement or representation in his application for issuance or renewal of a license;
 3. Has violated any aerial application law or the regulations promulgated by the Department;
 4. Has made any application in a careless or negligent manner;
 5. Has used or applied any pesticide in a manner which is inconsistent with its labeling;
 6. Has neglected or refused to keep and maintain records required by these regulations, or refused or neglected to make reports when required or refused to make such records available to the department;
 7. Has made false or fraudulent records, invoices, or reports;
 8. Has aided or abetted any person in evading the provisions of any law or regulation, or allowed his license to be used by an unlicensed person;
 9. Has violated the Federal Insecticide, Fungicide and Rodenticide Act;
 10. Has performed work in a category for which he is not licensed;
 11. Has been convicted in any of the courts of this state for a violation of any aerial application law or these regulations;
 12. Has refused to yield an agricultural substance sample to the Department or its employees;
 13. Has failed to renew the bond or insurance required in these regulations to maintain financial responsibility; or
 14. Has applied an agricultural substance in such a manner that allowed it to drift from a target site to a non-target site.

Source: *Miss. Code Ann.* §69-21-109 (Rev. 2009).

Spray Equipment

- 116.01 In order to minimize spray drift via the wingtip/rotortip vortex, the distance between the outermost nozzles shall not exceed seventy percent (70%) of the wingspan/rotorspan, except for aircraft equipped for standard mosquito control applications and helicopters equipped with nozzles delivering sprays with a 750 micron or larger volume median diameter according to the USDA ARS College Station, TX models, or data from nozzle manufacturers.
- 116.02 Only equipment, operating conditions, and tank mixes that will produce a volume median diameter droplet size of 300 microns (μm) or larger as determined by use of the appropriate USDA ARS (College Station, TX) atomization model (<http://apmru.usda.gov/downloads/downloads.htm>), or data from nozzle manufacturers, without consideration of any tank mix adjuvants, will be allowed for applications of glyphosate. This rule does not apply to standard mosquito control applications.

Source: *Miss. Code Ann.* §69-21-109 (Rev. 2009).

Application of Pesticides

- 117.01 Unless otherwise restricted by regulation or labeling, the application of non-hormone type herbicides is prohibited when the wind speed is over ten (10) miles per hour.
- 117.02 Any pilot who applies glyphosate products with a fixed wing aircraft must have at least 500 hours of commercial agricultural aerial application flying time.
- 117.03 All applicators and/or pilots shall have meteorological equipment at each base of operation capable of physically measuring and recording (1) the location of the application site (latitude and longitude), (2) wind speed, (3) wind direction, and (4) temperature or have access to a recognized meteorological reporting station, within a 10 nautical mile radius of each base of operation, for the purpose of providing (1) physical measurement of the station location (latitude and longitude), (2) wind speed, (3) wind direction and (4) temperature and shall record all applications of agricultural substances utilizing such equipment.

Source: *Miss. Code Ann.* §69-21-109 (Rev. 2009).

Hormone-Type Herbicide Applications

Specifications and Inspection of Spray Equipment on Aircraft for Hormone Type Herbicides

- 118.01 The spray equipment on an aircraft must have a positive cockpit-operated cutoff control at the tank and the same or equivalent (diaphragm check) at each nozzle and be equipped with functional bleed back systems where booms extend past the last operating nozzle, and must be kept in good operating condition.

“Nozzles must be a type and configuration that will deliver a droplet with a volume median diameter of 300 microns or larger”. The number of nozzles shall be sufficient to deliver not less than five gallons of water solutions per acre for applications made from April 1 to September 30, or three gallons per acre for applications made from October 1 to March 31. When more than five gallons per acre are to be applied, this may be done by increasing the number of nozzles or the diameter of the orifice openings. So as to reduce the amount of spray drawn into the wing tip vortices, the distance between the outermost nozzles shall not exceed 70% of the fixed wing span or rotor diameter.

- 118.02 Special Drift Control Spray Systems and Equipment: Any equipment designed for special purposes and drift control, (such as the Microfoil boom, Warnell System, Thru-Valve Boom, or similar equivalent equipment) must be approved before a license is issued. Field operation of the equipment for observation may be required before approval. If it is determined that the equipment is not operating in a safe manner, a license will not be issued.
1. Boom length shall not exceed 70% of the rotor diameter.
 2. Inspection and Testing of Equipment: The spraying or application equipment on all aircraft used in applying hormone-type herbicides may be inspected by an employee of the department to see if such equipment will meet with requirements, and may be pattern tested and achieve a coefficient of variation of not greater than 20% across the pattern before approval, and may be spot checked in the field.
- 118.03 Other special drift control equipment and/or new technology equivalent to the above listed equipment may be approved upon submission of supporting equivalency data by the manufacturer, except for use on rice.

Source: *Miss. Code Ann.* §69-21-109 (Rev. 2009).

Materials and Methods for Application for Hormone-Type Herbicides

- 119.01 2, 4-D, Dicamba, and/or MCPA shall not be applied in any form to any crop or site by fixed wing aircraft between the dates of April 1 and September 30; and
- 119.02 2, 4-D and/or MCPA shall not be applied in any form to rice by helicopter between the dates of April 1 and September 30, except as follows:
1. Helicopter must be equipped with precision type spray system. (Microfoil type)
 2. Equipment Specifications and Application Techniques
 - a. Boom: No longer than rotor diameter
 - b. Nozzles:
 - i. .028" Airfoil or larger, or
 - ii. .028 Accu Flow, or larger, 32 tube
 - c. Volume: 5 gal. minimum total spray volume per acre
 - d. Flight Speed: 30 mph maximum in critical areas, and 60 mph maximum in field away from critical areas

- e. System Pressure: Maximum of 30 PSI with very low pressure at tubes
 - f. Wind Speed: Not to exceed 5 mph at time of application
 - g. Wind Speed and Direction Indicators: Must be used during application
 - h. Buffer Zone: Application is prohibited within one-half (1/2) mile of commercial plantings of cotton or other highly susceptible crops such as grapes, tomatoes, etc., unless the applicator, or person for whom the application is made, furnishes the Bureau of Plant Industry written permission from the owner of those highly susceptible crops at least 24 hours prior to the time the application is made.
3. Insurance: Property damage liability insurance for applications under this section of these regulations must be in the amount of \$200,000.00 for each occurrence.
 4. Observer: An observer employed by the applicator and/or the rice producer for whom the application is made, must be present at all times to monitor the application and record temperature, wind speed and direction, and other pertinent information. Temperature, wind speed and direction must be measured and recorded immediately prior to application, and monitored consistently during the application with recordings made when changes occur or every 1/4 hour (15 minutes). The time of day shall be recorded for the period of time such data is collected.
Example of Data to be recorded:
 - a. Date, 6/20/90
 - b. Time, 10:00 a.m.
 - c. Wind Direction, NE or 45°
 - d. Wind Speed, 2 mph
 - e. Temperature, 86° F.
 5. Inspector/Observer: An Inspector/Observer from the Bureau of Plant Industry may be assigned to each applicator. The Inspector/Observer will monitor and record wind speed and direction, temperature, herbicide use and symptoms of herbicide injury in the vicinity of the treated area, and labeling for the herbicide being applied.
 6. Pilot Training: Each pilot making applications must complete an approved training course in proper application.
 7. Equipment Inspections: Equipment may be inspected by the Bureau of Plant Industry. Inspections of equipment may be made at any time during and after the time it is used.
 8. Tank Mixes: Tank mixes with other pesticides and/or fertilizers are prohibited.
 9. Ester Formulations: Applications of ester formulations are prohibited.

119.03 2,4-D, Dicamba, and/or MCPA applied to other crops or sites between April 1 and September 30 by helicopter shall not be applied within one-half (1/2) mile of commercial plantings of cotton, or other highly susceptible crops such as tomatoes, snap beans, grapes (and soybeans in the case of Dicamba). Helicopters must be equipped with special spray systems and equipment designed for drift control (such as Microfoil boom, Warnell System, Thru-Valve

boom, or similar equivalent equipment) and be approved by the Bureau of Plant Industry following inspection and testing as indicated in subsection 219.02 above.

- 119.04 Low Volatile Ester formulations of 2,4-D and MCPA shall not be applied from April 1 thru September 30; and
- 119.05 Drift control agents shall be used in accordance with labeling with all hormone-type herbicides applied between the dates of April 1 and September 30 unless spray system precludes such use.
- 119.06 Smoke and/or other suitable means shall be used to detect inversion conditions and determine wind direction and speed.
- 119.07 Applicators shall not use less volume of spray per acre than provided for on the labeling of the herbicide being used and in no case shall the volume of total spray per acre be less than five gallons between April 1 and September 30, or three gallons between October 1 and March 31.
- 119.08 Applications of hormone-type herbicides shall not be made when a temperature air inversion exists or when air temperatures within the application zone are 90° F., or above.
- 119.09 The application of high volatile ester formulations is prohibited at any time.
- 119.10 Transportation of hormone-type herbicides by aircraft other than while treating crops involved is prohibited.
- 119.11 No hormone-type herbicide shall be discharged at a height greater than 10 feet with fixed wing aircraft and/or 30 feet for helicopters above the tops of the plants being treated except in power line right-of-way work, nor over any crops, or properties other than the crop being treated.
- 119.12 No hormone-type herbicides applications shall be made in winds of excess of 10 mph.
(Revised 2009; Amended December 20, 2019.)

Source: *Miss. Code Ann.* §69-21-109.

Conflict of Laws

- 120 Sections 100 through 117.04 of the above regulations cover all agricultural substances including hormone-type herbicides. Sections 118.01 through 119.12 cover only hormone-type herbicides. In the event of a conflict between the regulations covering all agricultural substances and those covering only

hormone-type herbicides and a hormone-type herbicide is the material involved, the hormone-type herbicide regulations shall control.

(Subchapter amended Aug. 12, 2010.)

Source: *Miss. Code Ann.* §69-21-109 (Rev. 2009).

(Note: Subchapter 01 was adopted on March 29, 1977, the department amended subchapter 01 on September 18, 1979, June 25, 1980, December 18, 1984, March 30, 1989, April 3, 1991, March 19, 1993, May 12, 1995, June 5, 1998, July 25, 2000, June 14, 2001, September 1, 2004, April 4, 2005, July 26, 2005, July 5, 2007, July 27, 2008, December 4, 2008 and May 20, 2010.)

Materials and Methods for Application for Herbicides Containing Glyphosate in Bolivar County

120.01 Except as provided in Section 120.03, herbicides containing glyphosate shall not be applied in any form to any crop on any site in Bolivar County by fixed wing aircraft between the dates of April 1 and September 30.

120.02 Herbicides containing glyphosate may be applied by helicopter between the dates of April 1 and September 30, under the following conditions:

1. Helicopter must be equipped with precision type spray system. (Microfoil type)
2. Equipment Specifications and Application Techniques
 - a. Boom: No longer than rotor diameter
 - b. Nozzles:
 - i. .028" Airfoil or larger, or
 - ii. .028 Accu Flow, or larger, 32 tube
 - c. Volume: Not less than 5 gallons of water solutions per acre
 - d. Flight Speed: 45 miles per hour in critical areas, and 60 miles per hour maximum in fields away from critical areas
 - e. System Pressure: Maximum of 30 pounds per square inch with very low pressure at tubes
 - f. Wind Speed and Direction Indicators: Must be used during application
 - g. Buffer Zone: Application is prohibited within 1½ mile upwind of commercial plantings of rice or other highly susceptible crops.
3. Insurance: Property damage liability insurance for applications under this section of these regulations must be in the amount of \$200,000.00 for each occurrence.
4. Observer: An observer employed by the applicator and/or the rice producer for whom the application is made, must be present at all times to monitor the application and record temperature, wind speed and direction, and other pertinent information. Temperature, wind speed and direction must be measured and recorded immediately prior to application, and monitored consistently during the

application with recordings made when changes occur or every 1/4 hour (15 minutes). The time of day shall be recorded for the period of time such data is collected.

Example of Data to be recorded:

- a. Date, 6/20/90
- b. Time, 10:00 a.m.
- c. Wind Direction, NE or 45°
- d. Wind Speed, 2 mph
- e. Temperature, 86° F.

5. Inspector/Observer: An Inspector/Observer from the Bureau of Plant Industry, may be assigned to each applicator. The Inspector/Observer will monitor and record wind speed and direction, temperature, herbicide use and symptoms of herbicide injury in the vicinity of the treated area, and labeling for the herbicide being applied.
 6. Pilot Training: Each pilot making applications must complete an approved training course in proper application.
 7. Equipment Inspections: Equipment may be inspected by the Bureau of Plant Industry. Inspections of equipment may be made at any time during and after the time it is used.
- 120.03 Application of herbicides containing glyphosate in any form to any crop on any site in Bolivar County shall be allowed by fixed wing aircraft between the dates of April 1 and September 30, subject to the following restrictions:
1. Boom length shall not exceed 50% of the fixed wing span. The number of nozzles shall be sufficient to deliver not less than 5 gallons of water solutions per acre;
 2. Drift control agents may be used in accordance with label for aerial application of any herbicides containing glyphosate;
 3. No application of herbicide containing glyphosate shall be made when a temperature air inversion exists;
 4. No herbicide containing glyphosate shall be discharged by a fixed wing aircraft 1½ mile upwind of commercial plantings of rice or other highly susceptible crops;
 5. No herbicide containing glyphosate shall be discharged by a fixed wing aircraft over any crops or properties, other than the crop or site being treated; and

6. Applications of herbicides containing glyphosate shall be subject to the provisions of Section 116.02 of this Regulation.

Source: *Miss. Code Ann.* §69-21-109 (Rev. 2009).

Conflict of Laws and Regulations

121. Sections 100 through 117.04 of the above regulations cover all agricultural substances including hormone-type herbicides. Sections 118.01 through 119.12 cover only hormone-type herbicides. Section 120.01 through 120.03 covers only application of herbicides containing glyphosate in Bolivar County. In the event of a conflict between the regulations covering all agricultural substances and those covering only hormone-type herbicides and a hormone-type herbicide is the material involved, the hormone-type herbicide regulations shall control. In the event of a conflict between the regulations covering all agricultural substances and those covering only application of herbicides containing glyphosate in Bolivar County and a herbicide containing glyphosate is the material involved, the regulations regarding application of herbicides containing glyphosate in Bolivar County shall control.

(Adopted on March 29, 1977; Amended September 18, 1979; Amended June 25, 1980; Amended December 18, 1984; Amended March 30, 1989; Amended April 3, 1991; Amended March 19, 1993; Amended May 12, 1995; Amended June 5, 1998; Amended July 25, 2000; Amended June 14, 2001; Amended September 1, 2004; Amended April 4, 2005; Amended July 26, 2005; Amended July 5, 2007; Amended July 27, 2008; Amended December 4, 2008; Amended May 20, 2010; Amended Aug. 12, 2010; Amended February 26, 2017; Amended December 28, 2018.)

Source: *Miss. Code Ann.* §69-21-109 (Rev. 2009).