



**VIRGINIA SOIL AND WATER
CONSERVATION BOARD
GUIDANCE DOCUMENT ON THE
TAX CREDIT FOR PRECISION
AGRICULTURE EQUIPMENT**

(Approved July 1996, Revised April 19, 2018)

Summary:

This guidance document specifies the types and specifications of equipment which may be used to apply for the state tax credit established in §§ 58.1-337 and 58.1-436 related to the purchase of advanced technology pesticide and fertilizer application equipment.

Electronic Copy:

An electronic copy of this guidance in PDF format is available on the Regulatory Town Hall under the Virginia Soil and Water Conservation Board at <http://townhall.virginia.gov/L/GDocs.cfm>

Contact Information:

Please contact the Department of Conservation and Recreation's Division of Soil and Water Conservation at (804) 225-3653 or the Agricultural Incentives Program Manager with any questions regarding the application of this guidance.

I. Background:

Sections 58.1-337 and 58.1-436 of the *Code of Virginia* establish state tax credits for individuals or corporations purchasing certain equipment that provides more precise pesticide and fertilizer applications. This guidance details the features and specifications necessary for equipment purchases to qualify for these state tax credits.

II. Authority:

The *Code of Virginia* contains the following authorities applicable to this guidance:

§ 58.1-337. Tax credit for purchase of advanced technology pesticide and fertilizer application equipment.

A. Any individual engaged in agricultural production for market who has in place a nutrient management plan approved by the local Soil and Water Conservation District by the required tax return filing date of the individual shall be allowed a credit against the tax imposed by § 58.1-320 of an amount equaling twenty-five percent of all expenditures made by such individual for the purchase of equipment certified by the Virginia Soil and Water Conservation Board as providing more precise pesticide and fertilizer application. Virginia Polytechnic Institute and State University and Virginia State University shall provide at the request of the Virginia Soil and Water Conservation Board technical assistance in determining appropriate specifications for certified equipment which would provide for more precise pesticide and fertilizer application to reduce the potential for adverse environmental impacts...

§ 58.1-436. Tax credit for purchase of advanced technology pesticide and fertilizer application equipment.

A. Any corporation engaged in agricultural production for market which has in place a nutrient management plan approved by the local Soil and Water Conservation District by the required tax return filing date of the corporation shall be allowed a credit against the tax imposed by § 58.1-400 of an amount equaling twenty-five percent of all expenditures made by such corporation for the purchase of equipment certified by the Virginia Soil and Water Conservation Board as providing more precise pesticide and fertilizer application. Virginia Polytechnic Institute and State University and Virginia State University shall provide at the request of the Virginia Soil and Water Conservation Board technical assistance in determining appropriate specifications for certified equipment which would provide for more precise pesticide and fertilizer application to reduce the potential for adverse environmental impacts...

Appendix 1 contains the *Code of Virginia* authorities (extended) applicable to this guidance.

III. Discussion and Interpretation:

Agricultural Production

Equipment qualifying for this credit must be used in "agricultural production". Section 15.2-4302 of the Code of Virginia defines "agricultural production" as the production for commercial purposes of crops, livestock and livestock products and shall include the processing or retail sales by the producer of crops, livestock and livestock products which are produced on the parcel or in the district."

Nutrient Management Plans

Both §§ 58.1-337 and 58.1-436 require the individual or corporation requesting a tax credit to have in place a nutrient management plan that has been prepared and certified by a Virginia certified nutrient management planner. The key components of the nutrient management plan include:

- Field maps indicating field locations and environmentally sensitive areas;
- Soil productivity information;
- Nutrient management recommendations by field or rotation based upon soil and/or manure tests as applicable; and
- Plan narrative.

Plan approval is a one time requirement fulfilled only for the year in which the tax credit is taken.

Equipment Certification

To receive the tax credit, a piece of equipment must meet all the specifications for its category in Section IV of this document. It will be the responsibility of the purchaser to determine if the equipment meets these specifications. It is not the responsibility of the Soil and Water Conservation District (District) or any other agency staff to determine or advise the purchaser if the equipment qualifies. It is solely the responsibility of the individual to pursue the development of a nutrient management plan.

Filing the Commonwealth of Virginia Tax Return

The individual filer must complete a Schedule CR, Part VI; corporate filers must complete Form 500 CR, Part VI. The Virginia Department of Taxation will require as certification a copy of the letter from the local District indicating that the nutrient management plan has been approved. This letter, along with a confirmation of purchase of the qualifying equipment, must be attached to the Schedule CR or Form 500 with the state tax return when it is filed to receive the credit.

Nutrient management plans must be written and approved prior to the required filing date of the individual's or corporation's tax return for that year. The tax credit will not be approved without the nutrient management plan approval letter provided by the District (example provided in Appendix 2).

Additional questions regarding tax policy should be directed to either a qualified tax consultant or the Virginia Department of Taxation, Office Services Division, Taxpayer Assistance Section.

IV. Equipment Categories and Specifications:

The categories of equipment covered include:

- A. Spray systems for pesticides and liquid fertilizers;
- B. Pneumatic fertilizer applicators;
- C. Monitors and flow regulators for pesticide and liquid fertilizer applicators;
- D. Manure application equipment;
- E. Tramline adapters;
- F. Starter fertilizer banding and in-furrow attachments for planters;
- G. Variable rate application equipment using spatial positioning systems; and
- H. Other equipment.

The certification criteria for equipment eligible to receive this income tax credit are as follows:

A. Spray systems for pesticides and liquid fertilizers

Required features for newly purchased spray systems:

Newly purchased sprayers, to qualify for the credit, must have all of the following features.

1. Quick change nozzles to enable operators to select and position the correct nozzle for each type of pesticide and/or liquid fertilizer application. These must also be "anti-drip" type nozzles.
2. Adequate pump capacity to maintain required pressures at all nozzles on the boom and to ensure complete mixing at all times of the spray solution by recirculating at least 40% of the pumped volume.
3. Sectioned boom "cutoffs" for boom widths greater than 20 feet that enable the operator to reduce spray width and thus reduce overlaps and applications to non-field areas when finishing irregularly shaped areas of fields.
4. Pressure gauges or monitors on each boom section to ensure adequate pressure for even applications rates across the boom.

5. Steps and a platform or other means where applicable to safely and easily add materials to the spray tank. The spray tank opening must be large enough for the safe addition of materials to the tank and have a lid that seals.
6. Calibration kits for all new sprayers.

Optional features for new spray systems:

The following components are optional for new spray systems but considered desirable. Both these items and those listed above, when purchased as components for addition to an existing sprayer will qualify for the tax credit.

7. Spray tank drain that can be opened and closed without exposure of the operator to the solutions.
8. Mechanical or hydraulic boom height adjustment to enable operators to select the appropriate height for each spraying situation.
9. Marker systems which allow the applicator to more precisely locate previously sprayed areas to prevent over application in the overlap between sprayer passes.
10. Clean water rinse systems which provide the ability to rinse spray tanks or pesticide containers in the field at the time the application is being made.
11. Self-leveling booms which minimize boom movement and assure accurate spray patterns across the width of the boom.
12. Multiple nozzle body systems or multiple boom systems which allow for a rapid change between previously selected nozzles to allow for appropriate changes in the field without leakages.
13. Chemical injection metering systems which eliminate the need for tank mixing.
14. Air carrying sprayers.
15. GPS guidance and auto-steer systems.
16. Pesticide application systems incorporating electrostatic charging technology to improve spray deposition.

Required features for upgraded existing spray systems:

Items added to upgrade an existing spray system qualify if the resultant sprayer meets the following criteria also:

1. Spray systems must have the essential features previously stated for new spray systems in items 1-6 above.

Optional features for upgraded existing spray systems:

Both these items and those listed above, when purchased as components for addition to an existing sprayer will qualify for the tax credit.

2. Spray systems may have the essential features previously stated for new spray systems in items 7-16 above.

Required features for air assist spray systems:

Newly purchased air assist application equipment must have the following features.

1. Air assist spray systems must have the essential features previously stated for spray systems in items 2-6 above. Nozzles need not be “quick change” but must be “anti-drip” for the system to qualify.
2. Manifold sections must have separate cutoff or actuator valves.

3. There must be top deflectors, guide vanes, or other means to adjust the direction of the flow of air.
4. The equipment must be capable of variable air volume (i.e. a variable pitch fan, variable slot width, etc...)

Optional features for air assist spray systems:

5. Multiple nozzles.
6. Powder mixers or pre-mixers.
7. Optical or electronic sensing system to control sprayer application by providing spray shut off to the whole nozzle bank or to individual nozzles when no target is present.
8. Equipment which permits the recovery of excess spray for reuse.
9. Shields or deflectors to contain or direct the spray.

B. Pneumatic fertilizer applicators

Pneumatic applicators are capable of uniformly applying materials that vary in particle size on non-uniform terrain. They must possess the following characteristics to qualify for the tax credit:

Required features:

1. Provide uniform division of the fertilizer materials from the central hopper to each distribution device on the boom.
2. Allow infinitely variable rates of application within the range of application rates for the particular applicator.
3. Have a spread pattern coefficient of variation of less than 15% for the entire boom width.

Optional features:

4. Be equipped for "static" and/or moving calibration prior to field use.
5. Have monitoring equipment which indicates the actual application rate for boom sections during field operation.
6. Be equipped to vary the rate of application during field operation.

C. Monitors and flow regulators for pesticide and liquid fertilizer applicators

These are defined as electronic and mechanical devices which provide operators with an accurate indication of any of the following:

1. True ground speed;
2. Nozzle pressure;
3. Flow rates of the spray solution;
4. Air flow in air assist spray systems;
5. Blocked nozzles or distribution devices;
6. Actual application rates;
7. Allows for the accurate adjustment of application rates while spraying;
8. Metering for injected liquid fertilizer application at or post planting; or

9. Monitor boom height and adjust to appropriate height for each spraying situation to assure accurate spray patterns across the width of the boom.

D. Manure application equipment

Newly purchased manure application equipment must have the following features. Items added to upgrade an existing applicator qualify if the resultant spreader meets the following criteria also.

1. Dry Manure Spreaders

Required features:

- a. Constructed so as to prevent leakage during transport and include a litter/slurry pan or a hydraulic end gate.
- b. Capable of spreading manure at 2.5 tons/acre or less in a uniform swath.
- c. Box spreaders (flat bottom) having a beater spreader mechanism shall be equipped with an upper beater and a gear reduction unit (slow down kit) to provide chain speeds of no more than 2.5 feet/minute.

Optional features:

- d. Spreaders having an adjustable discharge gate/door may be equipped with an indicator to display the position of the gate/door.
- e. Spreaders used to apply poultry manure and litter less than 50% moisture content may have cupped beaters.

2. Liquid Manure Spreaders

Required features:

- a. Constructed so as to prevent leakage during equipment transport.
- b. Capable of spreading manure at 1,000 gallons/acre or less in a uniform swath behind the spreader.
- c. Have an application swath width of 20 feet or greater. The applicator must be driven by a positive discharge system.

Optional features:

- d. Equipment to inject the manure directly into the soil. The application swath width requirements are waived for this option.

3. Manure Irrigation System

Required features:

- a. Designed for a maximum application rate of 0.30"/hour. The nutrient management plan must address the issues of infiltration rates and environmentally sensitive areas.

- b. Components submitted for the tax credit must meet the IRS "equipment" definition requirements of Federal Tax Regulation 1.48-1(c). Pipe installation in the ground is defined as real property and does not qualify.
- c. Be purchased and utilized primarily for waste application.

E. Tramline Adapters

A tramline adapter alters a grain drill to leave certain rows unplanted. This allows for later access (traffic patterns) to the growing crop for split application of fertilizers and pesticides without damage to the crop. For the purposes of these criteria, the adapter is defined as the following components necessary for the adoption of the system:

1. The tramline mechanism for the drill.
2. As a set, the tires and associated rims, not to exceed 13.6" wide, necessary to adapt tractors for use in tramline systems.

F. Starter fertilizer banding and in-furrow attachments for planters

Starter fertilizer attachments for planters, drills and transplanters include appropriate soil opening components and allow for accurate band applications of fertilizers near the root zone when planting or transplanting a crop. Fertilizer hoppers or liquid fertilizer tanks attached or connected by hoses to the planter during field operation are an integral component of this equipment. The starter fertilizer banding or in-furrow attachment may be purchased as part of a new planter or purchased for installation on an existing planter. For newly purchased planters, only the cost of the starter fertilizer banding or in-furrow attachment is eligible for this tax credit. The start fertilizer banding or in-furrow attachment must meet the following criteria:

1. Constructed to place fertilizer in a band below the soil surface and within the root zone of seedlings or transplants.
2. Capable of accurately metering a range of application rates.

G. Variable rate application equipment using spatial positioning systems

This equipment combines the use of spatial positioning systems, such as global positioning using satellite technology, with variable rate application equipment for nutrients or pesticides, to result in more precise applications. To qualify for the tax credit, the equipment must:

1. Be used in conjunction with pesticide, manure, and fertilizer application equipment.
2. Result in automated variable nutrient or pesticide application rates using:
 - a. Spatial positioning systems;
 - b. Variable application rate controllers; and
 - c. Other input data such as, but not limited to, grid or management zone soil analysis results, soil types, expected yields, or weed maps.

H. Other equipment

Application systems which incorporate entirely new technology or application technology not covered by these criteria will be considered by the Board on a case-by-case basis upon request.

1. Pesticide application systems incorporating electrostatic charging technology to improve spray deposition shall qualify for the tax credit.
2. Equipment added to irrigation systems which provide more precise pesticide or nutrient application will qualify for the tax credit. Eligible necessary components include:
 - a. Accessories to protect the water source by preventing back flow or back siphoning.
 - b. A flow sensor to monitor water flow and adjust the injection rate of pesticide or fertilizer to achieve the appropriate application rate.

V. Adoption, Amendments, and Repeal:

This document will remain in effect until rescinded or superseded.

Appendix 1

Applicable *Code of Virginia* Authorities.

The *Code of Virginia* contains the following authorities applicable to this Guidance:

§ 58.1-337. Tax credit for purchase of advanced technology pesticide and fertilizer application equipment.

A. Any individual engaged in agricultural production for market who has in place a nutrient management plan approved by the local Soil and Water Conservation District by the required tax return filing date of the individual shall be allowed a credit against the tax imposed by § 58.1-320 of an amount equaling twenty-five percent of all expenditures made by such individual for the purchase of equipment certified by the Virginia Soil and Water Conservation Board as providing more precise pesticide and fertilizer application. Virginia Polytechnic Institute and State University and Virginia State University shall provide at the request of the Virginia Soil and Water Conservation Board technical assistance in determining appropriate specifications for certified equipment which would provide for more precise pesticide and fertilizer application to reduce the potential for adverse environmental impacts. The equipment shall be divided into the following categories:

1. Sprayers for pesticides and liquid fertilizers;
2. Pneumatic fertilizer applicators;
3. Monitors, computer regulators, and height adjustable booms for sprayers and liquid fertilizer applicators;
4. Manure applicators;
5. Tramline adapters; and
6. Starter fertilizer banding attachments for planters.

B. The amount of such credit shall not exceed \$3,750 or the total amount of the tax imposed by this chapter, whichever is less, in the year of purchase. If the amount of such credit exceeds the taxpayer's tax liability for such taxable year, the amount which exceeds the tax liability may be carried over for credit against the income taxes of such individual in the next five taxable years until the total amount of the tax credit has been taken.

C. For purposes of this section, the amount of any credit attributable to the purchase of equipment certified by the Virginia Soil and Water Conservation Board as providing more precise pesticide and fertilizer application by a partnership or electing small business corporation (S corporation) shall be allocated to the individual partners or shareholders in proportion to their ownership or interest in the partnership or S corporation.

§ 58.1-436. Tax credit for purchase of advanced technology pesticide and fertilizer application equipment.

A. Any corporation engaged in agricultural production for market which has in place a nutrient management plan approved by the local Soil and Water Conservation District by the required tax return filing date of the corporation shall be allowed a credit against the tax imposed by § 58.1-

400 of an amount equaling twenty-five percent of all expenditures made by such corporation for the purchase of equipment certified by the Virginia Soil and Water Conservation Board as providing more precise pesticide and fertilizer application. Virginia Polytechnic Institute and State University and Virginia State University shall provide at the request of the Virginia Soil and Water Conservation Board technical assistance in determining appropriate specifications for certified equipment which would provide for more precise pesticide and fertilizer application to reduce the potential for adverse environmental impacts. The equipment shall be divided into the following categories:

1. Sprayers for pesticides and liquid fertilizers;
2. Pneumatic fertilizer applicators;
3. Monitors, computer regulators, and height adjustable booms for sprayers and liquid fertilizer applicators;
4. Manure applicators;
5. Tramline adapters; and
6. Starter fertilizer banding attachments for planters.

B. The amount of such credit shall not exceed \$3,750 or the total amount of the tax imposed by this chapter, whichever is less, in the year of purchase. If the amount of such credit exceeds the taxpayer's tax liability for such taxable year, the amount which exceeds the tax liability may be carried over for credit against the income taxes of such corporation in the next five taxable years until the total amount of the tax credit has been taken. Credits granted to a partnership or electing small business corporation (S corporation) shall be passed through to the partners or shareholders, respectively.

C. For purposes of this section, the amount of any credit attributable to the purchase of equipment certified by the Virginia Soil and Water Conservation Board as providing more precise pesticide and fertilizer application by a partnership or S corporation shall be allocated to the individual partners or shareholders in proportion to their ownership or interest in the partnership or S corporation.

Appendix 2

Sample approval letter from District.

Date

Farm Name or Producer's Name

c/o Producer's Name

Address

City, State, Zip

RE: Nutrient Management Plan Approval for Tax Credit of Precision Application Fertilizer and/or Pesticide Equipment

Dear Mr./Ms. Last Name:

The (insert District name) Soil & Water Conservation District has received a copy of your Nutrient Management Plan, which was prepared by a Virginia certified Nutrient Management Planner, and is valid from XX/XX/XXXX to XX/XX/XXXX. **This letter verifies that your Nutrient Management Plan has been approved by the (insert District name) Soil & Water Conservation District.**

Your tax preparer must submit this letter with your tax return in order to apply for the Virginia Fertilizer and Pesticide Application Equipment Tax Credit in accordance with §§ 58.1-337 or 58.1-436 of the *Code of Virginia*. This tax credit is available for equipment purchased to provide more precise fertilizer and/or pesticide application. You and your tax preparer are responsible for determining your eligibility for this tax credit.

With regards,

Name

Position title

(insert District name) SWCD

Name

District Director

(insert District name) SWCD