

**NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE STANDARD**

AMENDMENTS FOR TREATMENT OF AGRICULTURAL WASTE

Code 591

(AU)



DEFINITION

The use of chemical or biological additives to change the properties of manure, process wastewater, contaminated storm water runoff and other wastes.

PURPOSE

- Facilitate the management, handling and processing of manure and waste
- Reducing risk associated with the spread and contamination from pathogens
- Improve or protect air quality
- Improve or protect water quality
- Improve or protect animal health

CONDITIONS WHERE PRACTICE APPLIES

This practice applies where the use of a chemical or biological amendment will alter the physical and chemical characteristics of the waste stream as a part of a planned waste management system. This practice does not include amendments added to the animal feed.

Conservation practice standards are reviewed periodically and updated if needed. To obtain the current version of this standard, contact the Natural Resources Conservation Service.

Criteria

General Criteria Applicable to All Purposes

Laws, Rules, and Regulations. Use of amendments as a part of a waste management system shall be planned and implemented to meet all Federal, state, and local laws, rules, and regulations. Waste management systems may need to be approved or permitted by the Florida Department of Environmental Protection. Refer to Chapter 62-522 Florida Administrative Code (F.A.C.), Chapter 62-620 F.A.C., Chapter 62-621 F.A.C., and Chapter 62-670 F.A.C. for permitting requirements.

Evaluate and avoid or minimize impact to cultural resources, wetlands and Federal and state protected species to the extent practicable during planning, design and implementation of this conservation practice in accordance with established National and Florida policy, General Manual (GM) Title 420-Part 401; Title 450-Part 401, Title 190-Parts 410.22 and 410.26, National Planning Procedures Handbook (NPPH) Florida Supplements to Parts 600.1 and 600.6, National Cultural Resources Procedures Handbook (NCRPH), National Food Security Act Manual (NFSAM), and the National Environmental Compliance Handbook (NECH).

Labeling and Instructions for Use. Products to be used as manure amendments shall be labeled or accompanied by instructions containing, as a minimum, the following information:

1. Active ingredients and their percentage of the whole. Proprietary terminology may be used as long as the actual chemical and/or biological names are included.
2. The purpose(s) for which the amendment is intended.
3. Recommended application rate(s) to achieve the intended purpose(s).
4. Application timing and methodology to optimize the effectiveness of the amendment.
5. Incorporation requirements (if any).
6. Special handling and storage requirements for the amendment.
7. Any safety concerns relating to the use of the amendment and recommended measures to overcome the safety concern, including any required personal protective equipment.

Validation of Product. The specific rate, timing, and application methodology of an amendment to achieve a needed level of treatment addressing a specific purpose must be documented by a university or other independent research entity acceptable to the NRCS. Documentation from peer reviewed journals is preferable. The effectiveness of the amendment under different climatic factors shall be included in the documentation, or if there are no difference in effectiveness, the documentation shall so state. Potential adverse impacts of the amendment on the ecosystem shall also be identified in the documentation. It shall be the responsibility of the amendment provider to furnish the documentation to the NRCS.

System Effects. Limit the use of amendments to situations where adverse impacts on other aspects of the planned manure management system have been addressed in the system design.

Land application of treated manure and other waste must meet the criteria in Florida NRCS conservation practice standard Nutrient Management, Code 590.

CONSIDERATIONS

The use of amendments to reduce ammonia and other emissions from manure in confined spaces may allow altered ventilation strategies at an appreciable energy savings.

Nutrient management plans may need to be revised for the reduction of ammonia emissions as this will also increase the proportion of nitrogen in the manure.

PLANS AND SPECIFICATIONS

Plans and specifications shall be prepared in accordance with the criteria of this standard and shall describe the requirements for applying the practice to achieve its intended purpose(s). Specifications for

the use of an individual amendment will be developed in accordance with the label directions and other instructions provided by the vendor. As a minimum, the plans and specifications shall provide the following:

- The name of the amendment, the purpose(s) for its use, and the planned outcome(s).
- Application methodology, including rates, timing, mixing instructions, temperature requirements, etc.
- Required tests to determine the effectiveness of the amendment as appropriate.

OPERATION AND MAINTENANCE

A site specific operation and maintenance (O&M) plan shall be developed and reviewed with the operator and owner prior to implementation of the practice. The O&M plan shall be consistent with the purposes of the practice, safety considerations, and label directions and other instructions provided by the vendor.

The O&M plan shall provide sufficient detail as to amendments to be used, application rates and timing, and equipment to be used.

The O&M plan shall detail all safety precautions necessary when handling the specific chemicals or biological amendments to be used.

The O&M plan shall provide for record keeping in sufficient detail to describe the amendment's use, actual application rates and timing, and any tests performed (including nutrient analysis).

REFERENCES

Chapter 62-522, Chapter 62-620, Chapter 62-621, and 62-670 F.A.C.

Florida NRCS Conservation Practice Standard Nutrient Management, Code 590.

General Manual Title 420-Part 401

Title 450-Part 401

Title 190-Parts 410.22 and 410.26

Title 420-Part 401

Title 450-Part 401

National Engineering Manual, Part 521 – Pollution Abatement and Water Quality Improvement

National Cultural Resources Procedures Handbook

National Environmental Compliance Handbook

National Food Security Act Manual

National Planning Procedures Handbook Florida Supplements to Parts 600.1 and 600.6

Agricultural Waste Management Field Handbook (AWMFH)