PHILIPPINE NATIONAL STANDARD

PNS/BAFS 291:2019
ICS

Code of practice for the production of organic soil amendments

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Foreword

The Philippine National Standard (PNS) Code of practice for the production of organic soil amendments was developed by the Bureau of Agriculture and Fisheries Standards (BAFS). The standard should be used in conjunction with the Philippine National Standard for Organic Soil Amendments (PNS/BAFS 183).

A Technical Working Group (TWG) for the development of the Standard was created as per Department of Agriculture Special Order No. 313 Series of 2016. This Standard has been approved by the Secretary of the Department of Agriculture in 2019.

This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2.

1 Scope

This Code covers the general practices for the production of organic soil amendments in order to achieve the minimum requirements specified under the Philippine National Standard for Organic Soil Amendments (PNS/BAFS 183). Emphasis is made on how to minimize contamination from microbiological, physical, and chemical hazards in accordance with the relevant provisions under the Philippine National Standard for Organic Agriculture (PNS/BAFS 07). This also safeguards worker's health, safety and welfare and minimize environmental hazards associated with the production of organic soil amendments.

This Code does not pose limit to the advancement on the technology for the production of organic soil amendments as long as it is consistent with the minimum requirements recommended by PNS/BAFS 183 and PNS/BAFS 07.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies:

PNS/BAFS 07, *Organic Agriculture*

PNS/BAFS 183, *Organic Soil Amendments*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

3.1
organic soil amendment
includes all the products within the scope of the PNS Organic Soil Amendments (PNS/BAFS 183), e.g. organic fertilizers, compost/soil conditioner, microbial inoculants, and organic plant supplements

3.2
raw materials
naturally occurring materials used in the production of organic soil amendment

3.3
site
preparation, production, packing, handling, and storage areas

4 Site and design of production facility

The site and design of the production facility should not compromise the product quality and safety of the workers. In particular, the structure should always be kept clean and properly ventilated.

For the preparation of microbial inoculants, the structure should allow thorough cleaning and disinfection to ensure that pathogens do not grow in the facility or on the equipment.

4.1 Production site

The production site shall comply with related and applicable regulations of the competent authority/ies.

4.2 Site management

Measures should be taken to ensure that the production site and its immediate environment are clean and free from possible sources of contamination (e.g. stray animals, non-biodegradable wastes, hazardous wastes, etc.). Management practices should be observed to prevent pollution of soil, water, and air.

5 Production of organic soil amendments

5.1 Choice of raw materials

Raw materials used in organic production should be consistent with the principles of the PNS/BAFS 07. Raw materials with substrates contaminated with heavy metals and, hazardous chemicals shall be avoided.

5.2 Processing

5.2.1 Solid organic fertilizer and compost/soil conditioner

Single or a combination of raw materials should undergo proper decomposition process to reach a minimum of 60°C to destroy pathogenic microorganisms.

5.2.2 Liquid organic fertilizer and organic plant supplement

Heavy metal contaminated raw materials should be avoided in the production of liquid organic fertilizer and organic plant supplement.

Liquid organic fertilizer and organic plant supplement should undergo complete fermentation process followed by proper handling and aeration.

5.2.3 Microbial inoculant

The carrier should be able to sustain a high population of the inoculum strain during the storage period. This can be done through sterilization of the carrier material. Carriers for seed or soil inoculation may be prepared from various types of materials.

Properties of good carrier materials are found in Annex A.

6 Packaging, labeling, and storage

Organic soil amendments shall be packed, labeled, and stored in accordance with the relevant provisions recommended by PNS/BAFS 183.

6.1 Packaging

Contact of packaging materials for organic soil amendments with any substance that would likely compromise the integrity of these products and pose risk of contamination should be avoided.

The use of biodegradable and recyclable packaging materials is encouraged.

Reuse of packaging materials from agrochemicals is prohibited.

6.2 Labeling

Labels of bottles, cartons, bags, and sachets shall be in accordance with the provisions under PNS/BAFS 183.

6.3 Storage

Organic soil amendments should be stored separately from other materials.

Organic soil amendments should be stored separately from other products. The storage area should be well-ventilated and appropriately protected from weather conditions which can affect the quality of the finished product. In addition, the storage areas should be free from wastes which may become breeding places for pests and where spillage and leakage are easily cleared.

Microbial inoculants should be stored under appropriate conditions.

7 Waste management

An operational waste management plan should be implemented and properly documented. Proper segregation of wastes should be strictly observed.
Proper disposal of empty containers and packaging materials should be followed in accordance with the rules and regulations set by the concerned regulatory agency.

Liquid wastes should not be disposed directly to bodies of water.

8 Worker's health, safety and welfare

8.1 Labor conditions

Employers shall ensure that the working conditions are suitable for the workers. Workers shall be treated in accordance with the country's labor rules and regulations, including the minimum working age, set by the competent authority. New workers are informed about the risks associated with health and safety when starting at the worksite.

8.2 Worker's safety/Personal Protective Equipment (PPE)

All workers including contractors or visitors should maintain an appropriate degree of personal hygiene. Wearing of protective clothing, gadgets, and safe manual handling practices should be followed. In cases of emergency, there should be available first aid measures and appropriate disaster prevention and control measures.

8.4 Trainings

Employers and workers should have appropriate knowledge or be trained in their area of responsibility, such as operating equipment and tools, accident and emergency procedures, safe use of substances, and personal hygiene. Evidence on the conduct of training should be kept.

9 Traceability

A complete set of records of organic soil amendment production shall be kept in conformance with Traceability and Record keeping of PNS/BAFS 07.

Annex A
(informative)

Properties of carrier materials for microbial inoculants

Good carrier materials should have the following properties: (1) non-toxic to the inoculum strain; (2) good moisture holding capacity; (3) easy to process and free of lump-forming materials; (4) easy to sterilize by autoclaving or gamma-irradiation; (5) available in adequate amounts; (6) inexpensive; (7) good adhesion to seeds; (8) good pH buffering capacity; and (9) non-toxic to plants.

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Department of Agriculture
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