



Greenhouse Organic System Plan

Status:
 Contact:
 Subject:
 Date:
 Type: 2019

Comments

Use this form to describe all areas where plants are started or grown within a structure, including greenhouses, hoopouses, or other types of buildings. If a section does not apply, indicate "N/A" if not applicable. This plan is to be submitted with the **Farm Organic System Plan**.

GENERAL INFORMATION NOS §§205.201, .202, .206(f), .272

In order to provide a complete description of your greenhouse production system, note that both this Organic System Plan (OSP) and the full Farm OSP must be completed. Facilities used for greenhouse, hydroponic and aquaponic production must be identified on attached maps. List all seeds, seedlings, and planting stock on the Seed Table. List in-ground production on the Crop Summary/Current Year Field Plan. For new in-ground production, complete a 3 Year Field History for sites under your management or submit a Prior Land Use Declaration form completed by the land owner or manager for land not under your management.

1. Are products produced for sale, for on-farm use, or both?
 sale on-farm use both

Describe all organic production facilities in the table below.

*In the "Identification" column, list the facility name or number on your **map(s)**. Describe in-ground production in the Additional Comments box. Use the "Description" column to describe if the facility is used for growing transplants or seedlings; harvested crops; microgreens; mature plants or harvested crops in containers; or any other type of container production. If sprouts are grown, complete the Sprout Organic System Plan.*

Please verify the lines below. Use the table to add new items. If there isn't enough room, attach a separate list with the same column layout.

| Greenhouse Facilities | | | | |
|-----------------------|---------------|-----------------------------------|-------------|-----------|
| Identification | Facility Type | Size (list as sq. ft. or acreage) | Description | In Ground |
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Additional Comments

3. Do you have any nonorganic production? *If "no," skip to the Inputs Section.*

Yes No

4. If "yes," list the types of nonorganic plants.

Describe all nonorganic production facilities in the table below. *Facilities listed below must be identified on attached map(s).*

Please verify the lines below. Use the table to add new items. If there isn't enough room, attach a separate list with the same column layout.

| Non-Organic Facilities | | | | |
|------------------------|---------------|-----------------------------------|-------------|------------------------|
| Identification | Facility Type | Size (list as sq. ft. or acreage) | Description | Also used for Organic? |
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Additional Comments

6. If you have nonorganic production, how do you prevent commingling and contamination of your greenhouse production?

- separate facilities are used
 separate equipment is used
 organic production is labeled
 equipment is cleaned before use
 other

7. If "other," explain.

8. **INPUTS:** The National Organic Standards require that all soil and crop inputs must be used in compliance with all restrictions and annotations. Inputs, including potting media, must not have been processed with or contain any prohibited ingredients. The use of on-farm manure or compost production should be described in the **Farm Organic System Plan**. If inputs are used, list all inputs such as potting media, fertility/growth, weed, disease or pest control inputs on the **Crop Input Inventory**, and provide product labels and ingredient information for inputs not OMRI listed or previously approved by MOSA.

Are greenhouse inputs used? *List inputs on the **Crop Input Inventory** and submit product labels and ingredient information for inputs not OMRI listed or previously approved by MOSA.*

- Yes
 No

9. **CROP ROTATION:** The National Organic Standards require a crop rotation plan that maintains or improves soil organic matter content, provides for pest management, manages nutrients, and provides erosion control.

Describe your crop rotation in areas used for in-ground plant production. *Note N/A if not applicable.*

Question(s) not listed are for office use only.

MAINTENANCE OF ORGANIC INTEGRITY NOS §§205.103, .201, .202, .206, .272

The National Organic Standards require that prohibited substances do not compromise the integrity of the organic production system. Water used for irrigation of organic crops must not contain any prohibited substances intentionally added by the producer. Irrigation is defined as any type of watering done to greenhouse plants.

12. Is lumber treated with prohibited materials used in any part of your organic production facilities, such as posts, sill plates, benches or tables?

Yes No

13. If "yes," where is the treated lumber located?

14. What is the minimum distance from the treated lumber to any in-ground production? *Note N/A if not applicable.*

15. If you have treated lumber, how do you prevent contamination of the soil and/or plants from the prohibited materials used in the treated lumber? *Not N/A if not applicable.*

16. What is the source of water used for production? *A safe Ecoli/fecal coliform test result is required for non-municipal water sources used for washing crops. Submit test results to MOSA.*

17. What equipment do you use for irrigation?

18. Is irrigation equipment dedicated organic?

Yes No

19. What inputs are added to the irrigation system? *Note N/A if not applicable. List inputs on the **Crop Input Inventory** and submit product labels and ingredient information for inputs not OMRI listed or previously approved by MOSA.*

20. What inputs do you use to clean irrigation lines/nozzles? *Note N/A if not applicable. List inputs on the **Crop Input Inventory** and submit product labels and ingredient information for inputs not OMRI listed or previously approved by MOSA.*

21. Describe equipment cleaning procedures. *List inputs on the **Crop Input Inventory** and submit product labels and ingredient information for inputs not OMRI listed or previously approved by MOSA.*

22. How do you ensure inputs/cleaners/sanitizers do not contaminate organic products? *Note N/A if not applicable.*

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HYDROPONICS NOS §§205.2, .200, .105, .201, .272

The National Organic Standards define organic production as a production system that is managed in accordance with all applicable standards to respond to site-specific conditions by integrating cultural, biological, and mechanical practices that foster cycling of resources, promote ecological balance, and conserve biodiversity. Hydroponic production and handling must meet the production and handling requirements of the National Organic Standards. Practices in place to support biodiversity and conserve natural resources must be described in the appropriate sections of the Farm OSP. There must be biological activity within the growing media, substrate, or planting mix.

Hydroponic production is prohibited by Canadian Organic Regulations (COR) and crops produced hydroponically cannot be sold as organic in Canada. The COR definition of hydroponic is: Cultivation of plants in aqueous nutrient solutions without the aid of soil. The soil is replaced by an inert culture medium (e.g. coarse sand, expanded clay, rockwool). Plants are cultivated by using a nutritive solution that is brought to each plant by taking into account the requirements of the species.

25. Do you grow plants in a liquid nutrient solution (including through aquaponic production)? *If "no," skip to the Aquaponic Section.*

Yes No

26. If "yes," list all types of plants grown hydroponically.

27. What system type(s) are used for hydroponic production? *Check all that apply.*

wick noncirculating water culture flood and drain drip nutrient film technique
 aeroponic aquaponic bioponic other

28. If "other," explain.

29. What are containers made of?

30. Could containers or their sealant pose a threat to organic integrity (such as through contamination from prior nonorganic use or leaching of prohibited substances)?

Yes No

31. If "yes," how do you ensure that organic integrity is maintained?

32. Is a medium used in your hydroponic system? *List all inputs on the **Crop Input Inventory** and submit labels and product ingredient lists for inputs that are not OMRI listed or previously approved by MOSA.*

Yes No

33. If "yes," indicate medium type. *Check all that apply.*

perlite gravel vermiculite clay pellets coconut fiber (coir) peat moss sand
 rockwool composted bark other

34. If "other," explain.

35. NUTRIENTS & LIGHT:

What are the components/ingredients of your nutrient solution? *List all inputs on the **Crop Input Inventory** and submit labels and product ingredient lists for inputs that are not OMRI listed or previously approved by MOSA.*

36. How often does the nutrient solution contact plant roots?

37. Explain your nutrient solution refreshing procedures.

38. How do you ensure that the disposal of waste does not contribute to environmental contamination?

39. What is the nutrient solution temperature range and how is this controlled?

40. How do you monitor and balance nutrient levels?

41. What is the light source for your hydroponic production?

natural light artificial light other

42. If "other" or "artificial light" is used, please describe.

43. Describe any other means used to aid plants in hydroponic production (such as nonsynthetic CO₂ enhancement, pollination techniques, climate control).

Question(s) not listed are for office use only.

AQUAPONICS

Aquaponic production is the production of plants using water that has been used to cultivate aquatic organisms (such as fish). Fish cannot be certified to the National Organic Standards at this time. MOSA does not certify fish, but plants grown aquaponically can be certified organic if their production is in compliance with the National Organic Standards.

46. Do you grow plants aquaponically? *If "no," skip to the last question to Complete.*

Yes No

47. Describe the location of fish and plants and how nutrients flow through the system, and submit a facility **map** illustrating your aquaponic system. Be sure all system components are clearly labeled and described (rearing tanks, settling basins, filters, pumps, etc.).

48. Are water additives used to balance pH, soften, or otherwise adjust your water supply? *List all inputs on the **Crop Input Inventory** form and submit labels and product ingredient lists for inputs that are not OMRI listed or previously approved by MOSA.*

Yes No

49. Describe how you prevent fish manure solids from contacting the edible portion of organic plants grown?

50. How was the bacterial community in your aquaponic system established?

51. How do you monitor and adjust the pH of your nutrient solution?

52. Do edible plant parts have contact with the nutrient solution?

Yes No

53. If "yes," describe in detail.

54. **COMPLETE:** Is your Organic System Plan complete?

Yes No

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