

Application objective

After completing this module you will be able to provide growers with recommendations about methods for maintaining organic integrity during the production, handling and transportation of products.

Learning Objectives

After completing this module you will understand:

- The concept of organic integrity as it applies to the production, harvesting, transportation, handling and/or processing of any certified organic product
- The different methods that a producer can use to physically protect the integrity of organic fields
- How to prevent commingling in a split production system
- The required documentation for record keeping and certification

Topics

- Requirements for buffers, signage, monitoring, etc. for adjoining lands
- Requirements for sharing of equipment with conventional production
- Provision for prevention of commingling during harvest, postharvest handling and transportation of product, including (1) harvest containers, (2) packaging, (3) storage facilities and (4) transport
- Documentation required for certification relating to maintenance of organic integrity

Relevant Sections of the NOP Standards

- 205.202 Land requirements
- 205.271 Facility Pest Management Practice Standard
- 205.272 Commingling and contact with prohibited substance prevention practice standard

Materials and Resources

- Pages 10-12 about Adjoining Land Use, and Harvest on page 50 of NCAT's "*Organic Crops Workbook*" (<http://attra.ncat.org/attra-pub/PDF/cropsworkbook.pdf>)
- Relevant sections of the NOP Standards (<http://www.ams.usda.gov/nop/NOP/standards.html>)
- OMRI Products List (See approved seed treatments) (http://www.omri.org/OMRI_products_list.html)

Keywords

Buffer zone. An area located between a certified production operation or portion of a production operation and an adjacent land area that is not maintained under organic management. A buffer

zone must be sufficient in size or other features (e.g., windbreaks or a diversion ditch) to prevent the possibility of unintended contact by prohibited substances applied to adjacent land areas with an area that is part of a certified operation.

Commingling. Physical contact between unpackaged organically produced and nonorganically produced agricultural products during production, processing, transportation, storage or handling, other than during the manufacture of a multiingredient product containing both types of ingredients.

Detectable residue. The amount or presence of chemical residue or sample component that can be reliably observed or found in the sample matrix by current approved analytical methodology.

Drift. The physical movement of prohibited substances from the intended target site onto an organic operation or portion thereof.

Handler. Any person engaged in the business of handling agricultural products, including producers who handle crops or livestock of their own production, except such term shall not include final retailers of agricultural products that do not process agricultural products.

Lot. Any number of containers which contain an agricultural product of the same kind located in the same conveyance, warehouse, or packing house and which are available for inspection at the same time.

Production lot number/identifier. Identification of a product based on the production sequence of the product showing the date, time, and place of production used for quality control purposes.

Prohibited substance. A substance the use of which in any aspect of organic production or handling is prohibited or not provided for in the Act or the regulations of this part.

Records. Any information in written, visual, or electronic form that documents the activities undertaken by a producer, handler, or certifying agent to comply with the Act and regulations in this part.

Residue testing. An official or validated analytical procedure that detects, identifies, and measures the presence of chemical substances, their metabolites, or degradations products in or on raw or processed agricultural products.

Split operation. An operation that produces or handles both organic and nonorganic agricultural products.

Activity 1: Commingling

Working in small groups, you will either use Legos to demonstrate how to maintain organic integrity in a mixed facility, such as a storage shed or cooler, or use poster paper and markers to draw such a facility. Your facilitator will indicate which of the facilities on the following list you should create.

Materials storage shed	Cooling facility
Transportation vehicle	Equipment cleaning facility
Adjacent conventional and organic fields	Packing shed
Crop storage building	

Activity 2: Save for a Rainy Day

This activity involves two parts. First, you will develop a list of potential concerns about maintaining organic integrity on Southern Comfort Farm. Then you will participate in a role play in which your new boss tests your knowledge of the National Organic Standards as he/she leads you through the problematic application for certification from Southern Comfort Farms.

You will be divided into small groups of four or five. Each group must review the information that Southern Comfort Farms has supplied to the certification agency. The completed application as it was submitted by Southern Comfort Farms is provided in this book. The information that the farm has supplied does not provide the certifier with enough information in some cases. In other cases, the certifier may have concerns that the farm plan will not comply with the national standards. Your group will be assigned one part of Section 7 of the Organic Farm Plan, as it has been submitted by Southern Comfort Farms. Your group should develop a list of the problems that you can identify. Indicate the nature of the problem and what information you would want from the grower in order to process this application. Use the **completed** section of the Organic Farm Plan that the farmer has turned in to the certifying agency, the description of Southern Comfort Farms, and the farm map to identify the problems.

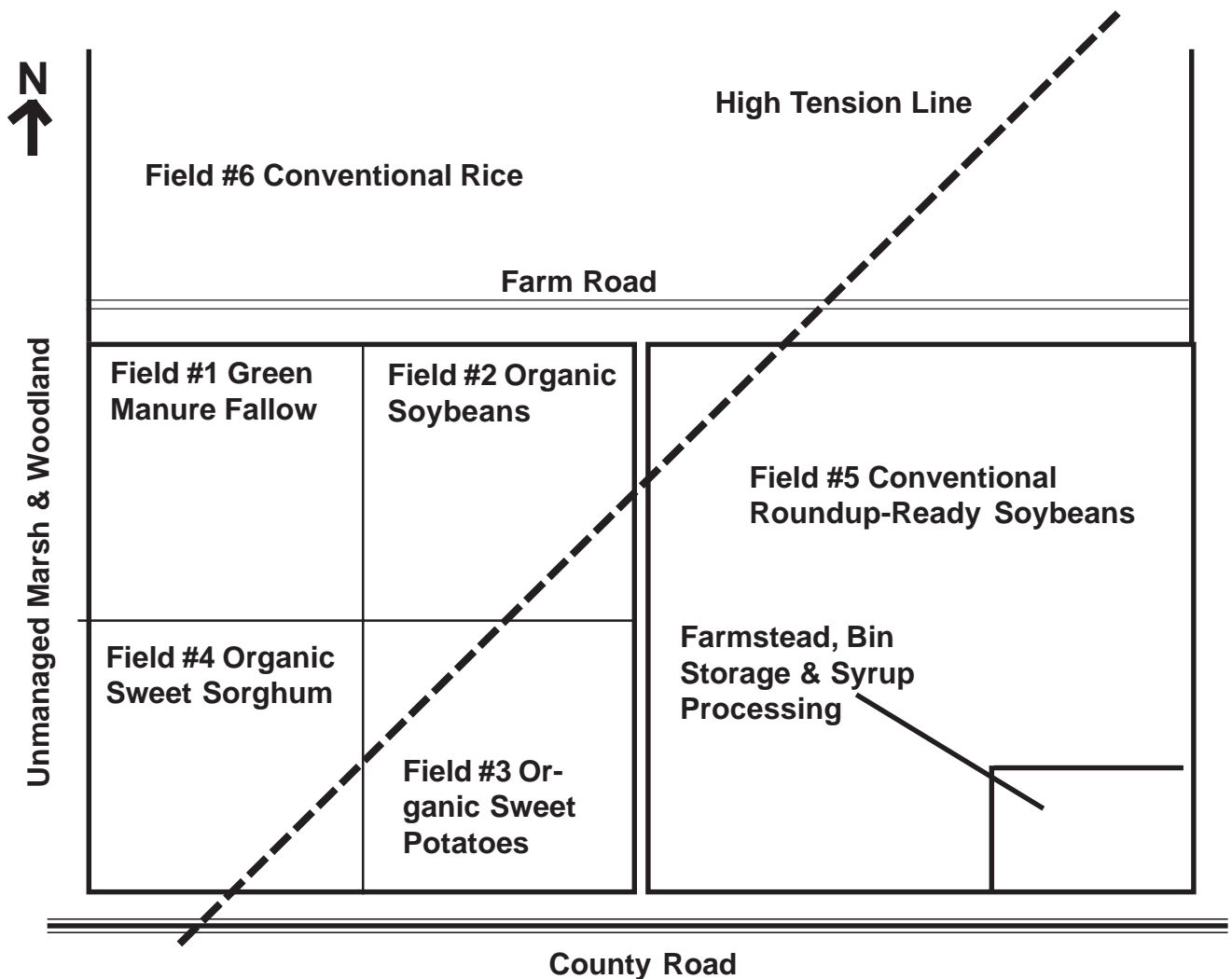
When you finish, your boss will call you on the carpet to make sure you know your Standards!

Save for a Rainy Day!

Southern Comfort Farms is a split operation (conventional and organic production), with parallel production of soybeans. The organic acreage is divided into four fields that are currently under a rotation of soybeans, sweet potatoes, sweet sorghum for syrup, and a green manure fallow. Conventional acreage features Roundup-Ready soybeans on the east and rice on the river bottom to the North. The rice has pesticides applied by air.

The southern border of the farm is a two-lane paved county road. The western boundary is unmanaged marsh woodland. The land slopes gradually towards the northwest. There is a high tension power line crossing both the organic and conventional acreage from northeast to southwest.

Much of the equipment—most notably tillage equipment, trucks, wagons, and the grain combine are used on both the conventional and organic fields.



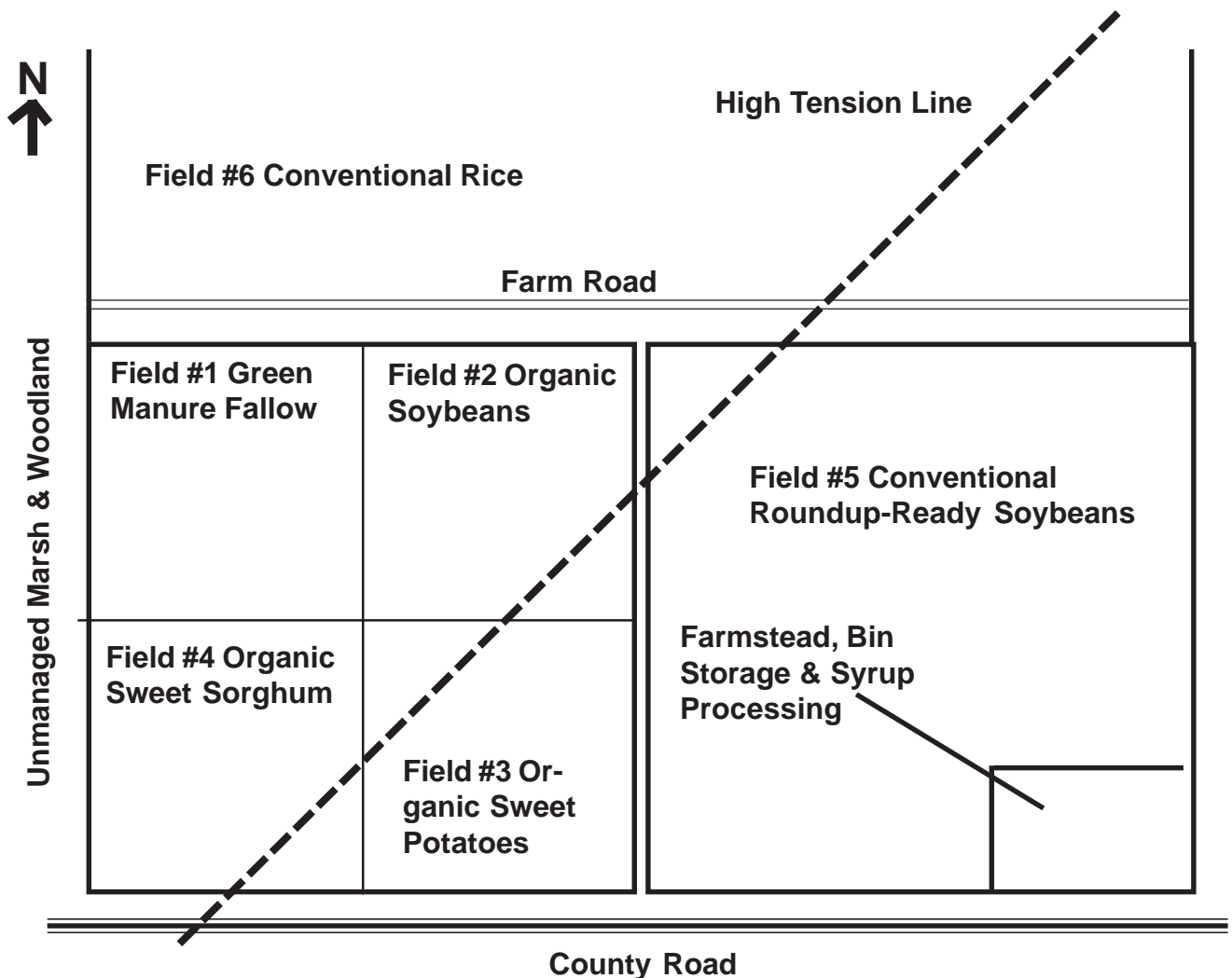


IFAS EXTENSION

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Includes specific Standards that apply, pages to consult in the NCAT Organic Crop Workbook, and room for you to write your concerns in each sub-section.

Maintenance of Organic Integrity		NOP Rule 205.201(a)(5) and 205.202(c)		
A. ADJOINING LAND USE:				
<p>NOP RULE requires that organic production areas have distinct boundaries and buffer zones to prevent the unintended application of a prohibited substance or contact with a prohibited substance that is applied to adjoining land not under organic management. Adjoining land includes crop land, pastures, residential property, fallow land, etc. Buffer areas may change annually, depending on contamination potential from adjoining land uses. The width of the minimum buffer is 25 feet. The NOP Rule requires that the buffer must be sufficient in size or other features (windbreaks, diversion ditches) to prevent the unintended contact by prohibited substances applied to adjacent land areas. Crops within the required buffer must be left unharvested or harvested, stored, and disposed of as nonorganic crop, with records kept of crop disposition. Indicate buffer zones and show all adjoining land uses on your field maps.</p>				
<p>List specific buffer areas you maintain. (Show all adjoining land uses on your field maps.)</p>				Not applicable
LOCATION OR FIELD NUMBER	TYPE OF BUFFER (CROP LAND, TREELINE, HEDGEROW, WILDLIFE PLANTING, GRASS STRIP)	WIDTH OF BUFFER	ADJOINING LAND USE	IF CROP IS HARVESTED FROM BUFFER, DESCRIBE USE (SALE, NON-ORGANIC LIVESTOCK FEED, SEED, ETC.)
1	Farm road		Conventional rice	
2	Farm road		Conventional rice	
2	Crop land ³		Conventional soybean	Sale
3	Beneficial habitat	25'	Conventional soybeans	

References:

§ 205.202 Land Requirements. Any field or farm parcel from which harvested crops are intended to be sold, labeled, or represented as “organic” must: (c) Have distinct, defined boundaries and buffer zones such as runoff diversions to prevent the unintended application of a prohibited substance to the crop or contact with a prohibited substance applied to adjoining land that is not under organic management.

See NCAT’s Organic Crops Workbook “Adjoining Land Use” pp 10-12.

Your Concerns:

A. ADJOINING LAND USE: (continued)

If crops are harvested from the buffer zones with equipment used for harvesting organic crops, what safeguards do you use to protect organic crops from contact with buffer crops during harvest?

Harvest buffer zone crops with crops from conventional field. Equipment is cleaned out before harvest of organic crops.

Your Concerns:

What additional safeguards do you use to prevent accidental contamination?

none

Written notification to: * highway departments electric companies aerial spray companies/airports
adjoining landowners drainage commissions farm service office other (specify)

*Documented phone contact with highway department.

Your Concerns:

Have you posted "No Spray" signs along roadsides that adjoin organic fields?

Yes No

Your Concerns

Do any fields or portions of fields flood frequently? (more than once every ten years)

Yes No

If yes, list field numbers 1 and 4

Your Concerns:

Prohibited herbicides/pesticides used on conventional crops:

PRODUCT NAME	WHO APPLIES? SELF (S) OR CUSTOM (C)	FIELD NUMBERS/NAMES WHERE APPLIED	WHERE STORED? (ON-FARM OR OFF-FARM; WHERE ON FARM?)
Round Up	S	5	On Farm, in farmstead equipment shed

Your Concerns:

C. EQUIPMENT:

To prevent commingling and contamination, all equipment used in organic crop production must be free of non-organic crops and prohibited materials. Equipment used for both organic and non-organic farming must be cleaned and flushed prior to use on organic fields or crops. Keep records of equipment clean and flush activities.

List equipment used for planting, tillage, spraying, and harvesting.

Not applicable

EQUIPMENT NAME	OWNED (O), RENTED (R), OR CUSTOM (C)	CHECK IF USED ON BOTH ORGANIC AND CONVENTIONAL (✓)	HOW IS EQUIPMENT CLEANED BEFORE USE ON ORGANIC FIELDS?
Ground sprayer	O	✓	Thoroughly rinsed
Plow	O	✓	Hose Down
Disc	O	✓	Hose Down
Harvest truck	C	✓	Swept out
Sweet potato digger	C	✓	Hose Down
Combine	O	✓	Compressed Air
Row crop cultivator	O		
Planter	O	✓	Compressed Air
Row binder	O	✓	Compressed Air

References

§ 205.272 Commingling and contact with prohibited substance prevention practice standard. (a) the handler of an organic handling operation must implement measures necessary to prevent the commingling of organic and nonorganic products and protect organic products from contact with prohibited substances. Note that this section refers to "handling" of organic crops, not production. However, the principles of non-contamination and no commingling apply as well to production stages as to handling.

See NCAT's Organic Crops Workbook, "Equipment" pp.56-57.

Your Concerns:

Is your equipment maintained so that fuel, oil and hydraulic fluid do not leak? Yes No Not applicable

Your Concerns:

If you use a sprayer:

What type? Ground Sprayer

Did you purchase it new or used? new used

Your Concerns:

Other equipment:

Could any equipment you use have been contaminated by previous uses? Yes No

If yes, describe:

Your Concerns:

D. HARVEST:

NOP Rule 205.272(b)(1) and (2) requires that containers, bins, and packaging materials must not contain synthetic fungicides, preservatives, or fumigants. All reusable containers must be thoroughly cleaned and pose no risk of contamination prior to use.

How are your organic crops harvested? mechanical by hand

Are any organic crops custom harvested? Yes No

If yes, provide name and address of custom harvester.

Billy Bob Huckabee
782 Harvester Lane
Farmville, AR

Sweet Potatoes are custom harvested, both with a mechanical digger and by hand. Sweet Sorghum is harvested by hand. The soybeans are mechanically harvested.

Describe steps taken to protect organic crops from commingling and contamination during harvest.

Combine is cleaned out with an air hose. All equipment parts are cleaned out real good. No special steps taken for sweet potatoes or sorghum. Dual use truck boxes and gravity wagons are swept out prior to hauling organic soybeans. Trucks and containers are used for agricultural products only, not fertilizers or chicken litter, etc.

References:

§ 205.272 Commingling and contact with prohibited substance prevention practice standard.

(a) The handler of an organic handling operation must implement measures necessary to prevent the commingling of organic and nonorganic products and protect organic products from contact with prohibited substances.

(b) The following are prohibited for use in the handling of any organically produced agricultural product or ingredient labeled in accordance with subpart D of this part:

(1) Packaging materials, and storage containers, or bins that contain a synthetic fungicide, preservative, or fumigant;

(2) The use or reuse of any bag or container that has been in contact with any substance in such a manner as to compromise the organic integrity of any organically produced product or ingredient placed in those containers, unless such reusable bag or container has been thoroughly cleaned and poses no risk of contact of the organically produced product or ingredient with the substance used.

See NCAT's Organic Crops Workbook, "Harvest" pp 47-49.

Your Concerns:

What containers are used for harvesting? gravity wagons/boxes truck boxes cardboard/waxed boxes
 wooden totes plastic containers other (specify)

Gravity wagons/boxes and truck boxes are used for soybeans. A flat bed truck is used to haul sorghum. Wooden totes and plastic containers are used for sweet potatoes.

Your Concerns:

Are containers new or used? new used

If used, what did they contain prior to organic use? Trucks and gravity wagons were purchased used. They were used for conventional crop harvest, but well cleaned when acquired. Both new and used containers are used for sweet potatoes. Don't know what the used containers were originally used for but they were rinsed prior to use.

Your Concerns:

Are the containers used for organic crops only?

Yes No

Describe potential contamination or commingling problems you have with harvest of organic crops.

none

Trucks boxes and gravity wagons have dual-use.

Your Concerns:

E. POST-HARVEST HANDLING:

Not applicable

NOP Rule 205.201(a)(5) requires that post-harvest handling procedures do not contaminate organic products with non-organic crops or prohibited materials. *For on-farm processing, you may need to complete an Organic Handling Plan Application.*

Describe your post-harvest handling procedures and equipment.

Sweet potatoes are field-cured in their totes under tarps. Tarps are used only for field curing.

Your Concerns:

Is the processing area and equipment used for both organic and non-organic products?

Yes No

If yes, describe steps taken to prevent commingling and contamination.

Does packaging present any contamination problems for your organic products?

Yes No

If yes, what are they?

Your Concerns:

Check types of packaging material used: bulk paper cardboard wood glass metal
foil plastic waxed paper aseptic natural fiber synthetic fiber other (specify)

In what form are finished products shipped? dry bulk liquid bulk tote bags tote boxes paper bags
foil bags metal drums mesh bags cardboard drums cardboard cases plastic crates
other (specify)

F. CROP STORAGE:

No organic crop storage

Operators must keep organic and non-organic crops in separate storage areas and prevent commingling and contamination. Storage records must be maintained.

Describe your storage locations.

STORAGE ID #	TYPE OF CROPS STORED	TYPE OF STORAGE	CAPACITY/SIZE	ORGANIC (O), TRANSITIONAL (T), BUFFER (B), CONVENTIONAL (C)
	Organic soybeans	Bins		O
	Conventional soybeans	Bins		C

Do you use the same storage areas for organic, transitional, buffer, and/or conventional crops. Yes No

If yes, how do you segregate organic crops from non-organic crops? Conventional and organic soybeans are stored in separate bins. Custom hauler is instructed about procedures to prevent commingling and contamination.

References:

§ 205.271 Facility pest management practice standard.

(a) The producer or handler of an organic facility must use management practices to prevent pests, including but not limited to:

- (1) Removal of pest habitat, food sources, and breeding areas;
- (2) Prevention of access to handling facilities; and
- (3) Management of environmental factors, such as temperature, light, humidity, atmosphere, and air circulation, to prevent pest reproduction.

(b) Pests may be controlled through:

- (1) Mechanical or physical controls including but not limited to traps, light, or sound; or
 - (2) Lures and repellents using nonsynthetic or synthetic substances consistent with the National List.
- (c) If the practices provided for in paragraphs (a) and (b) of this section are not effective to prevent or control pests, a nonsynthetic or synthetic substance consistent with the National List may be applied.

(d) If the practices provided for in paragraphs (a), (b), and (c) of this section are not effective to prevent or control facility pests, a synthetic substance not on the National List may be applied, Provided, That, the handler and certifying agent agree on the substance, method of application, and measures to be taken to prevent contact of the organically produced products or ingredients with the substance used.

(e) The handler of an organic handling operation who applies a nonsynthetic or synthetic substance to prevent or control pests must update the operation’s organic handling plan to reflect the use of such substances and methods of application. The updated organic plan must include a list of all measures taken to prevent contact of the organically produced products or ingredients with the substance used.

(f) Notwithstanding the practices provided for in paragraphs (a), (b), (c), and (d) of this section, a handler may otherwise use substances to prevent or control pests as required by Federal, State, or local laws and regulations, Provided, That, measures are taken to prevent contact of the organically produced products or ingredients with the substance used.

See NCAT’s Organic Crops Workbook, “Storage” pp 50-53.

Your Concerns:

How do you clean storage units prior to storage of organic crops?

Grain storage bins are swept out and visually inspected.

How do you prevent/control insect pests in crop storage areas?

No insect problems

Clean bins once they are empty. Clean-up around bins. Pyrethrum would be used if sanitation measures are inadequate.

Your Concerns:

How do you control rodents in crop storage areas?

No rodent problems

Barn cats

What stored crop inputs have you used in the last three years?

none

synthetic fumigants rodenticides sprouting inhibitors ripeners growth regulators
preservatives oils coloring agents waxes other (specify) Pyrethrum

Are any stored crop inputs used or planned for use on organic crops?

Yes No

If yes, specify input and retain labels. Pyrethrum

G. TRANSPORTATION:

Not applicable

Who is responsible for arranging transportation of organic products? self buyer other (specify)

Describe how organic products are transported.

Bulk truck for soybeans. Flat-bed truck to haul totes of sweet potatoes.

What potential contamination or commingling problems do you have with the transport of organic crops?

none

References:

§ 205.272 *Commingling and contact with prohibited substance prevention practice standard.*

(a) The handler of an organic handling operation must implement measures necessary to prevent the commingling of organic and nonorganic products and protect organic products from contact with prohibited substances.

See NCAT's *Organic Crops Workbook*, "Transportation of Products" p58.

Your Concerns:

What steps are taken to protect the integrity of organic products during transport?

- inspecting transport units prior to loading cleaning transport units prior to loading
- use of Clean Truck Affidavits letter/contract with transport company stating organic requirements
- other (specify) dedicated organic only

Your Concerns: