



Part One: Farm Review

WATER USAGE

1-1 What is the source of irrigation water?
Please specify: pond, stream, well, municipal, or other.

Informational – No Points
Verification Requirements: List and Demonstration

D

This list should include all types of water that is used in the farm operation, including different locations or parts of the farm that may use different sources. The source of irrigation water and the frequency of testing can affect the risk of microbial contamination of crops.

Sources of Farm Water:

Municipal water supplies	LOW RISK
Well/ground water	MEDIUM TO HIGH RISK
Surface water	HIGH RISK

1-2 How are the crops irrigated?
Please specify: flood, drip, sprinkler, overhead, or other.

Informational – No Points
Verification Requirements: List and Demonstration

D

Be specific and list all methods of irrigation that the farm uses and the timing of use. Including a list in your farm safety plan makes this easy to show to the auditor.

GOOD AGRICULTURAL PRACTICES

IRRIGATION

1. WATER SOURCE - DEEP WELLS
2. IRRIGATION STYLE – OVERHEAD SPRINKLERS
METAL PIPES
3. TESTS – CONDUCTED BY WATERLAB CORP
4. PIPE MAINTENANCE – PIPES ARE INSPECTED
SEVERAL TIMES DURING
IRRIGATION SEASON
5. WELL MAINTENANCE – SEALED ENTRANCE –
ABOVE FLOOD PLAIN
6. SEWAGE – NO SEWAGE OR SEWAGE TREATMENT
EXPOSURE

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1-3 Water quality is known to be adequate for the crop irrigation method and crop being irrigated.

10 Points

Verification Source: Water test results and/or well construction specifications.

D

The type of irrigation method used may affect your risk of microbial contamination from your water source, especially during the period right before harvest. Water from irrigation districts or other municipal sources is considered acceptable for all irrigation applications.

1-4 Water quality is known to be adequate for chemical application or fertigation method.

10 Points

Verification Requirements: Water test results and methodology.

D

The intent of this evaluation is not to require potable water in every application on the farm. However, knowledge of the quality of any spray source water is required for any chemical or irrigation applications that occur prior to the crop being harvested whenever water is coming in direct contact with an edible portion of the crop.

Evaluate the risk of your irrigation water by looking at the following factors:

1. Knowledge of water quality – test your water source
2. Application method
 - a. Drip, flood, sprinkler
 - b. Does it come into direct contact with produce?
3. Inherent product risk
 - a. Potatoes versus blueberries – produce that is often eaten before washing
4. Preventative practices
 - a. Avoid direct contact – use drip irrigation methods
 - b. Use water treatments for washing and direct contact applications

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Water Quality Risks – Sources, Testing, and Treatment

	LOW	LOW-MEDIUM	MEDIUM-HIGH	HIGH
Water source used in irrigation or processing	City or Regional Water District...or, apply as drip irrigation, irrigate only root crops	Private well 50-200 feet from pollutants* and construction meets state standards**	Private well 50-200 feet from pollutants* and construction meets state standards**	Private source less than 50 feet from pollutants*; or well construction does not meet state standards**; or unknown water source (i.e. surface water)
Tests for private water quality	Bacteria twice per month, and chemicals yearly	Bacterial quarterly and chemicals yearly	Bacteria yearly, no chemicals testing	No testing or unknown results of tests
Private water treatment	Maintained by certified water supply system operator and meets public water supply standards	Disinfection is continuous and tested daily	Disinfection during production only or daily testing is not consistent.	No disinfection equipment or no ability to test.
Alternative emergency water source	Public supply or commercially bottled water	Private source with continuous disinfection and daily chlorine testing	Private source not disinfected, but tested and found uncontaminated	No alternative source plan
*Pollutants would include: abandoned or unused wells, septic systems, waste storage/disposal sites, fuel storage, animal pens, manure piles, chemical storage and chemical mixing areas.				
**Local regulations may be consulted for specifics. Generally, wellhead is 12” above ground, casing intact, sealing cap approved and properly installed. A local government sanitarian can also offer assistance in evaluating well construction.				

Source: USDA.

TEST REPORT

SAMPLE INFORMATION

Location: 8630 67th Ave NE well tap *Ham*
Date Sampled: 07/20/2007 Sample Type: Water
Time Sampled: 0900 Collected by: Greg

CASE NARRATIVE

The analyses were performed according to the guidelines in the WATERLAB Corp Quality Assurance Program. This report contains analytical results for the sample(s) as received by the laboratory.

WATERLAB Corp certifies that this report is in compliance with the requirements of NELAC. No unusual difficulties were experienced during analysis of this batch except as noted below or qualified with data flags on the reports.

TESTING INFORMATION

Lab #: 20070720-007
Date Received: 07/20/2007 Date Reported: 07/24/2007
Received by: AR Reported By: MS
Time Received: 1055
*Chlorine Residual: N/A Amount of Sample Used: 100 mls
Date Started: 07/20/2007 Time Started: 1200
Tech: BEM Method Code: SM 20th ED 9223 P/A Colisure

TOTAL COLIFORM BACTERIA RESULTS

Analysis shows Total Coliform Bacteria to be: **ABSENT**
Absent= Acceptable Present= Unacceptable

E.COLI COLIFORM BACTERIA RESULTS

Analysis shows E. coli Bacteria to be: **ABSENT**
E. coli is a sub-section of Total Coliform and its presence in water indicates that raw sewage is present in the water.

Explanation: When coliform bacteria are present in water, it is considered contaminated and therefore unsafe. Coliform organisms are found normally in discharges from the intestinal tract of man, animals or birds. Their presence in the water, therefore, must be considered as evidence of pollution. The laboratory examination determines the presence or absence of contamination at the time of sampling only. No definite conclusions should be drawn from a single bacterial examination.

* Chlorine Footnote: Chlorine in water will kill coliform bacteria. Presence of chlorine in a water sample should invalidate the test unless the water is from a system that is continuously chlorinated every day the water is in use.

Approved by: *fer*
ORELAP ID# OR100039

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1-5 If necessary, steps are taken to protect irrigation water from potential direct and non-point source contamination.

15 Points

Verification Requirements: Observation of Premises

Evaluation of surrounding land areas and potential of water source contamination is required. Surrounding land that poses a potential for contaminated runoff must be avoided by berms, swails, diversion, or other implements. Evidence of source point testing and pollution avoidance implements, including limits of animal exposure to water sources will suffice for this requirement.

1-6 The farm sewage treatment system/septic system is functioning properly and there is no evidence of leaking or runoff.

15 Points

Verification Requirements: Observation of Premises.

The auditor will do a survey of the sewage treatment system, if applicable, and check for signs of dysfunction.

1-7 There is no municipal/commercial sewage treatment facility or waste material landfill adjacent to the farm.

10 Points

Verification Requirements: Observation of Premises.

There may be no municipal or commercial sewage treatment facility located within 1/4 mile of the farm in order to receive credit for this question.

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ANIMALS/WILDLIFE/LIVESTOCK

1-8 Crop production areas are not located near or adjacent to dairy, livestock, or fowl production facilities.

15 Points

Verification: Observation of Premises.

In general, crop production that is closer than one (1) mile to a livestock production area (i.e. CAFO or other similar operation) without any barriers to prevent cross contamination may be considered high risk and not receive credit for this question. Natural barriers may suffice if operation can show sufficient evidence that livestock or fowl feces cannot contaminate produce in the field.

1-9 Manure lagoons located near or adjacent to crop production areas are maintained to prevent leaking or overflowing, or measures have been taken to stop runoff from contaminating the crop production areas.

10 Points

Verification: Observation of Premises.

If there are no adjacent dairy or livestock production facilities, this question is not applicable. However, where observed, manure lagoons demonstrate sufficiency to protect against leaking or overflowing into adjacent crop area.

1-10 Manure stored near or adjacent to crop production areas is contained to prevent contamination of crops.

10 Points

Verification: Observation of Premises.

Any manure storage area must demonstrate sufficient construction to protect against leaching or runoff in crop areas.

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1-11 Measures are taken to restrict access of livestock to the source or delivery system of crop irrigation water.

5 Points

Verification: Observation of Premises.

Livestock should not have access to the source of the water supply for the produce crop. Operators should take measures to ensure that they do not come within 200 feet of the water source. If there are no livestock or livestock facilities near the operation, this question is not applicable.

1-12 Measures are taken to reduce the opportunity for wild and/or domestic animals from entering the crop production areas.

5 Points

Verification: Observation of Premises.

Operation managers should make an effort to exclude wild and domestic animals from entering produce production areas. An operations manager should be able to express the demonstrate tactics that are being used to limit access to crops by animals. This includes dogs – operators should contain domestic pets to areas where employees can eat whenever they are brought to work.

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1-13 Crop production areas are monitored for the presence or signs of wild or domestic animals entering the land.

5 Points

Verification: Documentation of policy.

D

Operations managers should be able to demonstrate how they can determine whether unwanted animals are entering into crop production areas and articulate their strategies for deterrence. In the operation's standard operating procedures, if any action has been taken it should be recorded.

FARM PROCEDURES

Wildlife and Livestock

All fields are routinely monitored for unauthorized entry of wildlife or neighboring domesticated animals to the fields. In the event that unauthorized entry is discovered, the operation will take steps to isolate and eliminate the contaminated product or production areas, and the detected risk and corrective actions are documented.

NOTE: see the sample Food Safety Program Manual.

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MANURE AND MUNICIPAL BIOSOLIDS

There are three main types of manure use on the farm. Determine which your operation falls in, and then refer to the questions that correspond to your operation's manure use plan.

- Option A. Raw Manure or a combination of raw and composed manure is used as a soil amendment. Questions 1-14 – 1-17 are applicable to your operation.
- Option B. Only composted manure/treated municipal biosolids are used as a soil amendment. Questions 1-18 – 1-21 are applicable to your operation.
- Option C. No manure or municipal biosolids of any kind are used as a soil amendment. Only question 1- 22 is applicable to your operation.

RAW MANURE

1-14 When raw manure is applied, it is incorporated at least 2 weeks prior to planting or a minimum of 120 days prior to harvest.

10 Points

Verification: Manure application records.

D

1-15 Raw manure is not used on commodities that are harvested within 120 days of planting.

10 Points

Verification: Manure applications records.

D

A manure application log is sufficient to demonstrate that raw manure is not applied to commodities that are too close to harvest time. If the crop has a short growing season and does not grow for over 120 days before harvest, the operation cannot use raw manure after planting.

Raw Manure Application Log

_____ uses applies raw manure to the following crops at least two weeks prior to planting or a minimum of 120 days prior to harvest as outlined in its food safety plan.

Raw Manure Applications:

Farm Location: _____

Crop(s): _____

Date applied: _____

Expected Harvest Date: _____

Farm Safety Program Coordinator Initials: _____

Farm Location: _____

Crop(s): _____

Date applied: _____

Expected Harvest Date: _____

Farm Safety Program Coordinator Initials: _____

Farm Location: _____

Crop(s): _____

Date applied: _____

Expected Harvest Date: _____

Farm Safety Program Coordinator Initials: _____

Farm Location: _____

Crop(s): _____

Date applied: _____

Expected Harvest Date: _____

Farm Safety Program Coordinator Initials: _____

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1-16 If a combination of raw and treated manure is used, the treated manure is properly treated, composted, or exposed to reduce the expected levels of pathogens.

10 Points

Verification: Manure treatment records.

D

Manure treatment records are required for the auditor to review whether any composted manure used has been properly treated to reduce the risk of microbial contamination of produce. If no composted manure, or mixture of composted manure is used, this question is not applicable to the operation.

Please see Question 1-19 for example of documentation required for proper manure composting procedures.

1-17 Untreated Manure is properly stored prior to use.

5 Points

Verification: Observation of Premises.

All untreated manure that is stored on the farm must ensure against leaching or runoff into crop production areas. Physical containment is an effective method to reduce cross-contamination with adjacent crop production areas, especially if concrete slabs or clay-lined lagoons are used to also mitigate against leaching. All storage must also be away from irrigation sources, spray dilution or processing water sources. Operations may also need to cover manure storage from rain, as rain can cause unforeseen runoff and may spread pathogens.



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COMPOSTED MANURE

1-18 Only composted manure and/or treated biosolids are used as a soil amendment.

10 Points

Verification: Manure treatment records.

D

Operations treating or composting their own manure should follow a procedure as outlined in their food safety plan. Operations that purchase manure should obtain a specification sheet from the manure supplier for each shipment of manure containing information about the method of treatment and any tests associated with that treatment.

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1-19 Composted manure and/or treated biosolids are properly treated, composted, or exposed to environmental conditions that would lower the expected level of pathogens.

10 Points

Verification: Manure treatment records.

D

Passive versus Active Treatments:

Passive Treatments: Passive treatments rely primarily on the passage of time, in conjunction with environmental factors, such as natural temperature and moisture fluctuations and ultraviolet (UV) irradiation, to reduce pathogens. Holding time for passive treatment varies depending on regional and seasonal climactic factors and on the type and source of manure. It is important to ensure that passively treated manure is sufficiently aged and decomposed before use and the use of a time chart that corresponds with the specific growing area can give indication of this stage.

Active Treatments: Active treatments require a greater level of intentional management and a greater input of resources to achieve treatment results. These treatments include pasteurization, heat drying, anaerobic digestion, alkali stabilization, aerobic digestion, or a combination of these. Composting is the most common form of on-farm manure treatment, which relies on microbial action to digest organic materials, either aerobically or anaerobically. The high temperature used in properly composted manure treatment can kill most pathogens in a number of days and be ready to use in the field. It is required that operations keep documentation of time and temperature charts, process explanations and microbial testing results for active manure treatment methods that they practice on their operation. If active treated manure is purchased, accompany those shipments with similar documentation to ensure that the product is sufficiently free of pathogens for use on produce crops.

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1-20 Composted manure and/or treated biosolids are properly stored and are protected to minimize recontamination.

10 Points

Verification: Observation of Premises.

All manure that is stored on the farm must ensure against leaching or runoff into crop production areas. Physical containment is an effective method to reduce cross-contamination with adjacent crop production areas, especially if concrete slabs or clay-lined lagoons are used to also mitigate against leaching. All storage must also be away from irrigation sources, spray dilution or processing water sources. Operations may also need to cover manure storage from rain, as rain can cause unforeseen runoff and may spread pathogens.

GAP will conduct a site review when manure or biosolid materials are stored at the operation, before application.

1-21 Analysis reports are available for composted manure/treated biosolids.

5 Points

Verification: Manure treatment records.

D

It is required that operations keep documentation of time and temperature charts, process explanations and microbial testing results for active manure treatment methods that they practice on their operation. If treated manure is purchased, accompany those shipments with similar documentation to ensure that the product is sufficiently free of pathogens for use on produce crops.



Good Agricultural/Good Handling Practices Manual

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NO MANURE/BIOSOLIDS USED

1-22 No animal manure or municipal biosolids are used.

35 Points

Verification: Documentation of Procedure.

If no manure (raw or treated) or biosolids are used on the operation, this should be included in the Farm Safety Program.

FARM PROCEDURES

...

Manure and Municipal Biosolids

_____ does not use any manure or municipal biosolids in its operation.

...

NOTE: see the sample Food Safety Program Manual.



Good Agricultural/Good Handling Practices Manual

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SOILS

1-23 Previous land use history indicated that there is a minimum risk of produce contamination.

5 Points

Verification: Land use history.

This question is to determine whether the land was recently used as a CAFO facility or if there is improper use of animal wastes that may continue to contaminate the soil. It is a good idea to have a listing of previous land use history.

PRODUCER PLANTING WORKSHEET #1										#1= ANNE, BR, VAN		
SWEET CHERRIES-PEARS										#2= BING/LAMB RAIN/LAPIN/SWEETHEART		
TOWNSHIP	TRACR	FIELDS	YEAR PLANTED	ACRES PLANTED	ACRES NON-BARE	ACRES PROD	TOTAL ACRES	TOTAL ACRES FARMED	TREE PER ACRE	TREE COUNT BY VARIETY	PLANTING PATTERN	
HIGHLAND	854	MC-LAMBERT	1910	38	11	0	38	38	80	1 IN 9 RAINIER	20X20 PLANTING	
		MC-BARRETT HILL	2002	24	0	0	24	24	80	1 IN 9 BR	REMOVED SPRING 02	
		MO-TRIANGLE	1910	7.1	7.1	0	7.1	7.1	56	1 IN 9 VAN	20X20 PLANTING	
		MC-ANN		18.6	18.6	0	18.6	18.6			30X30 PLANTING	
		R&G BART, ST&GOL BOSCH		87.7	11	0	87.7	98.7				
		TOTAL MC										
		HP-BING	1970	7	0	0	7	7	2	56	1 IN 9 VAN	30FT TRIANGLE
		HP-ANN	1965	11.7	0	0	11.7	11.7	2	56	1 IN 9 VAN&BR	30FR TRIANGLE
		HP-G6 BING	2000	1	0	0	1	1	2	181	1 IN 9 VAN	12X20 PLANTING
		HP-G6 BING	1999	7	0	0	7	7	2	181	1 IN 9 VAN	12X20 PLANTING
		G BART, GOLD BOSCH		12	0	0	12	12				
		TOTAL HOME		38.7	11.2	0	27.5	38.7				
		IRD-BING	1965	18.6	0	0	18.6	18.6	2	56	1 IN 9 VAN	30FR TRIANGLE
		IRD-SKEENA	2002	4.5	0	0	4.5	4.5		NO POLLINIZERS	20 X 20 PLANTING	
		TOTAL IRU		23.1	0	0	23.1	23.1				
		TUCKER-BING	1965	10.3	0	0	10.3	10.3	2	56	1 IN 9 VAN	30FT TRIANGLE
		SIX ACRES	1976	6.7	0	0	6.7	6.7	1	56	1 IN 9 VAN	30 FT TRIANGLE
		40FRED	1978	13.6	0	0	13.6	13.6			REMOVED SPRING 01	
		10FRFH	1970	36.2	0	0	36.2	36.2	1	56	1 IN 9 VAN	30FT TRIANGLE
		GOLD BOSCH		13.1	0	0	13.1	13.1			REMOVED SPRING 01	
		TOTAL SIX,10,13,40		4.5	0	0	4.5	4.5				
				47.4	26.7	0	47.4	74.1				
		TOTAL FOR I		207.2	37.7	15.7	191.5	244.9				
		COP-ANN	1978	5.6	0	0	5.6	5.6	2	56	1 IN 9 VAN	30FT TRIANGLE
		COP-BING	1937/82/0	34.1	0	0	34.1	34.1	2	50	1 IN 9 VAN	60FT SQU INT/PL 192.01
		MAZ-BING	2000	15.3	0	0	15.3	15.3	2	121	1 IN 9 VAN	18X20FT TRIANGLE
		GS-REGINA	2002	1	0	0	1	1	2	251	12X20RAINIER	12X20FT PLANTING
		TOTAL COP-PEARS	2001	.2	0	0	0	0				
				58	0	23.9	34.1	58				
		707 RYAN	1989	14	0	0	14	14	2	50	1 IN 9 RAINIER	25X30 PLANTING
		TOTAL FOR		72	0	23.9	48.1	72				
		1316 AP	1990	69	0	0	69	69	2	56	1 IN 9 VAN	30FT TRIANGLE
		AP-G6	2000	10	0	0	10	10	2	247	1 IN 9 RAINIER	INTER PLT G-6-BING
		G BARTS, GOLD BOSCH	1995	19	9	15	28	28			11X16 FT TRIANGLE	
		TOTAL AP-PEARS		98	9	10	88	107				
		TOTAL ACRES CHERRIES AND PEARS		377.2	46.7	49.6	327.6	423.9				

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1-24 When previous land use history indicates a possibility of contamination, preventative measures have been taken to mitigate the known risks and soils have been tested for contaminants and the land use is commensurate with test results.

10 Points

Verification: Soil Test Results and/or Land use history.

D

If previous land use history indicates that the soil may have a medium to high risk of microbial contamination, steps must be taken to plant crops that carry less contact with the soil, or have the soil tested. This includes previous use as a CAFO facility, building site, waste treatment facility, dumpsite, and/or chemical storage. Include soil test results and if a high risk remains, indicate in the food safety plan the crops that will be planted in those fields that have a high risk of contaminated soil and how long they must remain in high risk under accepted scientific principles.

T SYSTEMS INTERNATIONAL
COMBINED SAP AND QUICKSOIL TEST RESULTS



2537 South Encina Street
 Visalia CA 93277

Contact for sample enquiries:
 Craig Homung

Telephone: 559-392-1700
 Facsimile: 559-626-2402
 e-mail: rblattler@t-tape.com
 Web site:
 Grower:

please advise if details are incorrect

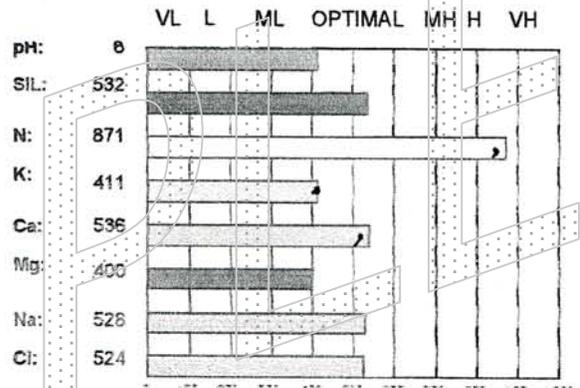
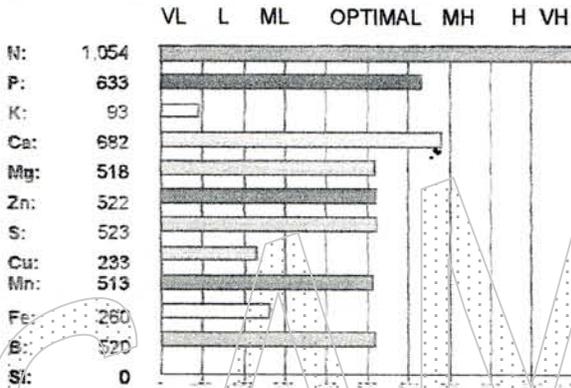
Block: onions
 Recommendation for: Onion

Order no.: 071007

Variety:	YELLOW	Plant vigor:		Water stress:	
Crop stage:	EarlyVegetative	Irrigation type:	Overhead	Water stress type:	
Age:	10 weeks	Soil type:		Preferred application:	
Fruit set:		Soil color:	Black	Sample notes:	
Still setting fruit:		Soil drainage:	Good		

SAP number: 1 Date entered: 10-Jul-2007

Quick soil number: 1 Date entered: 10-Jul-2007



*Results have been converted from mg/kg to a normalised format, allowing all elements to fall within appropriate high/Medium/Low ranges.

Notes:

The next two weeks through the drip or until the next sample is completed.

2 units P2O5/acre/week as solution grade
 5 Units/acre/week K2O as Potassium Sulfate Solution Grade

T.P.A 1-gal IA
Keep 8th IA
Cal-max 1-gal IA

DISCLAIMER:

Results are based on analysis of the sample as received. Because of the variability of sampling procedures, environmental and managerial condit the Company does not accept liability for lack of performance based on these recommendations. Recommendations are made in good faith based on the sample and information received.

1.03.34 IAL
 Integrator IAL011

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1-25 Crop production areas that have been subjected to flooding are tested for potential microbial hazards.

5 Points

Verification: Soil test results.

D

If a crop production area has been flooded, it must be tested prior to planting to evaluate risk of contamination. In the case of flooding, annual crops carry a much higher risk of possibly contamination from flooding than perennial crops that may take several years to produce a harvest. If no flooding has occurred on the operation, this question is not applicable.