

NRCS Conservation Practice Standard: Code 595 ~ Pest Management

IPM Worksheet: Potato

Version: 5/21/08

Soil Nutrient Management and Cultural Practices

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| 1. | Crop rotation is practiced as follows: | |
| | a. Field has not been planted to potatoes for three previous years; | 25 _____ |
| | OR | |
| | b. Field has not been planted to potatoes for two previous years; | 20 _____ |
| | OR | |
| | c. Field has not been planted to potatoes in the previous year. | 15 _____ |
| 2. | Fields have been evaluated with an appropriate soil test for nutrient status and pH for the current year. | 10 _____ |
| | OR | |
| | Fields have been evaluated with an appropriate soil test for nutrient status and pH within two years. | 5 _____ |
| 3. | Soil organic matter status has been tested within three years. | 10 _____ |
| 4. | Fertilizer is applied in accordance with soil test results and expected uptake of nutrients, accounting for additional nitrogen supplied by organic matter, compost and cover crops. Expected nutrient uptake is determined from the <i>New England Vegetable Management Guide</i> . | 15 _____ |
| 5. | A pre-sidedress nitrogen test is used to determine the need for supplemental nitrogen. | 10 _____ |
| 6. | Nitrogen fertilizer is applied by split application. Some is applied through the planter at planting, and some at cultivation or as a side dress. | 10 _____ |
| 7. | This year's crop was preceded by a winter cover crop. | 10 _____ |
| 8. | <i>If the cover crop was a legume or legume/grass mix, its nitrogen contribution is calculated and fertilizer for this year's crop was adjusted accordingly.</i> | 10 _____ |

Total practice points for Soil Nutrient Management and Cultural Practices _____

Total possible points for Soil Nutrient Management and Cultural Practices **90**

Pesticides Application and Records

Only pesticides approved and registered for potato in the state are used. Records of pesticide applications are maintained, including date, field and block, target pest, crop stage pesticide name and EPA number, formulation, rate and number of acres treated. Pesticide drift is minimized. Re-entry and pre-harvest intervals are adhered to. **Win-PST analysis is conducted for all pesticides considered for use on the farm.**

1. Only pesticides with a LOW or VERY LOW environmental hazard (Win-PST) are used all major pests (includes insects, diseases and weeds).	20	
OR		
Only pesticides with a LOW or VERY LOW environmental hazard (Win-PST) are used for at least one major pest.	10	
2. Pesticide application equipment is calibrated at the start of the season and the procedure is recorded.	10	
3. Calibration is checked at least once during the season and equipment is recalibrated as needed.	5	
4. Records of pesticide applications are maintained and organized.	10	
5. Records of planting dates and stage of crop of treated fields are maintained.	5	
6. Water-sensitive spray cards have been used to test the coverage of leaf surfaces in this crop within the past five years, using current pesticide application equipment.	10	
Total practice points for Pesticides Application and Records		60
Total possible points for Pesticides Application and Records		60

Disease Management

Disease incidence can be reduced by selecting well-drained fields, minimizing mechanical injury, avoiding excessive nitrogen and by controlling insect vectors. Diseases include bacterial soft rot & black leg, fusarium dry rot, late blight, early blight, verticillium wilt, fusarium wilt, black dot root rot, Rhizoctonia canker and black scurf, Botrytis vine rot, white mold, nematodes, pink rot, powdery scab, Pythium leak, seed piece decay, silver scurf, common scab and assorted viruses.

1. Certified virus-free seed is planted.	10	
2. Sanitation is practiced by properly disposing of cull piles (burial or composting) and by removing volunteer potato plants.	15	
3. Fungicide application intervals for early blight and late blight are based on potential for disease severity due to weather conditions, crop age and disease incidence in the field or the region.	10	
4. Fields are monitored weekly for diseases including late blight and results are recorded.	15	
5. Diseases are accurately identified by the farmer, consultant or diagnostic laboratory.	10	
Total practice points for Disease Management		60
Total possible points for Disease Management		60

Insect Management

Insect pests include Colorado potato beetle, aphids, potato leafhopper, flea beetle, cutworms, European corn borer and wireworms.

1. Colorado potato beetle (CPB) densities are monitored weekly by scouting at least 25 plants per field.	15	
2. Application of insecticides for CPB corresponds to action thresholds specified in the <i>New England Vegetable Management Guide</i> .	10	

3.	Insecticide resistance management for CPB is practiced as follows:	
	a. Insecticides from the same resistance group are not applied more than once per season.	20 _____
	OR	
	b. Insecticides from the same resistance group are not applied to the same generation of CPB.	10 _____
5.	If systemic insectide (e.g. neonicotinoid group) is used, its use is limited to the following resistance management approach (Maximum 20 pts):	
	a. Whole-field soil-applied systemic application is applied no more than once every two years	10 _____
	OR	
	b. Foliar application is limited to one generation of CPB per season. Foliar application is not made where systemic application was made.	10 _____
	OR	
	c. Soil application is made as a perimeter treatment to outer six rows or twenty feet in non-rotated fields or adjacent to fields previously planted to potato.	10 _____
6.	Non-chemical Colorado potato beetle control methods are employed, such as propane flaming, delayed planting, straw mulch, trench traps or trap crops (15 points)	15 _____
7.	Aphid densities are monitored weekly by examining at least 25 leaves per week. Aphid species are identified and insecticides are selected which will best control the species present. Application of insecticides for aphids corresponds to action thresholds specified in the New England Vegetable Management Guide.	10 _____
8.	Potato leafhopper densities are monitored by examining 50 leaves per week. Application of insecticides for potato leafhopper correspond to action thresholds specified in the New England Vegetable Management Guide.	10 _____
9.	Insecticide for other pests are applied only after field scouting has determined damage or the presence of potentially damaging numbers.	10 _____
	<i>Total practice points for Insect Management</i>	_____
	<i>Total possible points for Insect Management</i>	100

Weed Management

Major weeds are winter annuals, summer annuals, perennial grasses and nutsedge.

1.	This year's fields were scouted for weeds in the previous year, at mid- to late season. Weeds were identified and mapped. This information was used in the current weed management program	10 _____
2.	Weed management includes one or more of the following:	
	a. Herbicide use is supplemented by at least one cultivation or hand weeding;	5 _____
	b. Herbicide rates are reduced through banding of herbicides & cultivation;	10 _____
	c. No herbicides are applied and weeds are controlled through cultivation.	15 _____
	<i>d. Herbicide rates are reduced by delaying application until, or after, crop emergence. Bonus.</i>	5 _____

3.	Weeds in fields, alleys and roadways are prevented from going to seed.	10	_____
4.	Fields are scouted in midseason for weeds. Location and species of uncontrolled weeds are mapped and the information is used in planning for next year.	10	_____
5.	Outbreaks of new or problem weed species are controlled, using chemical or non-chemical means, to prevent spreading or seed production.	10	_____
6.	<i>A trial plot is maintained to test a different weed management technique. The methods and results are recorded. Bonus.</i>	10	_____
<i>Total practice points for Weed Management</i>			_____
<i>Total possible points for Weed Management</i>			55

Education

1.	Manager has a current copy of the <i>New England Vegetable Management Guide</i> .	5	_____
2.	Manager attends one or more state/regional/national Extension vegetable training session during the current year.	5	_____
3.	Manager subscribes to the UMass Extension <i>Vegetable Notes & IPM Message</i> .	5	_____
<i>Total practice points for Education</i>			_____
<i>Total possible points for Education</i>			15

POINT SUMMARY

TOTAL POINTS	_____
TOTAL POSSIBLE POINTS	380
Percentage	%