

**NRCS Conservation Practice Standard: Code 595 ~ Pest Management**

**IPM Worksheet: Cole Crops**

Version: 5/5/08

**Soil Nutrient Management and Cultural Practices**

|   |  |    |           |
|---|--|----|-----------|
| 1.  | Crop rotation is practiced as follows:   |    |           |
|   | a. Field has not been planted to crucifers for three previous years;   | 15 | _____     |
|   | OR   |    |           |
|   | b. Field has not been planted to crucifers for two previous years;   | 10 | _____     |
|   | OR   |    |           |
|   | c. Field has not been planted to crucifers in the previous year.   | 5  | _____     |
| 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 as a side dress.  | 10 | _____     |
| 7.  | This year's crop was preceded by a winter cover crop.  | 10 | _____     |
| 8.  | <i>If the winter 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>  | 5  | _____     |
| 9.  | <i>If compost or manure is applied, its nitrogen contribution is calculated, and fertilizer application is adjusted accordingly.</i>   | 5  | _____     |
| Total practice points for Soil Nutrient Management and Cultural Practices |  |    | _____     |
| Total possible points for Soil Nutrient Management and Cultural Practices |  |    | <b>80</b> |

**Pesticides Application and Records**

Only pesticides approved and registered for cole crops 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 planting dates and stage of crop of treated fields are maintained.  | 5         |  |
| 5. 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  |           |  |
| Total possible points for Pesticides Application and Records  | <b>50</b> |  |

**Disease Management**

*Disease management includes the practice of crop rotation. Preventative fungicides are generally not recommended unless the field has a history of disease or weather conditions are particularly favorable for disease development. Diseases include alternaria leaf spot, black rot, blackleg, clubroot, downy mildew, fusarium yellows, nematodes, sclerotinia white mold, root rot.*

|  |    |  |
|--|----|--|
| 1. Diseases resistant cultivars are planted in fields with a history of specific diseases.   | 5  |  |
| 2. Seed has been disease-indexed and found to be disease-free, or has been hot-water-treated to reduce Alternaria leaf spot, black rot, or blackleg.   | 10 |  |
| 3. <i>If transplants are used, they are grown in-state, using sanitary practices.</i>  | 10 |  |
| 4. <i>If transplants are imported from out of state, they are inspected and used only if free of insects and diseases.</i>   | 5  |  |
| 5. Fields are monitored weekly for disease symptoms and records of scouting results are kept.  | 10 |  |
| 6. If disease problems occur, diseases are accurately identified (using the help of consultants or a diagnostic laboratory if needed).   | 10 |  |
| 7. Fungicides and bactericides are applied only when disease symptoms occur, when weather conditions are particularly favorable for specific disease development, or if a field has a history of disease which can be suppressed by chemical means. Only those pesticides which will suppress the targeted disease are used. | 10 |  |
| 8. Fungicides applications are rotated by active ingredient for resistance management.   | 5  |  |
| 9. <i>If sclerotinia blight (white mold) is present, infected plants are removed from the field to reduce carryover of long-lived sclerotia.</i>   | 10 |  |
| 10. <i>Where clubroot has been observed, soil pH has been raised to 7.2 by regular applications of lime.</i>   | 10 |  |
| 12. Crop residues are promptly incorporated into soil after harvest to speed decomposition and reduce disease inoculum.  | 10 |  |
| 13. Cull piles are not located in near fields.   | 5  |  |

Total practice points for Disease Management  
 Total possible points for Disease Management

75

### Insect Management

Major insect pests: *Cabbage root maggot fly, imported cabbageworm (ICW), diamondback moth, cabbage looper, onion thrips, cabbage aphid, flea beetle.*

- |     |   |    |       |
|-----|---|----|-------|
| 1.  | In spring or fall cole crops, during periods when flies are active and crop is susceptible, the presence of cabbage maggot eggs is determined by weekly sampling at the base of at least 25 plants.       | 10 | _____ |
| 2.  | Insecticide to control cabbage maggot is applied according to thresholds specified in the <i>New England Vegetable Management Guide</i> .   | 10 | _____ |
| 3.  | Insecticide to control cabbage maggot is a banded application targeting the base of the plant.  | 10 | _____ |
| 4.  | Non-chemical means, such as floating row covers, are used to exclude or control cabbage root maggot or flea beetles during periods when the crop is susceptible and pests are active.                     | 10 | _____ |
| 5.  | Imported cabbageworm, diamondback moth, cabbage looper, onion thrips and flea beetles are monitored weekly by sampling at least 25 plants per field. For caterpillars, percent infestation is calculated. | 20 | _____ |
| 6.  | Treatments for caterpillar pests conform to IPM thresholds for the appropriate crop stage as specified in the <i>New England Vegetable Management Guide</i> .   | 10 | _____ |
| 7.  | A selective microbial insecticide is used to conserve beneficial insects.   | 10 | _____ |
| 8.  | <i>If onion thrips are historically a problem, resistant cultivars are planted.</i>   | 10 | _____ |
| 9.  | <i>If multiple applications of foliar insecticide are used, the risk of insecticide resistance is reduced by alternating resistance groups of insecticides.</i>   | 15 | _____ |
| 10. | <i>If flea beetles are a problem, spring and fall crops are planted in separate fields to prevent movement of summer adults into fall crops</i>   | 10 | _____ |

Total practice points for Insect Management  
 Total possible points for Insect Management

70

### Weed Management

Major weeds: *broadleaved weeds, annual grasses, perennial weeds.*

- |    |  |    |       |
|----|--|----|-------|
| 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 | _____ |
| 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 practice.</i> | 10 | _____     |
|    |  |    | _____     |
|    | <i>Total practice points for Weed Management</i>   |    | _____     |
|    | <i>Total possible points for Weed Management</i>   |    | <b>55</b> |

**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 &amp; IPM Message</i> .                              | 5 | _____     |
|    |   |   | _____     |
|    | <i>Total practice points for Education</i>  |   | _____     |
|    | <i>Total possible points for Education</i>  |   | <b>15</b> |

**POINT SUMMARY**

|                              |            |
|------------------------------|------------|
| <b>TOTAL POINTS</b>          | _____      |
| <b>TOTAL POSSIBLE POINTS</b> | <b>345</b> |
| <b>Percentage</b>            | <b>%</b>   |







