



Evaluation Criteria for Grape Production

To be used in conjunction with the Food Alliance Whole Farm/Ranch Evaluation Criteria

Evaluation Criteria

To have grape crops certified by Food Alliance, an operation must score an average of 3.0 out of 4 overall in the areas listed below:

Product Specific Evaluation Criteria for “REDUCING PESTICIDE USE”:

Cultural Practices

Cover Crops
 Adjacent Area Management
 Stock Selection
 Harvest
 Storage

Crop Nutrition

Fertilizer Applications
 Soil pH Levels

Insects/Mites

Black Vine Weevil
 Branch and Twig Borer
 Cottony Maple Scale
 Cutworms and Armyworms

Grape Mealybug
 Grape Phylloxera
 Grasshoppers
 Leafhoppers
 Leafrollers
 Mites
 Thrips
 Yellowjackets
 Other Insect Pests

Diseases/Nematodes

Black Sooty Mold
 Botrytis Bunch Rot
 Crown Gall
 Eutypa Dieback
 Nematodes

Phomopsis Cane & Leaf Spot
 Powdery Mildew
 Virus Diseases
 Other Diseases

Weeds

Vertebrate Pests

Birds
 Deer/Rabbits
 Voles

Additional Practices

(None)

Instructions for Use

1. Production practices are evaluated according to Food Alliance criteria (listed on the following pages of this document) and then ranked in a four-step process from Level 1 to Level 4. Points are only earned for the highest level achieved.
2. Scoring partial points is allowed. Example: Half of the farm is in a four-year crop rotation, a Level 3 practice. You may score 2.5 points, or half the increase between Level 2 and Level 3 as a result.
3. No points are earned for a criterion that is not applicable (N/A) to the operation or region.
4. For producers reviewing this evaluation tool: The scorecard at the end of this document identifies the minimum number of points required to be considered for certification. This is only a guideline for your use and does not guarantee acceptance of your application.
5. Inspectors should make notes on each criterion describing how they arrived at decisions, including means used to verify all specific producer claims. These notes will provide important background, which will be carefully considered in the final certification decision. A section for notes is also included at the end of this document. Please make note of any sections that were not applicable and the reason. Also include any Best Management Practices (BMPs) implemented by the producer that are not listed in this inspection tool.

Name of Farm:

Date of Inspection:

Site Inspector:



Inspection Tool for Grape Production

To be used in conjunction with the Food Alliance Whole Farm/Ranch Inspection Tool

	Point value	Points earned
Cultural Practices		
Cover Crops		
Level 1. Cover crops are not planned or managed other than with regular cultivation and/or herbicide applications.	1	
Level 2. Cover crops are planned to maximize crop productivity and minimize environmental impact. Herbicide use is in response to scouting results and thresholds for weed populations, if available.	2	
Level 3. Cover crops or mulches are planned and maintained to minimize soil erosion, improve equipment traction and water infiltration, suppress weeds, encourage beneficials and optimize soil temperatures. Ground covers that result in increased weed, disease or insect pests are avoided. If herbicides are used, herbicides labeled "Danger" or "Warning" are avoided.	3	
Level 4. Cover crops are planned and maintained as per Level 3. Mulches, if used, are selected and maintained to improve soil microbial activity, organic matter levels and nutrient cycling. Bare soil, if used, is maintained by cultivation and is used only during the growing season.	4	
Notes:		

<p>Adjacent Area Management</p> <p>Level 1. Areas adjacent to the vineyard are not managed.</p> <p>Level 2. Areas adjacent to the vineyard and under the control of the farmer are managed in response to pest problems that are exacerbated by conditions in these areas, e.g., overwintering sites for pests exceeding thresholds are disrupted.</p> <p>Level 3. As per Level 2, and adjacent areas are managed to reduce potential for pest immigration, and pesticide and fertilizer movement off-site.</p> <p>Level 4. As per Level 3, and adjacent areas are planted with hedgerows, windbreaks, or other low-maintenance plantings to encourage specific beneficial organisms.</p> <p>Notes:</p>	<p>1</p> <p>2</p> <p>3</p> <p>4</p>	
<p>Stock Selection</p> <p>Level 1. Planting stock is not certified, and scions used for grafting are not inspected before use.</p> <p>Level 2. Stock is not certified. Scions used for grafting are inspected in the field before leaf fall, and canes with pest problems or diseases are avoided.</p> <p>Level 3. Stock is certified, or scions used for grafting are inspected as per Level 2.</p> <p>Level 4. Stock is certified or meets all requirements for certified stock as determined by field and seed inspection.</p> <p>Notes:</p>	<p>1</p> <p>2</p> <p>3</p> <p>4</p>	

	Point value	Points earned
Crop Nutrition		
Fertilizer Applications		
Level 1. Fertilizers are applied on a regular schedule, without regard to nutrient testing of soil or foliage.	1	
Level 2. Soil and/or leaf tissue or sap tests are performed and fertilizers are applied according to test results. Fertilizers are not applied unless a deficiency or low level of that specific nutrient has been shown to exist by testing or deficiency symptoms.	2	
Level 3. As per Level 2, and fertilizer/nutrient materials and application rates are selected to minimize leaching and runoff. Applications are timed to optimize effectiveness at the lowest possible rates.	3	
Level 4. Fertilizers are applied as per Level 3, and nitrogen is applied in split applications. Soil quality, including organic matter content, is established at planting and maintained at optimum levels to minimize commercial fertilizer needs.	4	
Notes:		
Soil pH Levels		
Level 1. pH levels are not monitored or adjusted.	1	
Level 2. pH is tested regularly. Soil amendments are applied to adjust pH according to test results.	2	
Level 3. pH is monitored and tested as per Level 2. Irrigation water pH is monitored and adjusted according to test results.	3	
Level 4. pH levels are adjusted prior to planting and maintained as per Level 3.	4	
Notes:		

	Point value	Points earned
Insect and Mite Pest Management		
Black Vine Weevil		
Level 1. Labeled pesticides are applied against Black Vine Weevils on a routine basis.	1	
Level 2. Vineyards are scouted for feeding damage (girdled berry or cluster stems) every week or two in June and July, especially around the vineyard edges. Insecticides, if used, are applied in early evening to ground and lower portion of the vine.	2	
Level 3. As per Level 2, and cultural controls are used such as careful cleaning of tools, equipment, plants and soil to remove Black Vine Weevil adults and larvae prior to entering another vineyard; and managing areas adjacent to vineyards to reduce other hosts. Pesticides labeled "Danger" or "Warning" are not used for Black Vine Weevil.	3	
Level 4. As per Level 3, and no chemical pesticides are applied for Black Vine Weevil.	4	
Notes:		
Branch and Twig Borer (Grape Cane Borer)		
Level 1. Labeled pesticides are applied against branch and twig borers on a routine basis.	1	
Level 2. Vineyards are scouted for adult beetles and/or active feeding damage (brown frass and wood dust filled holes in dead vines and old pruning cuts) in spring. Insecticides, if used, are applied in early evening to ground and lower portion of the vine.	2	
Level 3. As per Level 2, and cultural controls are used such as maintaining good overall vine health; pruning out dead or dying parts of vines; and removing prunings and dead wood or brush of any kind from the vineyard and destroying before adults emerge in spring. If prunings are chipped, all residue should be buried prior to adult emergence in spring. Pesticides labeled "Danger" or "Warning" are not used for branch and twig borers.	3	
Level 4. As per Level 3, and no chemical pesticides are applied for branch and twig borers.	4	
Notes:		

<p>Cottony Maple Scale</p>		
<p>Level 1. Labeled pesticides are applied against Cottony Maple Scale on a routine basis.</p>	1	
<p>Level 2. Vineyards are scouted annually for Scales and insecticides are applied only if scales are found on main canes, laterals and trunks (otherwise, infested canes are removed and destroyed at pruning). If insecticides are used for crawlers (immature Scales), degree days and/or visual sampling of infested vines are used to determine timing.</p>	2	
<p>Level 3. As per Level 2, and spot treatments are used whenever possible. Pesticides labeled "Danger" or "Warning" are not used for Cottony Maple Scale.</p>	3	
<p>Level 4. As per Level 3, and no chemical pesticides are applied for Cottony Maple Scale.</p>	4	
<p>Notes:</p>		
<p>Cutworms: Redback Cutworm, Spotted Cutworm</p>		
<p>Level 1. Labeled pesticides are applied against cutworms on a routine basis.</p>	1	
<p>Level 2. Pheromone traps and/or scouting are used for sampling cutworms, armyworms and/or crop damage if vineyard history indicates need. Adjacent weedy areas are scouted for eggs and larvae, and if populations are high, buds are watched carefully as soon as they begin to swell. Insecticides are applied only when feeding damage is over threshold, and cutworm feeding damage has been confirmed (i.e., by detecting cutworms in trash, soil or weed clumps at the base of vines or by observing cutworms feeding at night). Insecticide applications are stopped once shoot growth has reached four inches.</p>	2	
<p>Level 3. As per Level 2, and cultural controls are used such as reducing weed hosts (e.g., broadleaf and grassy weeds) in the vineyard and vineyard edges well before bud swell. Spot treatments are used (e.g., vineyard edges, hot spots within a vineyard) rather than treating an entire vineyard whenever possible. Areas with heavy cutworm damage are noted on a map for reference the following season, and attempts are made to correct conditions leading to high cutworm pressure in those areas. Pesticides labeled "Danger" or "Warning" are not used for cutworms.</p>	3	
<p>Level 4. As per Level 3, and no chemical pesticides are applied for cutworms.</p>	4	
<p>Notes:</p>		

<p>Grape Mealybug</p> <p>Level 1. Labeled insecticides are applied against Grape Mealybug, and/or fungicides are used for Mealybug-caused sooty mold, on a routine basis.</p> <p>Level 2. Vineyards are scouted annually for Grape Mealybug and insecticides are applied only if over threshold or indicated by vineyard history. Insecticides are applied at dormant or delayed dormant, or when crawlers (immature Mealybugs) are present as indicated by degree days and/or visual sampling.</p> <p>Level 3. As per Level 2, and cultural controls are used such as pruning and training to encourage grape clusters to hang free and away from old wood (e.g., spurs positioned horizontally, leaving long spurs); planting cane-pruned or loose-clustered varieties; and managing ants which can spread Mealybugs. Spot treatments are used whenever possible. Pesticides are selected for least toxicity to predators and parasites of Mealybugs. Pesticides labeled "Danger" or "Warning" are not used for Grape Mealybug or ant management</p> <p>Level 4. As per Level 3, and no chemical pesticides are applied for Grape Mealybug or ants.</p> <p>Notes:</p>	<p>1</p> <p>2</p> <p>3</p> <p>4</p>	
<p>Grape Phylloxera</p> <p>Level 1. No management steps are taken for Grape Phylloxera in areas where it is known to occur, and/or fumigants are used.</p> <p>Level 2. Susceptible varieties are scouted annually for Phylloxera, and any new detections are reported to the state department of agriculture.</p> <p>Level 3. As per Level 2, and cultural controls are used such as planting certified insect-free grapevines and tolerant rootstocks; cleaning soil from equipment when moving between vineyards; optimizing fertilization and irrigation; and/or increasing soil organic matter. Pesticides labeled "Danger" or "Warning" are not used for Grape Phylloxera.</p> <p>Level 4. As per Level 3, and susceptible varieties are grafted onto tolerant rootstocks. No chemical fumigants are used for Grape Phylloxera.</p> <p>Notes:</p>	<p>1</p> <p>2</p> <p>3</p> <p>4</p>	

<p>Grasshoppers</p> <p>Level 1. Labeled pesticides are applied as needed for these sporadic pests.</p> <p>Level 2. Pesticides are applied on areas adjacent to the vineyard against the nymphal stages, before they enter the vineyard, and only when necessary and according to all regulations.</p> <p>Level 3. Pesticides applied on adjacent areas as per Level 2 are baits or pesticides labeled "Caution" only.</p> <p>Level 4. Areas adjacent to the vineyard are managed without chemical pesticides to reduce immigration into the vineyard.</p> <p>Notes:</p>	<p>1</p> <p>2</p> <p>3</p> <p>4</p>	
<p>Leafhoppers</p> <p>Level 1. Labeled pesticides are applied against leafhoppers on a routine basis.</p> <p>Level 2. Leafhoppers are monitored by sampling leaves for nymphs or feeding damage or other method, and insecticides are applied only when over threshold.</p> <p>Level 3. As per Level 2, and physical and/or cultural controls are used such as sticky tape to trap adults; removing basal leaves at the peak of first generation nymphs to reduce populations and improve spray penetration; minimizing nitrogen fertilizer to reduce excess vigor. Insecticides, if used, are selected for least toxicity to leafhopper predators and parasites. Pesticides labeled "Danger" or "Warning" are not used for leafhoppers.</p> <p>Level 4. As per Level 3, and no chemical pesticides are applied for leafhoppers.</p> <p>Notes:</p>	<p>1</p> <p>2</p> <p>3</p> <p>4</p>	

<p>Leafrollers: Omnivorous Leafroller, Orange Tortrix</p> <p>Level 1. Labeled pesticides are applied against leafrollers on a routine basis.</p> <p>Level 2. Leafhoppers are monitored by pheromone trapping and sampling clusters for caterpillars or feeding damage, and insecticides are applied only when over threshold.</p> <p>Level 3. As per Level 2, and physical and/or cultural controls are used such as managing weed hosts and destroying old clusters (mummies) while pruning. Insecticides, if used, are selected for least toxicity to leafroller predators and parasites. Pesticides labeled "Danger" or "Warning" are not used for leafrollers.</p> <p>Level 4. As per Level 3, and only biopesticides (e.g., <i>Bt</i>, mating disruption with pheromones) are used. No chemical pesticides are applied for leafrollers.</p> <p>Notes:</p>	<p>1</p> <p>2</p> <p>3</p> <p>4</p>	
<p>Mites: Grape Erineum Mite, McDaniel Mite, Twospotted Spider Mite</p> <p>Level 1. Labeled pesticides are applied against mites on a regular schedule.</p> <p>Level 2. Labeled pesticides are applied against mites only when populations are over threshold as indicated by sampling.</p> <p>Level 3. As per Level 2, and mite predators are also sampled and pesticides are only applied when beneficial organisms are too few to effect pest mite control. Pesticide programs for other pests are selected to minimize impact on mite predators. Water stress, which can exacerbate mite damage, is avoided through timely irrigation, where available. Dust buildup on foliage is reduced through ground cover management and limiting traffic on vineyard drive ways. Pesticides labeled "Danger" or "Warning" are not used for mites.</p> <p>Level 4. As per Level 3, and no chemical pesticides are used for mites.</p> <p>Notes:</p>	<p>1</p> <p>2</p> <p>3</p> <p>4</p>	

<p>Thrips: Grape Thrips, Western Flower Thrips</p> <p>Level 1. Labeled pesticides are applied against thrips on a routine basis.</p> <p>Level 2. Shoots, flower or fruit clusters are monitored for thrips in spring and insecticides are applied only to susceptible varieties after the thrip has been identified as a pest thrip (some species are beneficial) and populations are over threshold or indicated by vineyard history.</p> <p>Level 3. As per Level 2, and spot treatments are used whenever possible. Pesticides labeled "Danger" or "Warning" are not used for thrips.</p> <p>Level 4. As per Level 3, and no chemical pesticides are applied for thrips.</p> <p>Notes:</p>	<p>1</p> <p>2</p> <p>3</p> <p>4</p>	
<p>Yellowjackets</p> <p>Level 1. Labeled pesticides are applied against Yellowjackets on a routine basis.</p> <p>Level 2. Fruit clusters are monitored for feeding damage by Yellowjackets and insecticides are used only when populations are over threshold. Insecticides are used only to treat nests or on baits protected from access by non-targets. Insecticide baits are not used before July 15 to preserve beneficial wasps</p> <p>Level 3. As per Level 2, and physical and cultural controls are used such as trapping and washing down surfaces contaminated with food and/or fruit juice around storages, employee eating facilities, etc. Trapping in these areas is initiated early in the season, before Yellowjacket populations build, and continues through the end of the season. Pesticides labeled "Danger" or "Warning" are not used for Yellowjackets.</p> <p>Level 4. As per Level 3, and no chemical pesticides are applied for Yellowjackets.</p> <p>Notes:</p>	<p>1</p> <p>2</p> <p>3</p> <p>4</p>	

<p>Other Insect Pests</p> <p>Level 1. Labeled pesticides are applied on a regular schedule.</p> <p>Level 2. Labeled pesticides are applied only when pest populations are over threshold as indicated by sampling. Pesticide applications are timed according to degree days, trapping or other monitoring technique.</p> <p>Level 3. As per Level 2, and when present, beneficials are also sampled and pesticides are applied only when beneficials are too few to effect control of the pest. Pesticide programs for other pests are selected to minimize impact on beneficials. Pesticides labeled "Danger" or "Warning" are not used.</p> <p>Level 4. When pests are over threshold, only biopesticides, horticultural oils or soaps, or beneficial organisms are applied. Ground cover in and around the vineyard is managed to maximize beneficial populations.</p> <p>Notes:</p>	<p>1</p> <p>2</p> <p>3</p> <p>4</p>	
	<p>Point value</p>	<p>Points earned</p>
<p>Disease Pest Management</p> <p>Black Sooty Mold</p> <p>Level 1. Labeled fungicides are applied for Black Sooty Mold on a routine basis.</p> <p>Level 2. Fungicides are applied only when Black Sooty Mold levels exceed thresholds.</p> <p>Level 3. As per Level 2, and fungicide applications are necessary, the insect problem creating honeydew and leading to Black Sooty Mold formation is identified and addressed using cultural methods and chemical methods as a last resort. Pesticides labeled "Danger" or "Warning" are not used for Black Sooty Mold or for honeydew creating insects.</p> <p>Level 4. As per Level 3, and no chemical fungicides are applied for Sooty Mold or honeydew creating insects.</p> <p>Notes:</p>	<p>1</p> <p>2</p> <p>3</p> <p>4</p>	

<p>Botrytis Bunch Rot</p> <p>1. Labeled fungicides are applied for Botrytis Bunch Rot on a routine basis.</p> <p>Level 2. Fungicides are applied only to susceptible varieties and when scouting results indicate need or vineyard history and weather conditions favor Botrytis Bunch Rot development. Fungicides, if used, are carefully timed using crop growth stage and weather conditions.</p> <p>Level 3. As per Level 2, and cultural methods are used such as removing east or north-side leaves closest to fruit clusters at shatter (pea-sized berries) leaving south or west-side leaves to prevent sunburn as needed; using an appropriate trellis system allowing light, air and spray material penetration; and minimizing nitrogen fertilizer and irrigation to reduce excessive growth and fruit splitting. Fungicides labeled "Danger" or "Warning" are not used for Botrytis Bunch Rot.</p> <p>Level 4. As per Level 3, and no chemical fungicides are applied for Botrytis Bunch Rot.</p> <p>Notes:</p>	<p>1</p> <p>2</p> <p>3</p> <p>4</p>	
<p>Crown Gall</p> <p>Level 1. Labeled bactericides are applied for Crown Gall on a routine basis.</p> <p>Level 2. Bactericides are applied only to susceptible varieties and when winter injury favors Crown Gall development. Vineyards are scouted for diseased vines, which are removed and destroyed to prevent spread.</p> <p>Level 3. As per Level 2, and cultural methods are used such as planting only disease-free nursery stock; sterilizing pruners between vines; and avoiding injury to the roots, trunks and cordons. Fungicides labeled "Danger" or "Warning" are not used for Crown Gall.</p> <p>Level 4. As per Level 3, and no chemical fungicides are applied for Crown Gall.</p> <p>Notes:</p>	<p>1</p> <p>2</p> <p>3</p> <p>4</p>	

<p>Eutypa Dieback</p> <p>Level 1. Labeled fungicides are applied to pruning cuts for Eutypa on a routine basis.</p> <p>Level 2. Fungicides are applied only to large pruning cuts on vines at least five years old. Vineyards are scouted in early spring to detect and mark diseased vines.</p> <p>Level 3. As per Level 2, and cultural and physical controls are used such as making clean, close pruning cuts to encourage callusing; avoiding pruning during or before wet weather; delaying pruning until vines are completely dormant; minimizing the size and number of pruning cuts through proper training; removing diseased wood (to 4 to 6 inches below the canker); and removing and replacing vines if diseased wood extends below ground level. Fungicides labeled "Danger" or "Warning" are not used for Eutypa.</p> <p>Level 4. As per Level 3, and no chemical fungicides are applied for Eutypa.</p> <p>Notes:</p>	<p>1</p> <p>2</p> <p>3</p> <p>4</p>	
<p>Nematodes: Dagger, Ring and Root-Knot Nematodes</p> <p>Level 1. Pre-plant fumigants are applied to control nematodes on a routine basis.</p> <p>Level 2. Fumigants are applied only when pre-planting soil testing indicates unacceptable levels of nematodes are present. Fumigants labeled "Danger" are not used where less toxic alternatives are available.</p> <p>Level 3. Clean stock is planted on soil that has been tested and found to have below-threshold populations of nematodes. Cultural controls are used such as cleaning machinery and equipment before moving from infected to non-infected vineyards; avoiding cover crops that encourage nematode buildup; managing vineyards and adjacent areas to reduce weed and volunteer hosts; and not using ditch water for irrigation. Pesticides labeled "Danger" or "Warning" are not used for nematodes.</p> <p>Level 4. Clean stock (certified nematode-free if available) is planted and cultural controls are practiced as per Level 3, and no chemical fumigants are applied for nematodes.</p> <p>Notes:</p>	<p>1</p> <p>2</p> <p>3</p> <p>4</p>	

<p>Phomopsis Cane & Leaf Spot</p> <p>Level 1. Labeled fungicides are applied for Phomopsis on a routine basis.</p> <p>Level 2. Fungicides are applied only to susceptible varieties and when vineyard history and weather conditions favor Phomopsis development. Applications are timed according to shoot growth and weather conditions.</p> <p>Level 3. As per Level 2, and cultural methods are used such as scouting vineyards for diseased canes (“bleached out” appearance), which are removed and destroyed during pruning. Fungicides labeled “Danger” or “Warning” are not used for Phomopsis.</p> <p>Level 4. As per Level 3, and no chemical fungicides are applied for Phomopsis.</p> <p>Notes:</p>	<p>1</p> <p>2</p> <p>3</p> <p>4</p>	
<p>Powdery Mildew</p> <p>Level 1. Labeled fungicides are applied for Powdery Mildew on a routine basis.</p> <p>Level 2. Fungicides are applied only to susceptible varieties and when vineyard history and weather conditions favor Powdery Mildew development. Applications are timed according to vine growth and weather conditions.</p> <p>Level 3. As per Level 2, and cultural methods are used such as planting resistant varieties; trellis and training systems to encourage light, air and spray penetration; leaf removal; and minimizing nitrogen fertilization and irrigation to reduce excess growth. Fungicides labeled “Danger” or “Warning” are not used for Powdery Mildew.</p> <p>Level 4. As per Level 3, and no chemical fungicides are applied for Powdery Mildew.</p> <p>Notes:</p>	<p>1</p> <p>2</p> <p>3</p> <p>4</p>	

<p>Virus Diseases: Leafroll and Fanleaf Viruses</p> <p>Level 1. No management steps are taken to prevent virus diseases.</p> <p>Level 2. Plant only virus-free stock. Vineyards are scouted for infected vines, which are immediately destroyed.</p> <p>Level 3. As per Level 2, and cultural controls are used such as planting resistant varieties and managing nematodes.</p> <p>Level 4. As per Level 3, and only varieties that are resistant or tolerant to viruses are used.</p> <p>Notes:</p>	<p>1</p> <p>2</p> <p>3</p> <p>4</p>	
<p>Other Diseases</p> <p>Level 1. Fungicides are applied on regular schedule, transplant treatments are used on a routine basis or no management plan is implemented for the disease.</p> <p>Level 2. Vineyards are scouted to detect disease and permit early corrective action. Chemical pesticides are applied when over threshold, when conditions favor disease development or in areas with a history of the disease. Strategies are employed to delay pest resistance to pesticides.</p> <p>Level 3. As per Level 2, and at least one non-chemical strategy is used such as sanitation. Pesticides are selected to minimize environmental and applicator risk.</p> <p>Level 4. No chemical pesticides are applied for the disease. Resistant varieties, sanitation or other appropriate cultural controls and preventative strategies are used.</p> <p>Notes:</p>	<p>1</p> <p>2</p> <p>3</p> <p>4</p>	

	Point value	Points earned
Weed Pest Management		
<p>Level 1. Herbicides are applied on a regular schedule.</p>	1	
<p>Level 2. Planting is scouted to detect, identify and spot treat weeds early, before they become established. After harvest, irrigation is withheld to induce summer dormancy before treating perennial weeds. Where available, thresholds are used to schedule treatments. Herbicide spray booms are shut off before stopping or turning at the end of the row. Soil-active herbicides, if used, are used with extreme caution and not on shallow, coarse-sandy or gravelly soils. Herbicide usage is minimized 4-6 weeks after planting if good weed control has been established, but late emerging weeds are not allowed to seed.</p>	2	
<p>Level 3. As per Level 2, and weed maps are prepared and updated at least once per season. Weeds are ranked in order of abundance to guide herbicide selection. Herbicides are spot applied whenever possible and supplemented with cultivation and mechanical removal of weeds in planting row when thinning. Herbicides labeled "Danger" or "Warning" are avoided.</p>	3	
<p>Level 4. Weed scouting and mapping is conducted as per Level 3, and cultural, mechanical or biological methods are used to control weeds: soil quality and ground cover in the vineyard and adjoining areas are planned and managed to prevent weeds and weed seed immigration into the vineyard; vineyards are pre-irrigated to stimulate weed emergence, cultivated to destroy weeds and then very minimally cultivated or disturbed; subsurface drip irrigation is used to limit weed seed access to water; and/or grapes are planted using a precision system to allow precise mechanical weed removal. If herbicides are needed, only herbicides labeled "Caution" or less toxic herbicides are used and none that threaten biological control programs.</p>	4	
<p>Notes:</p>		

	Point value	Points earned
Vertebrate Pest Management		
Birds		
Level 1. Bird damage is not monitored.	1	
Level 2. If vineyard has a history of bird damage, birds are managed by hazing or direct removal. Hazing devices (e.g., balloons, noise devices) or barriers (netting) are installed and activated prior to seeding and germination and feeding habits becoming established. Direct removal by trapping is conducted in compliance with all laws.	2	
Level 3. As per Level 2, and a comprehensive bird management plan is developed and implemented, including sampling and assessing economic losses due to bird damage. The costs of bird management actions are proportionate to actual losses.	3	
Level 4. As per Level 3, and habitat is modified around plantings to reduce nesting and perching sites for pest birds. Any new or replacement plantings are designed and varieties selected to minimize bird problems.	4	
Notes:		
Deer and Rabbits		
Level 1. Deer and rabbit damage is not monitored.	1	
Level 2. If vineyard has a history of damage by deer and rabbits, these are managed by barriers, hazing, repellants or direct removal. Hazing devices (e.g., balloons, noise devices), repellants (e.g., soap) or barriers (e.g., netting, fencing) are installed and activated prior to feeding habits becoming established. Direct removal is conducted in compliance with all laws.	2	
Level 3. As per Level 2, and a comprehensive deer and/or management plan is developed and implemented, including sampling and assessing economic losses. The costs of deer and/or rabbit management actions are proportionate to actual losses.	3	
Level 4. As per Level 3, and habitat is modified around plantings to reduce cover or exclude deer and/or rabbits.	4	
Notes:		

<p>Voles</p>		
<p>Level 1. Bait application is made on a regular schedule.</p>	<p>1</p>	
<p>Level 2. Vole damage is monitored and baiting is done only when damage is above threshold.</p>	<p>2</p>	
<p>Level 3. As per Level 2, and baiting is supplemented with alternative methods including encouraging predation and habitat modification.</p>	<p>3</p>	
<p>Level 4. Chemical baits are not used for vole management. If vole damage exceeds thresholds, ground cover is modified to reduce vole habitat and vole predators are encouraged where present.</p>	<p>4</p>	
<p>Notes:</p>		

	Total Possible Points	Your Total Points Earned:
<p>Computing your score:</p> <p>Step 1. Add up your total points earned (maximum of 4 points per Category):</p>	132	_____
<p>Step 2. List Categories which are not appropriate (N/A) for your location, i.e., pests not present in your area, if any. Note: <i>You do not earn points for N/A categories.</i></p>		
<p>1. _____</p>	-4	
<p>2. _____</p>	-4	
<p>3. _____</p>	-4	
<p>4. _____</p>	-4	
<p>5. _____</p>	-4	
	Adjusted Total Possible Points	
<p>Step 2. Compute Adjusted Total Possible Points by subtracting 4 points for each N/A Category from the Total Possible Points:</p>	_____	
<p>Step 3. Convert your Total Points Earned to a percentage (% = Total Points Earned/Adjusted Total Possible Points):</p>	_____ %	
<p>A minimum score of 75% is required to become Food Alliance Certified.</p>		
<p><i>Example: Three categories are not appropriate because those pests are not present.</i></p>		
$ \begin{array}{r} 132 \text{ Total Possible Points} \\ - \quad 12 \text{ (3 N/A categories} \times \text{ 4 points)} \\ = \quad 120 \text{ Adjusted Total Points Possible} \end{array} $		
<p><i>If you earned 90 points, your score is 90/120 = 75%</i></p>		

Notes on special circumstances:

Acknowledgements

These Guidelines were developed from information from the following sources:

An Online Guide to Plant Disease Control. Oregon State University Department of Botany and Plant Pathology. <http://osu.orst.edu/dept/botany/epp/guide/index.html>

Compendium of Grape Diseases. 1988. APS Press, St. Paul, MN. ISBN 0-89054-088-8.

Crop Profile for Wine Grapes in California. 1999. USDA Office of Pest Management Policy & Pesticide Impact Assessment Program. http://cipm.ncsu.edu/CropProfiles/Detail.CFM?FactSheets__RecordID=243.

Northwest Berry & Grape Information Network. Grape Production. Oregon State University, University of Idaho, Washington State University, USDA-ARS. <http://berrygrape.orst.edu/fruitgrowing/grapes/grapeproduction.htm>

Oregon Low Input Viticulture and Enology, Inc. Program. <http://berrygrape.orst.edu/LIVE/index.htm>

Grape Pest Management, Second Edition. 1992. University of California Division of Agriculture and Natural Resources, Oakland CA. ISBN 0-931876-96-6. Portions available at UC Pest Management Guidelines, <http://www.ipm.ucdavis.edu/PMG/selectnewpest.grapes.html>

Pest Management Guide for Grapes in Washington. 1999. Washington State University, Pullman WA. Publication No. EB0762. <http://berrygrape.orst.edu/fruitgrowing/pest/pestguides.htm>

Pest Management Guide for Wine Grapes in Oregon. 2000. Oregon State University, OR. Publication No. EM 8413. <http://berrygrape.orst.edu/fruitgrowing/pest/pestguides.htm>