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**Whole Farm Evaluation Tool**

|  |  |
| --- | --- |
| **Operation Name:**  |  |
| **Address:**  |  |
| **Evaluation Date:**  |  |
| **Evaluator/Inspector:** |  |

**Scoring System**

Compliance with the Food Alliance Whole Farm standard includes the following:

1. Full compliance with all Whole Farm fixed evaluation criteria
2. Average scores of 3.0 (75%) or above in each of the following Whole Farm evaluation areas:
	1. Integrated pest, disease, and weed management, and pesticide risk reduction,
	2. Soil and water conservation,
	3. Safe and fair working conditions, and
	4. Wildlife habitat and biodiversity conservation.

#### Instructions for Use

1. **Scored Criteria**: Using the performances indicators listed in Levels 1-4 of each of the scored evaluation criteria, assign a score for each criterion. Level 1 is worth 1 point; Level 2 is worth 2 points, and so on. Scoring half points is allowed. Example: All Level 2 requirements and half of Level 3 requirements are met. In this instance, a score of 2.5 may be assigned. Fixed Criteria: Indicate whether the operation complies with the requirements of each fixed criterion, and verification method(s) used.
2. **Inspectors**: In the NOTES section at the end of each criterion, include any pertinent additional information which was considered in determining the score. These notes will provide important background that will be carefully considered in the final certification decision. As applicable, please include reference to documents which were reviewed to verify compliance with requirements.
3. **Completion**: At the end of each set of evaluation criteria, complete the scoring table and calculate the final percentage score. Points for non-applicable criteria are not included in the final percentage score.

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Integrated pest, disease and weed management, and pesticide risk reduction

**NOTE**: The term "pest" is used in its inclusive sense to refer to all insects, mites, nematodes, pathogens and weeds that are injurious to crop yield and quality.

Continuing education for IPM

**Level 1:** Manager exhibits little or no knowledge of IPM strategies and tactics. Current operation reflects this knowledge gap with no planning that is based on knowledge of severity or impacts of pests, clear evidence of unnecessary pest outbreaks and may use practices that are risky on and off the operation to ecological services and natural resources.

**Level 2:** Manager relies on general interest publications and/or salesmen to learn about pest management issues. Manager may not be connected to independent sources of knowledge or advice about pest management, but shows evidence of knowledge of prevention, avoidance and biologically-based tactics and the risks associated with IPM practices.

**Level 3:** Manager uses independent, technical information, specific to crop and location and relevant to diverse prevention, avoidance, monitoring, and suppression (PAMS) tactics, ecological service management and pesticide risk reduction. Manager participates in independent education events. Manager can discuss and communicates plans, practices and mitigation approaches. If restricted use pesticides are used on the operation, manager is a licensed private applicator, and meets all continuing education requirements for licensed private applicators.

**Level 4:** As per Level 3, and manager participates in on-site research to develop management or mitigation practices.

**Score:**

**Verification methods and notes:**

Production plan including IPM

**NOTE**: For the purposes of this evaluation criteria, Food Alliance Application Module 9A is recognized as satisfying the requirement for a written IPM plan.

**Level 1:** Manager has no IPM plan, and there is no evidence that PAMS principles, eco-service management or risk reduction are factored into the operation.

**Level 2:** Manager has completed a written IPM plan, but the plan lacks consideration of some or all of the following: pest status, economic impacts, aesthetic injury thresholds, and prevention and avoidance practices. Some monitoring is employed to support decisions and IPM practices reflect pest occurrence.

**Level 3:** Manager has completed a written IPM plan that considers pest status and impacts, and employs prevention, avoidance and biologically-based tactics as appropriate, all in the context of clearly articulated production goals.

**Level 4:** As per Level 3 and manager can show clear evidence that pest risks are exhibiting a downward trend. Where appropriate, IPM practices and their benefits are communicated in the market and value chain.

**Score:**

**Verification methods and notes:**

IPM activities: recordkeeping

**NOTE**: Records are a key element of the inspection process and are the only way inspectors can verify activities in the past.

**Level 1:** All records are kept for all legal requirements for pesticide record keeping are met. [USDA requires, and states enforce, the following records for all applications of restricted use pesticides: name of applicator, date, field location or area, area treated, pesticide name and EPA registration number, total amount applied, and crop.]

**Level 2:** As per Level 1, and records include at least the four of the following additional pieces of information. Check all that apply:

[ ]  Crop growth stage

[ ]  Purpose of the pesticide treatment, i.e., target pest

[ ]  Pest/disease/weed growth stage

[ ]  Pest monitoring Information

[ ]  Pest risk assessment information, e.g. threshold(s), disease risk index, etc.

[ ]  Weather conditions on day of application

[ ]  Accumulated weather data, i.e., growing degree days to determine pest outbreaks

[ ]  Measures of effectiveness of pesticide treatment

[ ]  Calibration records

[ ]  If commercial companies apply pesticides on this operation, those records are requested and maintained on site.

**Level 3:** Records include all from Level 2. Pesticide records are kept for longer than two years. Grower can relate how records are used year-to-year to examine trends and aid management decisions.

**Level 4:** As per Level 3. Grower employs records to devise PAMS strategies that reduce pest risks. Records show decrease over time in pest pressures as a result of PAMS implementation. Records show that pesticide use and/or pesticide risk also decrease over time.

**Score:**

**Verification methods and notes:**

IPM activities: prevention

**Level 1:** Manager makes very limited or no use of pest prevention practices, resulting in high pest risk and reliance on suppression.

**Level 2:** Manager employs multiple prevention practices relevant to crop selection and pest risks.[[1]](#endnote-1)

**Level 3:** As per Level 2. Manager can show that prevention practices are employed in response to pest risks on the operation, and that pest risks have declined because of practices being employed.

**Level 4:** As per Level 3, and manager can show that high-risk suppression practices, particularly pesticide application, are limited or declining. Crops and varieties selected based on relative pest risks.

**Score:**

**Verification methods and notes:**

IPM activities: avoidance

**Level 1:** Very limited or no use of avoidance practices, resulting in high pest risk and reliance on suppression practices.

**Level 2:** Manager uses multiple avoidance practices, guided by their specific crop selection and on-site pest risks.

**Level 3:** As per Level 2. Manager can show that avoidance practices are employed in response to pest risks, and that pest risks have declined as a result of practices being employed.

**Level 4:** As per Level 3, and manager can show that high-risk practices, particularly pesticide application, are limited or declining.

**Score:**

**Verification methods and notes:**

IPM activities: monitoring

**Level 1:** Monitoring and diagnosis of pest risks and weather conditions are minimal or do not occur. Monitoring records are limited or non-existent. There is evidence of significant pest risks.

**Level 2:** Records are maintained for all IPM practices and inputs, but the use of records for past production seasons in decision making is limited.

**Level 3:** Monitoring is scheduled according to pest risks and diagnostics are employed. Manager can describe or demonstrate what decision-support tools are used, and how those tools take into account pest epidemiology, crop susceptibility, weather conditions and other factors that affect risk.

**Level 4:** As per Level 3, and monitoring records are reviewed regularly to adapt and modify IPM practices, particularly prevention and avoidance.

**Score:**

**Verification methods and notes:**

IPM activities: pest suppression

**Level 1:** IPM practices consist mainly of chemical suppression, with limited employment of prevention and avoidance practices that could have reduced or eliminated chemical inputs.

**Level 2:** IPM practices emphasize suppression, particularly chemical, but these are applied in response to pest risks, applied to the minimum area necessary, and using low risk chemicals and risk mitigation practices as necessary.

**Level 3:** IPM practices emphasize prevention and avoidance for severe pests, appropriate cultural, physical and biological control tactics are used, monitoring, diagnostics and decision support tools are employed to determine the need for inputs, and reduced risk pesticides are applied, with appropriate mitigations

**Level 4:** IPM practices emphasize prevention and avoidance for severe pests, appropriate cultural, physical and biological control tactics are used, monitoring, diagnostics and decision support tools are employed to determine the need for inputs, and PAMS strategies are used reduce pest risks in any hot spots that occur. Where available, reduced risk pesticides are applied with appropriate mitigations.

**Score:**

**Verification methods and notes:**

Protection plan

**Level 1:** Manager has not previously developed an IPM plan that includes management of ecological services or management to reduce pesticide risks.

**Level 2:** Manager has completed an IPM plan and has limited management of ecological services and/or management to reduce pesticide risks.

**Level 3:** Manager has completed an IPM plan, manages ecological services and manages to reduce pesticide risks, all in the context of clearly articulated protection goals.

**Level 4:** Manager has completed an IPM plan, manages ecological services and manages to reduce pesticide risks, all in the context of clearly articulated protection goals, with clear evidence that risks are exhibiting a downward trend over time, and that practices and their benefits are communicated in the market and value chain, where appropriate.

**Score:**

**Verification methods and notes:**

IPM program outcomes

**Level 1:** Significant pest risks are apparent and have not been responded to. Pesticides and other suppression tactics are used without first considering alternatives.

**Level 2:** Manager can describe what opportunities for pest risk reduction have been considered and how they have been implemented. Pest risks are apparent, and prevention and avoidance practices limited or ineffective.

**Level 3:** Manager can describe what opportunities for pest risk reduction have been considered and how they have been implemented. Manager can describe or show that pest risks have been reduced. Prevention and avoidance practices and biologically-based approaches are in use.

**Level 4:** As per Level 3, and manager can describe or show how practices are adapted to address sporadic and potential novel or invasive species.

**Score:**

**Verification methods and notes[[2]](#endnote-2):**

Ecological service management outcomes[[3]](#endnote-3)

**Level 1:** Limited or no practices to manage ecological services are apparent.

**Level 2:** Manager can describe what opportunities for ecological service management have been considered and how they have been implemented. Management and conservation practices are limited or ineffective.

**Level 3:** Manager can describe what opportunities for ecological service management have been considered and how they have been implemented. Ecological service management and conservation practices are in use, and manager can describe or show their positive outcomes using monitoring records or other evidence.

**Level 4:** As per Level 3 and manager can describe or show how ecological service management and conservation practices have been adapted to address sporadic pests and potential novel or invasive species, not just severe pests.

**Score:**

**Verification methods and notes[[4]](#endnote-4):**

Risk management outcomes for pesticide risks identified in Module 9A

**Level 1:** Significant risks to health, environment or natural resources are apparent and have not recognized and/or addressed by manager.

**Level 2:** Manager can describe what opportunities for risk reduction have been considered and how they have been implemented. Risks still apparent and elimination or mitigation practices are limited or ineffective.

**Level 3:** Manager can describe what opportunities for risk reduction have been considered and how they have been implemented. Risk management practices are in use, and manager can describe or show their positive outcomes.

**Level 4:** As per Level 3 and manager can describe or show how risk reduction strategies have been adapted to address sporadic and potential novel or invasive species, not just severe pests.

**Score:**

**Verification methods and notes:**

Coordinated whole operation management of pests[[5]](#endnote-5)

**Level 1:** Manager does not use a coordinated whole-operation management approach to identify, verify or respond to current and potential pest, environmental, health and natural resource risks. Risk management is not coordinated geographically or across commodities.

**Level 2:** Manager uses a coordinated whole-operation management approach to identify, verify or respond to current and potential pest, environmental, health and natural resource risks. There is limited coordination of risks responses geographically or across commodities. Risk responses rely primarily on chemical suppression practices.

**Level 3:** Manager uses a coordinated whole-operation management approach to identify, verify and respond to current and potential pest, environmental, health and natural resource risks. Manager uses this information in planning and in real time to respond to risks in a coordinated manner geographically or across commodities.

**Level 4:** As per Level 3 and monitoring of status and trends of key indicators reveals and quantifies benefits of practices.

**Score:**

**Verification methods and notes:**

Hazardous material storage

**Level 1**: Storage facilities for hazardous materials (crop and livestock pesticides, fertilizers, fuel, lubricants) meet legal requirements (where applicable). Hazardous materials are stored in original, clearly labeled containers.

**Level 2:** Storage is at least 150 ft. away from wells and 200 ft. away from surface water or sources of flame. Four or more of the following are applicable. Check all that apply:

[ ]  Empty hazardous material containers are triple-rinsed before return to supplier, disposal in an approved recycling program or licensed landfill.

[ ]  Tank rinsate is sprayed out on labeled crops at labeled rate or less.

[ ]  Storage size and organization is adequate to separate flammables from other materials.

[ ]  Pesticides are organized by insecticides, fungicides, herbicides, fertilizers, etc.

[ ]  Containers are organized to prevent spillage when storing/removing materials.

[ ]  Non-hazardous materials (e.g., seed, livestock feeds) are kept away from hazardous materials.

[ ]  Storage area is clearly marked on the outside with warning signs.

[ ]  Flammables are kept out of direct sunlight.

[ ]  Dry materials are stored above liquids.

[ ]  Storage area is locked, and lock allows free exit from within when locked.

[ ]  Other (please specify):

**Level 3:** As per Level 2, and a current written inventory is maintained and accessible in the event of an emergency. An emergency plan is posted, directing people what to do in case of an emergency. Three or more of the following are applicable. Check all that apply:

[ ]  Storage area has a sealed floor.

[ ]  Storage area is well ventilated (no strong chemical smell).

[ ]  Inventory is managed on a first-in, first-out basis.

[ ]  Operation has a written internal audit process for dealing storage and safety issues associated with hazardous materials.

[ ]  Other (please specify):

**Level 4**: Hazardous wastes are limited due to success in eliminating use of pesticides labeled “Danger” or “Warning” OR, as per Level 3 and storage area is “state of the art” and all the following are applicable. Check all that apply:

[ ]  Storage area is located in a separate facility or building.

[ ]  The storage area is diked/curbed to contain spills.

[ ]  Capacity of the diking system is at least 125% of the largest quantity stored.

[ ]  Shelves are lipped and of an impermeable material.

[ ]  Road access is adequate for delivery and emergency vehicles.

[ ]  Storage area is locked, and lock allows free exit from within when locked.

[ ]  Valves on (large) storage tanks are locked when not in use where other security measures are not in place (if applicable).

[ ]  Storage is downwind (prevailing wind) from nearby housing, play or livestock areas.

**Score:**

**Verification methods and notes:**

Application equipment calibration and pesticide drift management

**Level 1:** Application equipment that can be calibrated (insecticide, fungicide, herbicide growth regulator, fertilizer application equipment, including backpack sprayers) is calibrated less than once per year. Applications are made only with equipment designed for that use. Nozzles are checked and replaced when necessary.

**Level 2:** Check all that apply:

[ ]  Products are mixed according to label directions.

[ ]  Application equipment is calibrated at the start of each season, if designed to be calibrated.

[ ]  Drift reduction strategies are used.

[ ]  Applications are made only under weather conditions that minimize off-site movement (e.g., low wind speed, not raining).

[ ]  Commercial application companies are hired on this operation.

**Level 3:** As per Level 2, and spot applications are used exclusively on this operation. Check all that apply:

[ ]  Spot applications are limited to infested areas.

[ ]  Pressure gauge on applicator is calibrated regularly.

[ ]  Training is provided in proper use of equipment for efficient and effective application.

OR all the following apply:

[ ]  The method of calibration is communicated to the inspector via written calibration records or verbal description. Note: Inspectors must feel confident that the method of calibration is adequate. Provide notation as to calibration methods used.

[ ]  When possible, calibration is adjusted to control amount applied and distribution of application (e.g., air blast sprayer nozzle distribution matches plant canopy size and shape).

[ ]  Buffer areas are established around fields to help reduce drift.

[ ]  Other (please specify):

**Level 4:** As per Level 3, and at least one of the following is applicable. Check all that apply:

[ ]  Application equipment is calibrated more than once per season or uses technology that continuously calibrates.

[ ]  Technology is employed to keep particle size above 150 microns, depending on the type of equipment and pesticide used.

[ ]  Water sensitive paper and spray droplet analysis software is used to avoid drift or over-application.

[ ]  Pesticide application equipment is selected and maintained for site-specific conditions (e.g., hooded sprayers for windy sites).

[ ]  Storage is downwind (prevailing wind) from housing, play or livestock areas.

[ ]  An emergency plan is posted, directing people what to do in case of an emergency.

**Score:**

**Verification methods and notes:**

Scorecard for integrated pest, disease and weed management

|  |  |
| --- | --- |
|  | **SCORE/LEVEL** |
| Continuing education for integrated pest, disease and weed management |  |
| Production plan including IPM  |  |
| IPM activities: pesticide record keeping |  |
| IPM activities: prevention |  |
| IPM activities: avoidance  |  |
| IPM activities: monitoring |  |
| IPM activities: pest suppression |  |
| Protection plan |  |
| IPM program outcomes |  |
| Ecological service management outcomes |  |
| Risk management outcomes for pesticide risks identified in application PSP Module 9A |  |
| Coordinated whole operation management of pests |  |
| Hazardous material storage  |  |
| Application equipment calibration and pesticide drift management |  |
|  |  |
| **(1) TOTAL POINTS EARNED** |  |
|  |  |
| **Total Points Available** | **56** |
| **- Minus Total Points Not Applicable** |  |
| **(2) TOTAL APPLICABLE POINTS** |  |
|  |  |
| **(3) AVERAGE PERCENTAGE SCORE = [(1) / (2)] \* 100** | **%** |

Soil and Water Conservation Evaluation Criteria

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Continuing Education for Soil and Water Conservation

**Level 1:** Manager demonstrates little or no knowledge about soil and water conservation. Current operation reflects this knowledge gap, with no special planning or action considered to prevent soil erosion, conserve water, and protect water quality.

**Level 2:** Manager relies on general interest Ag publications (newspapers and general newsletters, etc.) to learn about soil and water conservation. In the course of the discussion, manager demonstrates a basic understanding of the issue area.

**Level 3:** Manager uses technical, subject matter-specific information sources to aid in soil and water conservation. Farm or ranch manager can discuss these issues and communicates technical knowledge of the following specific soil and water conservation issues. Check all that apply:

[ ]  Erosion prevention strategies

[ ]  Nutrient budgets

[ ]  Innovative irrigation systems and management

[ ]  Soil quality monitoring

[ ]  Precision application of plant nutrients

[ ]  Incorporation of crop residue or compost

[ ]  Cover cropping

[ ]  Conservation tillage

[ ]  Riparian habitat and buffer zones around surface waters

[ ]  Carbon sequestration in agricultural soils

[ ]  Building soil organic matter and soil carbon levels

[ ]  Soil building crop rotations[[6]](#endnote-6)

[ ]  Soil ecology

[ ]  Soil biota

[ ]  Water conservation practices (list practices used):

[ ]  Other (please specify):

**Level 4:** As per Level 3, and manager participates (or has participated in the last 5 years) in either on-farm testing of soil and/or water conservation strategies to evaluate their usefulness, or, participates in a local or regional water quality council or organization. Manager also documents performance of on-farm soil and water conservation practices.

**Score:**

**Verification methods and notes:**

Buffer Strips Around Waterways

**Level 1:** Cultivated areas alongside waterways are currently managed to allow the following to occur less than 25 feet from water’s edge. Check all that apply:

[ ]  There is evidence of sediment or farm effluent reaching watercourses.

[ ]  Riparian and/or wetland areas appear in a degraded state (e.g., eroded, areas of unusually sparse vegetation, hummocky, etc.).

**Level 2:** Cultivated areas alongside waterways have been managed to achieve the following greater than 25 feet from water’s edge. Check all that apply:

[ ]  Sedimentation appears to be contained by the buffer.

[ ]  Stream banks seem stable with no evidence of falling into the watercourse.

**Level 3:** As the slope of the adjoining field increases, the width of the riparian buffer zone is increased to adequately protect the riparian area from erosion and run-off. Riparian buffer zones are sufficiently vegetated to prevent erosion and the movement of agricultural chemicals and sediment from adjoining fields into surface waters. Check all that apply:

[ ]  Grass filter strips have been established and maintained in fields above waterway.

[ ]  The farm is in no-till production.

[ ]  Livestock access to riparian areas is managed.

[ ]  The farm has transitioned into a pasture-based livestock system.

[ ]  Riparian buffer areas are an average of 35-feet or more in width**.**

[ ]  The use of buffers and upland erosion-control measures has resulted in the prevention of the movement of sediment, nutrients, organics and pesticides beyond the edge of the field.

[ ]  Other (please specify):

**Level 4:** As per Level 3, and all the following must apply if applicable. Check all that apply:

[ ]  On slopes of 10 percent or greater, riparian zones are no less than 50 feet wide in any location.

[ ]  Riparian zones and buffer areas are adequately vegetated with a diverse mix of species containing greater than 50 percent of mixed multi-aged, native and non-invasive non-native species.

[ ]  Newly established ground cover plantings include a diverse mix of adapted grasses and forbs native to the site.

[ ]  Ecologically appropriate, trees and shrubs provide a second-story of cover and habitat, especially along stretches of streams or rivers in need of bank stabilization and shade. The use of native species is recommended when available.

[ ]  Once established, practices are managed appropriately and maintained to ensure effectiveness.

**Score:**

**Verification methods and notes:**

Soil Erosion Prevention

**Level 1:** All applicable federal, state and local erosion-related legal requirements are met (if applicable, for e.g., buffer zones, management of highly erodible areas).

**Level 2:** As per Level 1, and soil erosion is monitored regularly.

If signs of erosion are present, they are applicable. Check all that apply:

[ ]  Soil deposits exist at field margins as evidence of erosion.

[ ]  Channels and gullies are present

[ ]  Erosion pedestals are present.

[ ]  Wind scoured areas, blowouts or depositional areas are present.

[ ]  Surface-crusted areas are visible.

[ ]  Damage to seedlings from wind erosion is evident.

[ ]  Bare soil and loss of soil from around plant roots is evident.

[ ]  Other (please specify):

If erosion is present or reported, the manager must employ at least one landscape improvement or cultural practice to score at this level. Check all that apply:

[ ]  Diversion ditches

[ ]  Terracing

[ ]  Contour farming

[ ]  Contour buffer strips

[ ]  Stripcropping

[ ]  Cross wind trap strips or herbaceous wind barriers for wind erosion control

[ ]  Windbreaks/shelterbelts for wind erosion control

[ ]  Farm pond or wetland managed as sediment trap.

[ ]  Livestock managed to reduce or prevent erosion.

[ ]  Other (please specify):

**Level 3:** As per Level 2, and at least two of the following cultural practices are integrated into the cropping or livestock system. Check all that apply:

[ ]  Cover crops or inter-seeding are used.

[ ]  No-till, direct-seed, mulch-till, strip-till or other restricted tillage system is used.

[ ]  Crop residue is retained on field during critical erosion period.

[ ]  Time controlled/intensive rotational grazing system is employed to incorporate plant matter.

[ ]  Mulches are used.

[ ]  Organic matter (e.g., manures, composts) is incorporated into fields.

[ ]  Perennial crops are integrated into the farm/ranch.

[ ]  Long-term crops, like alfalfa, are incorporated into the rotation.

[ ]  A ley crop is included in the rotation.

[ ]  Conservation crop rotation.

[ ]  Other (please specify):

**Level 4:** As per Level 3, and at least four practices are used from Level 3. Signs of erosion (see Level 2) are very minimal or absent. Practices are designed for each filed and there is an evaluation of the effectiveness of implemented practices.

**Score:**

**Verification methods and notes:**

Tillage Selection Practices and Soil Compaction Prevention.

**Level 1:** The possible soil-degrading effects of tillage are rarely considered on the farm. Tillage operations are conducted with minimal concern for soil productivity and compaction.

**Level 2:** The farm considers tillage as a tool to be used judiciously. A tillage system that conserves soil (lessens soil erosion and compaction) and/or improves soil health is used on the farm. The following indicators are observed Check all that apply:

[ ]  Non-inversion tillage methods are selected that result in crop residue left on the soil surface during critical erosion periods (e.g. conservation tillage)

[ ]  Tillage is restricted to specific portions of fields (e.g., strip tillage).

[ ]  Farm activities involving heavy machinery are not performed when soils are wet.

[ ]  Farm traffic is generally controlled (e.g. use of field borders, tractor paths and lanes within fields for machinery).

[ ]  Farm vehicles are operated with improved load distributions.

[ ]  Precision agricultural-guidance systems are used.

[ ]  Cover crops are planted to improve drainage and increase the tilth of the soil.

[ ]  Long-term crops, like alfalfa, are incorporated into the rotation.

[ ]  Manures or compost are added to soils on a regular basis to improve tilth.

[ ]  Conservation cover (permanent vegetative cover) is planted between rows in orchards, vineyards, and other perennial row crops (e.g. caneberries and blueberries).

[ ]  Other (please specify):

**Level 3:** As per Level 2, and evidence of success is seen. Check all that apply:

[ ]  Farm records show gradual increases in soil organic matter.

[ ]  Monitoring records show a decrease in soil compaction.

[ ]  Evidence of erosion is minimal or not present.

[ ]  Soil quality indicators are all positive.

[ ]  Soil tilth appears good.

[ ]  Other (please specify):

**Level 4:** As per Level 3 and the farm manager selects production systems based on any of the following. Check all that apply:

[ ]  Producer is in the process of or has recently converted acreage to perennial crops.

[ ]  The farm is entirely in no-till, direct-seed, or other agricultural production system that uses crop rotations and other strategies to limit inputs.

[ ]  The farm employs pasture or rotational grazing systems for livestock production.

[ ]  Producer evaluates and documents improved efficiency of crop production resulting from adoption of conservation practices.

[ ]  Other (please specify):

**Score:**

**Verification methods and notes:**

Irrigation Systems

Note: Flood irrigation can be managed in perennial systems to increase overall field productivity, without causing erosion (in or below the field) and to maintain good litter distribution.

**Level 1:** An irrigation system is used that appears inefficient and may allow water, nutrients, pesticides and/or soil particles to leave the field.

**Level 2:** An irrigation system using at least one of the following improvements is used. Check all that apply:

[ ]  Fields with furrow irrigation have been laser leveled.

[ ]  Fields with furrow irrigation use gated head pipe.

[ ]  Center pivot systems use drop nozzles.

[ ]  Flood irrigation used only on perennial fields.

[ ]  Sprinkler systems make use of low pressure, micro-sprinklers.

[ ]  Trickle tape is used when appropriate for the crop.

[ ]  Soil moisture sensors are used to monitor moisture.

[ ]  Crop/range modeling is used to predict plant demand.

[ ]  A weather data system is used to estimate crop water use.

[ ]  Other (please specify):

**Level 3:** As per Level 2, and three improvements are checked.

**Level 4:** As per Level 3, and four improvements are checked. Improvements in water use efficiency for the farm are documented.

**Score:**

**Verification methods and notes:**

Irrigation Water Conservation

**Level 1:** Water use or need is not monitored or planned.

**Level 2:** Water use is monitored, and data is recorded OR annual planning for available water is a priority (as applies to regions with seasonal water availability). (Inspectors: describe how water use is monitored in notes.)

**Level 3:** As per Level 2, and at least three of the following irrigation management behaviors are evident. Check all that apply:

[ ]  Irrigation activities are initiated based on soil moisture testing.

[ ]  Water use data is analyzed and interpreted for managers and staff for the purpose of improving water conservation techniques.

[ ]  Irrigation practices consider soil type and infiltration rates.

[ ]  Weather information is factored into the timing of irrigation activities.

[ ]  Crop demand or consumptive use is factored into irrigation activities.

[ ]  Drought resistant varieties are selected.

[ ]  Soil moisture is conserved through reduced tillage and soil organic matter conservation.

[ ]  Crops are produced without irrigation.

[ ]  Mulches and ground covers are used.

[ ]  Manures (animal and/or green) are incorporated into fields and improvement in soil organic matter is detected.

[ ]  Animal watering systems that incorporate on-farm water storage (e.g. ponds) are established and maintained.

[ ]  Water is collected and recycled for other uses.

[ ]  Farmer/rancher participates in a local or regional body responsible for water issues such as over-allocation, groundwater recharge, stream flow, etc.

[ ]  Other (please specify):

**Level 4:** At least fiveitems checked in Level 3.

**Score:**

**Verification methods and notes:**

Nutrient Management

**Level 1:** There is no nutrient management plan in place. Neither soils nor plant tissues are monitored for nutrient levels.

**Level 2:** Fertilizer applications are performed using at least two of the following nutrient management practices. Check all that apply:

[ ]  Plant tissue testing is completed at regular intervals appropriate to the crop.

[ ]  Soil pH is monitored and adjusted to ensure proper nutrient availability and uptake.

[ ]  Soil and/or plant tissue tests are used to determine fertilizer application rates.

[ ]  Fertilizer applications comply with University or Extension crop and region-specific recommendations for rates and timing to minimize leaching and runoff while meeting plant needs.

[ ]  Manager considers soil type, previous crops, expected yields, and manures/composts in fertilizer applications and account for these in nutrient budgets.

[ ]  Split and/or banded applications are used.

[ ]  On-farm composting of animal manures.

[ ]  Organic fertilizers are used (e.g., animal manures, green manures) to meet but not exceed plant needs.

[ ]  Mulching is used to reduce nutrient leaching.

[ ]  If applicable, all state or local nutrient and fertilizer-related regulations are met (e.g., livestock density, manure storage and handling, safety, application equipment operation and calibration).

[ ]  Producer can describe how their operation recycles nutrients, and how their operation balances nutrient inputs with nutrient use.

[ ]  Other (please specify):

**Level 3:** Three practices are used from Level 2. Additionally, a nutrient management plan is in place that includes two of the following: Check all that apply:

[ ]  Procedures for advanced nutrient application techniques designed to reduce waste (e.g., banding, side-dressing rather than broadcasting).

[ ]  Precision agricultural-guidance systems are used.

[ ]  Proper crediting for animal or green manure applications or composts.

[ ]  Includes consideration of fertilizer type for both plant nutrient needs and environmental impact (broadly defined).

[ ]  A procedure to record observations on important indicators of success, like impacts on surface water on-site (e.g., algal blooms, excessive vegetation), etc.

[ ]  One of the following three nutrient requirements is met exclusively with organic, noncommercial sources: nitrogen (N), phosphorous (P), or potassium (K), to meet but not exceed plant needs.

[ ]  Manager is knowledgeable about healthy soils and how livestock interact with them (if livestock are part of the operation).

**Level 4:** Four practices used from Level 2. Additionally, as per Level 3, and the nutrient management plan is written and completed with the assistance of a professional (when available). Important indicators of success are evident. Check all that apply:

[ ]  Crop rotations are planned to maximize conservation and recycling of nutrients.

[ ]  Majority of nutrients provided by on-farm sources.

[ ]  Use of precision fertilizer applications based on multiple samplings per field (with varying application rates per field or block).

[ ]  Advanced soil quality indicators related to nutrient retention and uptake (e.g., organic matter content, soil aggregation) are monitored and improvements documented.

[ ]  Livestock numbers are managed to avoid exceeding the capacity of the land area to handle nutrients in waste. Producer documents nutrient plan calculations.

[ ]  Farmer or rancher participates in education, cost-share and/or demonstration programs related to nutrient management planning.

[ ]  Manger maintains records to demonstrate continuous improvement in nutrient management.

**Score:**

**Verification methods and notes:**

Soil Organic Matter Management

**Level 1:** Soil organic matter is not monitored. Inorganic fertilizers supply the majority of plant nutrients. Fertilizers may be applied without regard to soil testing or crop monitoring.

**Level 2:** Soil organic matter is considered a factor in soil management. Of the following practices shown to increase soil organic matter content, manager employs at least one. Check all that apply:

[ ]  No-till, direct-seed, strip-till, or other restricted tillage practice.

[ ]  Planting of seasonal cover crops that produce high volumes of organic material or root mass.

[ ]  Conservation cover (permanent vegetative cover) is planted between rows in orchards, vineyards, and other perennial row crops (e.g. caneberries and blueberries).

[ ]  Use of mulches (natural or synthetic).

[ ]  Regular additions of organic matter (e.g., animal manures, green manures, composts).

[ ]  Strip cropping with annuals and perennials.

[ ]  Using the least oxidizing inorganic fertilizers (e.g., ammonium nitrate versus anhydrous ammonia).

[ ]  Integration of perennial crops (e.g., orchards, vineyards, berries).

[ ]  Banding or split applications of fertilizers.

[ ]  Precision agricultural-guidance systems are used.

[ ]  Other (please specify):

**Level 3:** As per Level 2, soil organic matter management is a priority with at least two practices used from Level 2. One must be use of cover crops or no-till practices. Changes in soil organic matter resulting from implemented practices are documented.

**Level 4:** As per Level 3, and managers have eliminated use of inorganic fertilizers due to the successful implementation of soil quality and soil fertility management activities. Soil tests must be taken annually and include organic matter content to score at this level. Manager has developed and documented a plan for improvement on each individual field.

**Score:**

**Verification methods and notes:**

Scorecard for soil and water conservation

|  |  |
| --- | --- |
|  | **SCORE/LEVEL** |
| Continuing education for Soil and Water Conservation |  |
| Buffer Strips Around Waterways  |  |
| Soil Erosion Prevention |  |
| Tillage Selection Practices and Soil Compaction Prevention |  |
| Irrigation Systems |  |
| Irrigation Water Conservation  |  |
| Nutrient Management |  |
| Soil Organic Matter Management |  |
|  |  |
| **(1) TOTAL POINTS EARNED** |  |
|  |  |
| **Total Points Available** | **32** |
| **- Minus Total Points Not Applicable** |  |
| **(2) TOTAL APPLICABLE POINTS** |  |
|  |  |
| **(3) AVERAGE PERCENTAGE SCORE = [(1) / (2)] \* 100** | **%** |

Wildlife Habitat and Biodiversity Conservation Evaluation Criteria

**Note:** These criteria describe general approaches to farm biodiversity management. Practices listed are intended to serve as indicators of management approach, intent and desired outcomes. Conservation activities will be more obvious when actually on-site. Provide notation of viewed activities.

Continuing Education for Biodiversity Conservation

**Note:** The intent of this section is to raise awareness with operators, looking at the farm owner as a land steward. Fallow times and range-based livestock management both create opportunities to provide habitat.

**Level 1:** Producer/manager demonstrates little or no knowledge about wildlife habitat or threatened/endangered species conservation. Current operation reflects this knowledge gap, with no special planning or action considered to prevent agricultural activities from interfering with natural areas (if present).

**Level 2:** Producer/manager relies on general interest Ag publications (newspapers and general newsletters, etc.) to learn about wildlife and habitat issues. In the course of the certification process, producer/manager demonstrates a basic understanding of the issue area. Check one of the following:

[ ]  There are no natural areas on the farm. Producer/manager may use general interest informational materials to learn about natural pest control, establishment of insectary plants, predatory bird nesting sites, etc.

[ ]  Natural areas exist on farm. Actions are limited to preventing agricultural activities from interfering with natural areas.

**Level 3:** Producer/manager uses technical, subject matter-specific information sources or participates in seminars for habitat management, ID of habitat types or native vegetation, fish or wildlife management, etc. When natural areas exist on farm or ranch, producer/manager can discuss wildlife and habitat issues and communicates knowledge of. Check all that apply:

[ ]  General habitat management

[ ]  Native plants

[ ]  Native animals

[ ]  Invasive or exotic plants and animal

[ ]  Sensitive, priority habitat

[ ]  Endangered or at-risk species

[ ]  Migratory species

[ ]  Riparian habitat

[ ]  Aquatic ecosystems

[ ]  Other (please specify):

**Level 4:** Producer/manager participates (or has participated in the last 5 years) in on-farm testing of new wildlife habitat conservation strategies or concepts to evaluate their performance.

**Score:**

**Verification methods and notes:**

Farm Biodiversity Plan

**Level 1:** Producer/manager has not developed a farm biodiversity plan.

**Level 2:** Producer/manager has completed sections I of the farm plan template, mapping and describing existing biodiversity features and problem areas) OR has a document containing similar information, such as an NRCS conservation plan.

**Level 3:** Producer/manager has completed sections I and II A and B of the farm biodiversity plan template, and one of the following applies. Check one:

[ ]  Using sections III and IV of the farm biodiversity plan template, producer/manager has identified at least 2 biodiversity threats and at least 2 biodiversity opportunities, and management actions to address them.

[ ]  Producer/manager has a similar document in place, such as an NRCS conservation plan, that identifies threatened and endangered species, invasive species, and biodiversity threats and opportunities, and management actions to address them.

**Level 4:** As per Level 3, and one of the following applies. Check one:

[ ]  Producer/manager has completed all of sections II, III, and IV of the farm biodiversity plan template, and can describe how the farm plan is used to meet other Food Alliance biodiversity criteria.

[ ]  Producer/manager has a similar document in place, such as an NRCS conservation plan, that addresses the same issues as the farm biodiversity plan template and can describe how the farm plan is used to meet other Food Alliance biodiversity criteria.

**Score:**

**Verification methods and notes:**

Reducing On-Farm Threats to Wildlife

**Level 1:** Producer/manager communicates little or no knowledge about wildlife on/around the farm, and no steps are taken to reduce on-farm threats to wildlife.

**Level 2:** Producer/manager can identify on-farm threats to wildlife in the farm biodiversity plan but has not taken significant steps to reduce threats.

**Level 3:** On-farm threats to wildlife and biodiversity are identified in the farm biodiversity plan. The producer/manager has completed one action identified in the farm biodiversity plan to minimize threats to biodiversity and can describe how the action addresses the threat. Check all that apply:

[ ]  If watering facilities (tanks, troughs, etc.) are present, these provide safe access and escape for wildlife and are free of hazards for aerial wildlife.

[ ]  Management ensures that water resources on the farm are protected from contamination by farm operations.

[ ]  Fencing is constructed around individual fields rather than surrounding the entire farm.

[ ]  Grain harvest is delayed (as appropriate) to provide cover for hatching of ground nesting birds.

[ ]  Fences are constructed with considerations for wildlife species and their movements. For example, fences may use smooth wire rather than barbed or woven wire if this meets farm needs or be constructed to allow smaller wildlife to go under the barrier. Pasture fences may also be designed to allow large wildlife to pass through by spacing the top two wires at least 12 inches apart.

[ ]  In pastures, hay fields, or natural areas, all grasses are left unmowed during migration or reproductive times. Spring mowing is delayed as needed to allow ground-nesting species to nest, reproduce, and grow.

[ ]  Grazing takes into account habitat needs including reproduction and migration of priority species and other wildlife. The time intervals between grazing may be increased to accommodate native wildlife species.

[ ]  Vehicle traffic and activities around natural areas are limited during migration and reproductive times and/or when wildlife is present, or traffic is completely restricted from natural areas.

[ ]  Producer/manager limits other disturbances to wildlife, especially during sensitive stages of species’ life cycles (reproductive and rearing) and migratory activity.

[ ]  Mowing equipment has a flushing bar installed to flush birds and other wildlife and prevent mortality.

[ ]  Producer/manager uses benign practices whenever possible to protect crops or livestock from wildlife damage. For example, ranchers may use guard animals, fencing, and/or fladry to discourage native predators. Non-predatory wildlife are allowed to co-exist with livestock except where shared diseases are a concern.

[ ]  Priority species, including keystone species such as prairie dogs and beavers that provide habitat for wildlife, are not harmed.

[ ]  Other (as specified in farm biodiversity plan):

**Level 4:** As per level 3, and two or more practices identified in the farm biodiversity plan have been implemented.

**Score:**

**Verification methods and notes:**

Biodiversity conservation in cropped or grazed areas

**Level 1:** The farm or ranch has made no apparent improvements related to biodiversity conservation in cropped/grazed areas. Hedges, live trees, dead snags, and other natural habitat elements have been removed without first exhausting other alternatives. Producer/manager has not considered options for increasing in-field/crop diversity.

**Level 2:** Producer/manager has identified opportunities for biodiversity conservation in cropped or grazed areas in the farm biodiversity plan but has not made improvements.

**Level 3:** Opportunities to improve biodiversity in cropped/grazed areas are identified in the farm biodiversity plan, and the producer/manager has begun to make improvements. At least one high-impact improvement or at least two low-impact improvements have been implemented. Check all that apply:

**Low impact improvements**

Check all that apply:

[ ]  Pollinator and natural enemy insectary plants are grown in and around fields to increase organic matter and provide cover and habitat for beneficial insects and other wildlife.

[ ]  Structures are created to meet specific needs of native species, including beneficial. For example, bird perches are created on field edges to encourage predatory birds; owl or bat boxes are constructed to establish predator populations; wooden blocks or bundles of stems or straws support native tunnel-nesting bees.

[ ]  Structures such as barns and sheds are managed provide habitat for native birds and bats.

[ ]  Native plants, especially pollinator-friendly plantings, are used to landscape around buildings.

[ ]  Growing a variety of crops in annual systems or intercropping in perennial systems brings diversity to the farm and benefits soil microorganisms.

[ ]  Rangeland and pastures are well managed and overgrazing is prevented. The frequency, intensity, and timing of livestock grazing are managed to minimize negative impacts to soil, vegetation, and ecosystem health.

[ ]  Trees, especially large live or dead trees, are left in place in and around fields for predatory birds and other wildlife.

[ ]  Beetle banks are established.

[ ]  Ditch clearing is alternated from side to side, each year.

[ ]  Crop residue/stubble is left standing to provide cover or food for wildlife.

[ ]  A small portion of the crop is left unharvested for wildlife.

[ ]  Other (please specify):

**High impact improvements**

Check all that apply:

[ ]  Fields are left fallow for a year or more to provide wildlife habitat.

[ ]  Fallow fields, pastures, or crop stubble are flooded, if appropriate, to provide habitat for waterfowl and shorebirds.

[ ]  Fallow fields are left with plant cover to provide food, water, and/or cover; this includes cover crops, or crop residue left on soil surface. Cover crops, especially winter covers, can displace invasive weeds, increase soil organic matter, provide temporary wildlife habitat, and control erosion control.

[ ]  Field rotations include a fallow period specifically designed for wildlife habitat.

[ ]  Producer/manager makes arrangements to supply water to farm ponds, rice paddies, etc. as needed.

[ ]  Trampled or eroded areas are restored with native perennial grasses and forbs for the benefit of wildlife as well as livestock.

[ ]  Multiple grasses and forbs comprise the pastures and rangelands.

[ ]  Pastures or agro forestry enterprises are established for the dual benefit of crop/livestock production and wildlife habitat.

[ ]  Other (please specify):

**Level 4:** As per Level 3, and at least two high-impact or at least four low-impact improvements have been implemented.

**Score:**

**Verification methods and notes:**

Biodiversity conservation in natural or unused areas

**Note**: N/A given only if a) no natural areas exist on the farm/ranch; AND b) farm achieves at least a level 3 under the “Linking individual wildlife habitat conservation activities together” criterion.

N/A: No natural areas exist on the farm.

**Level 1:** The farm or ranch has unused areas that are not used for crop production, grazing, or other farm activities, but these are kept bare or are dominated by invasive species. Threats to wildlife and opportunities for biodiversity conservation are not taken into account in managing unused areas.

**Level 2:** Invasive species are kept out of unused areas. Some areas, including fencerows, hedgerows, and center-pivot corners, are left uncropped/ungrazed and include perennial ground cover.

**Level 3:** Opportunities to improve biodiversity in natural or unused areas are identified in the farm biodiversity plan. At least one improvement identified in the biodiversity plan has been implemented. Check all that apply:

[ ]  Native vegetation is established in unused areas (e.g., fencerows, windbreaks, field margins, center-pivot corners, riparian buffers) or natural areas are left intact and not converted to production.

[ ]  Plantings of native species in unused areas include a diversity of grasses and forbs, including flowering species that benefit native pollinators.

[ ]  Landowner participates in a Farm Bill incentive program, including CRP, WHIP, or EQIP. [Credit is given only if these areas are managed specifically for wildlife habitat.]

[ ]  Areas of remnant or high-priority habitat (e.g., native prairie, prairie pothole or other wetland) are left intact and not converted to production.

[ ]  Natural processes such as fire and flood are allowed to operate in natural areas when possible.

[ ]  Riparian buffers, windbreaks, and other larger set-aside areas where trees and shrubs are appropriate maintain good canopy cover (>50%) of mixed multi-aged, native species. Newly established plantings have a ground cover including a mix of native grasses and shrubs with a second-story of cover and habitat, especially along stretches of streams or rivers in need of bank stabilization.

[ ]  A conservation easement or other long-term agreement protects the conservation values on the land.

[ ]  Where possible, areas of native vegetation on-farm are linked with surrounding natural areas to provide habitat connectivity. Cooperating with surrounding landowners can help create a larger landscape that allows for movement of wildlife.

[ ]  Areas of native vegetation are increased in size over time to benefit a greater number and diversity of species.

[ ]  Natural areas are managed to benefit the specific needs of threatened or endangered species that occur locally.

[ ]  Other (please specify):

**Level 4:** Opportunities to improve biodiversity in natural or unused areas are identified in the farm biodiversity plan. Producer/manager consults with experts to ensure that plantings are site-appropriate, given the context of the larger ecosystem (e.g., shrubs and trees are not established on a grassland site). At least two improvements from Level 3 have been implemented.

**Score:**

**Verification methods and notes:**

Invasive species prevention and management

**Level 1:** Present or potential invasive species are not identified in the farm biodiversity plan. Producer/manager neither prevents establishment of invasive species nor systematically controls invasive species. Producer/manager is not informed about the issue. Check all that apply:

[ ]  Producer/manager deals with crop production problems stemming from invasive species as they are encountered and/or as time permits.

[ ]  Producer/manager has no plan, or systematic inventory of invasive species problems.

[ ]  Producer/manager communicates no knowledge of invasive species or how to identify them.

[ ]  Farm records do not refer to invasive species and are not used for improvement of invasive species problems.

[ ]  Operation currently produces invasive species.

[ ]  Other (please specify):

**Level 2:** Present or potential invasive species are identified in the farm biodiversity plan, and producer/manager has the ability to identify or describe most common species Check all that apply:

[ ]  Control of invasive species involves limited prevention strategies.

[ ]  Producer/manager performs rudimentary planning for invasive species control, with some inventory of existing problems.

[ ]  Inventory of problem extends beyond the production system and into habitat areas.

[ ]  Producer/manager communicates some knowledge of species life history and vulnerabilities in order to increase treatment effectiveness.

[ ]  Other (please specify):

**Level 3:** As per Level 2, and actively prevents introduction and spread of invasive species by implementing policy/protocols in farm biodiversity plan. At least one of the following is applicable. Check all that apply:

[ ]  Producer/manager establishes a policy or protocol designed to prevent establishment not just control of invasive species as problems arise.

[ ]  Producer/manager only uses certified seed and composts to prevent weed seeds from coming onto farm.

[ ]  Steps are taken to eradicate invasive species in natural areas while not harming the habitat and populations of natural species.

[ ]  Producer/manager communicates solid knowledge base of invasive species in the area and demonstrates the ability to identify, with some life history knowledge.

[ ]  Producer/manager keeps control records to improve control program.

[ ]  Producer/manager seeks additional knowledge to assist with control program effectiveness.

[ ]  Other (please specify):

**Level 4:** As per Level 3, and producer/manager has an advanced understanding of IPM principles and application, including bio-control, and implements policy/protocols in the farm biodiversity plan to prevent the introduction and spread of invasive species. Check all that apply:

[ ]  Producer/manager has systematic inventory and stated thresholds that trigger control action.

[ ]  Invasive species are a high priority in overall operation as reflected in farm plans and records.

[ ]  Producer/manager has advanced knowledge of life cycles and control is performed at most effective time.

[ ]  With noxious weeds, producer/manager has planned revegetation with desirable plants to gain control of site.

[ ]  Producer/manager uses predators of invasive species and other bio-control methods.

[ ]  Producer/manager keeps comprehensive records and evaluates program each year for effectiveness.

[ ]  Land clearly shows results of this comprehensive invasive species management program.

[ ]  Producer/manager works with state/federal agencies (e.g. Dept. of Natural Resources, Dept of Agriculture) to develop and implement control plans.

[ ]  Producer/manager discusses problems with neighbors to increase effectiveness of the control effort.

[ ]  Producer/manager actively tries to coordinate with neighbors in control efforts that have an impact on the wider general area.

[ ]  Other (please specify):

**Score:**

**Verification methods and notes:**

Linking individual wildlife habitat conservation activities together

**Note:** Government projects are included in this criterion.

**Level 1:** Producer/manager is not involved with other landowners **or** state/federal agencies to link individual on-farm actions to larger landscape activities.

**Level 2:** Producer/manager participates in watershed councils, soil and water districts, or other landscape activities promoted by state agencies, farming organizations, non-profits, or similar groups.

**Level 3:** Producer/manager has made on-farm habitat improvements in concert with nearby landowners, **or** on their own to create large and/or connected patches of habitat, **or** has participated or invested in off-farm habitat improvements.

**Level 4:** Producer/manager has made on-farm habitat improvements or participated or invested in off-farm habitat improvements as a part of a regional plan that includes other landowners. Check all that apply:

[ ]  Watershed council plan

[ ]  Eco-regional plan (such as those created by groups like The Nature Conservancy, etc.)

[ ]  Coordinated resource management plans

[ ]  Soil and water district plans

[ ]  Statewide habitat/biodiversity plans

[ ]  Other (please specify):

**Score:**

**Verification methods and notes:**

Scorecard for Wildlife Habitat Conservation

|  |  |
| --- | --- |
|  | **SCORE/LEVEL** |
| Continuing education for wildlife habitat conservation |  |
| Farm biodiversity plan |  |
| Reducing on-farm threats to wildlife |  |
| Biodiversity conservation in cropped or grazed areas |  |
| Biodiversity conservation in uncropped or natural areas |  |
| Invasive species prevention and management |  |
| Linking individual wildlife habitat conservation activities together |  |
|  |  |
| **(1) TOTAL POINTS EARNED** |  |
|  |  |
| **Total Points Available** | **28** |
| **- Minus Total Points Not Applicable** |  |
| **(2) TOTAL APPLICABLE POINTS** |  |
|  |  |
| **(3) AVERAGE PERCENTAGE SCORE = [(1) / (2)] \* 100** | **%** |

Safe and Fair Working Conditions Evaluation Criteria

**Note:** For operators who used the Food Alliance Employee Manual Template: the template was provided by Food Alliance as a service to producers seeking Food Alliance certification and is not intended to be a legal document. Every effort was made to include language that conforms to Food Alliance certification criteria for the following criteria, when all bracketed items are replaced with relevant information. However, fulfillment of said criteria is subject to verification by the site inspector and certification process.

**Note:** Food Alliance intends to implement a qualification necessitating written employee policies dependent on the number of employees.

Minors, children and family members in the workplace

**Level 1:** Employer complies with laws regarding employment of minors. Check if applicable:

[ ]  Employer has no policy or procedure regulating non-employees access to the workplace.

**Level 2:** Employer has a written policy designed to keep ALL non-employees out of the workplace. The policy exempts family members, however it states that children of the farm family (under age of 12) must be supervised when around the workplace area and in fields.

**Level 3:** As per Level 2, and at least one of the following items dealing with family and/or minors under employ. Check all that apply:

[ ]  Employer only employs legal minors during non-school hours.

[ ]  Employer has special training for minors and/or farm family’s children (see 4-H guidelines for child safety on farms).

[ ]  Employer communicates with parents of minors regarding the employment of their children.

[ ]  Employer provides childcare for employees’ children.

[ ]  Trains supervisors on the special management needs of minors.

[ ]  Other (please specify):

**Note**: If the operation does not employ minors, that can be an item for ‘Other’.

**Level 4:** As per Level 3, and two items checked.

**Score:**

**Verification methods and notes:**

Grievance procedures and policies

**Level 1:** Management has no policy and makes no suggestions to employees that they may raise grievances.

**Level 2:** A management policy exists that allows/encourages employees to raise concerns, safety issues, or grievances without fear of termination. Check all that apply:

[ ]  The policy is verbally communicated to employees either at the time of hire implementation.

[ ]  Employees are directed to a designated individual with whom to raise concerns/grievances.

[ ]  If needed, employer can speak with employee in native language, or someone on staff is available to translate.

**Level 3:** As per Level 2, and the policies are communicated in writing. The following are required. Check all that apply:

[ ]  The policy is accompanied by a set of procedures that describes how grievances or concerns will be handled.

[ ]  Employees are given the name of the person with whom to file the grievance.

**Level 4:** As per Level 3, and the employer takes steps to encourage and get feedback regularly from employees. Employer schedules meetings to communicate with employees about their concerns or has an open-door policy in writing.

**Score:**

**Verification methods and notes:**

Recognizing and supporting employee input for workplace improvement.

**Note:** Inspectors can give half points here if employer is encouraging employee input, but the policy is not necessarily in writing. Provide notation.

**Level 1:** Employer or managers discourage employees from forming groups or discussing issues.

**Level 2:** Employer or managers verbally encourage employees to discuss work place issues and develop ideas for improving the workplace.

**Level 3:** As per Level 2, and employer or manager has a policy in writing encouraging employees to develop ideas for improving the workplace.

**Level 4:** As per Level 3, and the operator supports group activities with space for meeting and/or time set aside during the workday for meetings.

**Score:**

**Verification methods and notes:**

Farm Worker Support Services

**Level 1:** When approached by employees or third-party representatives, employer is not receptive. Employer communicates this un-receptiveness to the inspector.

**Level 2:** Employer works with groups of employees or third-party representatives (any person representing a group or organization dedicated to welfare, safety, labor unions, legal services, etc) to improve workplace conditions. Check all that apply:

[ ]  Employer meets with union representatives when asked by the employees.

[ ]  Employer meets with community groups to discuss health and welfare.

[ ]  Employer cooperates with groups to build workplace productivity.

[ ]  Employer cooperates with groups to ID training needs.

[ ]  Employer cooperates with groups to ID safety concerns.

[ ]  Employer has addressed the recommendations of third party representatives.

[ ]  Other (please specify):

**Level 3:** Employer has a written policy communicating openness to working with third party representatives and/or groups of employees.

**Level 4:** As per Level 3, and the policy describes a timeline or process for responding to recommendations made by third party representatives.

**Score:**

**Verification methods and notes:**

Discipline process

**Level 1:** There is no policy or procedure in place requiring a uniform disciplinary process that maps out the steps that may lead to termination. When terminations occur, it involves no process of coaching to improve performance.

**Level 2:** There is a written policy in place but is not distributed to managers. Firing may take place at the will and by the terms of the manager.

**Level 3:** As per Level 2, and written policy is distributed to new hires and given to all managers. Firing of an employee comes at the end of a stepped, progressive discipline process.

**Level 4:** As per Level 3, and all managers are trained to implement policy uniformly. The policy must describe a process to improve performance problems.

**Score:**

**Verification methods and notes:**

Nondiscrimination policy

**Level 1:** Employer has no written policy claiming non-discrimination practices consistent with the law are in effect.

**Level 2:** Employer has a written policy describing non-discrimination practices consistent with the law. The following items are discussed. Check all that apply:

[ ]  Age

[ ]  Race

[ ]  Third party affiliation

[ ]  Religion

[ ]  Gender

[ ]  Sexual orientation

[ ]  National origin

[ ]  Disability

[ ]  Other (please specify):

**Level 3:** As per Level 2, and employer provides training for managers for implementing non-discrimination policy.

**Note:** If an owner is also the manager, his/her own training applies here.

**Level 4:** As per Level 3, and employer extends training to employees.

**Score:**

**Verification methods and notes:**

Hiring practices and communicating expectations and policies

**Level 1:** Employer does not communicate with employees about job expectations or workplace policies.

**Level 2:** Employer verbally communicates job expectations and policies at the time of hire.

**Level 3:** Employer gives new hires a workplace policies document. Check all that apply:

[ ]  This written document is in both English and applicable language for non-English speakers.

[ ]  New employees are given a sign off sheet acknowledging receipt of the policies.

[ ]  New employees are given a sign off sheet describing job expectations.

[ ]  New employees are given a sign off sheet detailing the terms of employment (pay rate, work day, and length of employment).

[ ]  Employer gives some limited job training and orientation specific to the task.

[ ]  Employer has an orientation checklist that is kept on file to keep a record of the orientation/training activity.

[ ]  Shows educational materials such as videos, manuals, etc, for safety and/or tasks specific to the jobs.

[ ]  Employer has taken a cultural sensitivity class to better relate with employees.

[ ]  Other (please specify):

**Level 4:** As per Level 3, and employer offers employees a written employee contract detailing terms and conditions of employment.

**Score:**

**Verification methods and notes:**

Work force development and new skills training

**Note:** For seasonal laborers doing unskilled tasks, this criterion is non-applicable. It does apply for laborers performing skilled tasks.

**Level 1:** Employer provides no training opportunities for employees.

**Level 2:** Employer allows limited unpaid leave for employees to pursue training.

**Level 3:** Employer encourages workplace training by providing paid time off and/or tuition for job related educational activities.

**Level 4:** As per Level 3, and employer offers paid leave to employees for training relevant to required tasks.

**Score:**

**Verification methods and notes:**

Compensation practices

**Level 1:** Employer meets federal laws for pay period, at least every two weeks, and meets minimum wage laws. Employer has a system to track piece rate to ensure minimum wage is met. Employer keeps records on each employee.

**Level 2:** As per Level 1, and employer has a progressive compensation system, employing at least one of the following practices. Check all that apply:

[ ]  Employer adjusts piece rates to reward seniority, or performance, or changing crop conditions.

[ ]  Employer gives bonuses to reward productivity of the group.

[ ]  Employer shares profits.

[ ]  Employer distributes work opportunities fairly, not giving favorite workers best opportunities.

[ ]  Employer conducts regular performance evaluations, rewarding good performance with pay raises.

[ ]  When employer gives pay advances to employees, they have system to communicate the expectations to prevent confusion on the part of the employee.

[ ]  Employer gives bonus wages to reward excellent work.

[ ]  Other (please specify):

**Level 3:** As per Level 2, and employer uses two practices from the list.

**Level 4:** As per Level 3, and employer uses three practices from the list.

**Score:**

**Verification methods and notes:**

Employee benefits

**Note:** Non-applicable for seasonal-only labor.

**Level 1:** Employer provides unemployment and/or workers compensation insurance.

**Level 2:** Employer provides one of the following. Check all that apply:

[ ]  Health insurance

[ ]  Disability insurance

[ ]  Life insurance

[ ]  Subsidizes cost of or provides transportation to employees

[ ]  Arranges for community groups to provide assistance to workers

[ ]  Sick pay

[ ]  Vacation pay

[ ]  Reduced cost housing for full time employees

[ ]  Housing allowance, special compensation to cover housing costs

[ ]  Migrant worker/temporary worker housing at reduced rates

[ ]  Employer gives bonus wages to reward excellent work

[ ]  Other (please specify):

**Level 3:** As per Level 2, and employer provides two benefits from the list.

**Level 4:** As per Level 3, and employer provides at least three benefits from the list.

**Score:**

**Verification methods and notes:**

Worker housing and family support services

**Level 1:** Employer provides no housing, referrals, and/or services to employees.

**Level 2:** Employer provides housing and housing meets legal standards.

**And/or** employer refers workers to community resources for housing and other health and welfare information. Check all that apply:

[ ]  Employer keeps a list of community resources to give to employees.

[ ]  Employer keeps a list of housing opportunities to give to employees.

[ ]  Employer offers childcare services or stipend.

[ ]  Employer participates at a high level (leadership, donations, etc.) in community groups dedicated to increasing housing opportunities.

[ ]  Employer donates money and other resources to local housing groups.

[ ]  Other (please specify):

**Level 3:** As per Level 2, and two items checked, if housing not provided.

**Level 4:** As per Level 3, and at least three items checked, if housing not provided.

**Score:**

**Verification methods and notes:**

Pesticide handler/applicator safety

**Level 1:** All legal requirements are met for protection of handler/applicators and others who handle hazardous materials including crop and livestock pesticides, fertilizers, fuel, lubricants, solvents, etc., including protective equipment, re-entry and pre-harvest intervals and posting appropriate signage.

**Level 2:** As per Level 1, and all the following are applicable for pesticide applicators. Check all that apply:

[ ]  All workers are closely supervised by a licensed pesticide applicator.

[ ]  All workers have taken a pesticide application training course.

**Level 3:** As per Level 2, and at least two of the following. Check all that apply:

[ ]  Emergency eye washing facilities are provided near storage, mixing/loading and/or application sites.

[ ]  Showers and changing rooms are provided near storage, mixing/loading and/or application sites.

[ ]  Spare clean clothing is provided near storage, mixing/loading and/or application sites.

[ ]  Protective clothing is used and cared for properly (e.g., laundered as soon after use as possible, laundered separately from household wash).

[ ]  Respirator training and fitting.

[ ]  Respirators are kept in protective packaging

[ ]  Respirator pads are changed regularly.

[ ]  Pesticide applicators applying highly toxic chemicals (e.g., pesticides labeled Danger) are equipped with powered filtered-air respirator systems and/or positive pressure cabs.

[ ]  When applicable, workers handling solvents, fertilizers, etc., with potential to cause injury, are provided appropriate safety equipment.

[ ]  Other (please specify):

**Level 4:** As per Level 3, and at least three items are checked.

**Score:**

**Verification methods and notes:**

Hazardous materials emergency management

**Note:** Inspectors need to know how spills are handled. Provide notation. Supplies needed include: absorbents, trash bags, rubber boots and gloves, eye protection and/or respirators.

**Level 1:** All state or local legal requirements (if applicable) are met for emergency management of spills, fires or other emergencies related to hazardous materials.

**Level 2:** As per Level 1, and any spills in storage, mixing/loading or application sites are cleaned up promptly. As an indicator, spill response kits/equipment (can be as simple as absorbent materials, i.e. kitty litter) are readily available where hazardous materials are stored, mixed or used. Materials used to clean up spills are disposed of properly.

**Level 3:** As per Level 2, and emergency washing facilities (this can include the operator’s home) such as showers, eyewash and spare clean clothing are provided near storage, mixing/loading and application sites.

**Level 4:** As per Level 3, and a written emergency management plan (see farm safety policy) is available including. Check all that apply:

[ ]  Identification and phone numbers for persons who should be contacted.

[ ]  Procedures and equipment to be used.

[ ]  Copies of complete labels and MSDS sheets of hazardous materials used.

[ ]  Location of fixed storage sites.

[ ]  Policies requiring training for those who work with or around hazardous materials.

[ ]  Other (please specify):

**Score:**

**Verification methods and notes:**

Sanitation and general safety

**Level 1:** All the following:

[ ]  Employers provide clean drinking water and clean latrines with handwashing stations to workers in fields and/or working areas.

**Note:** For operations greater than 2,000 acres, only needed in shop areas or water mounted on tractors, for example.

[ ]  Handwashing stations or facilities have soap and water.

[ ]  Upon inspection all facilities are clean.

[ ]  Employers provide safety training consistent with the law.

**Level 2:** As per Level 1, and one of the following:

[ ]  Employer provides a shower facility with warm water for employees to wash and change after the workday. (This can include the operator’s home.)

[ ]  Employer contracts with professional firms to provide safety training.

[ ]  Employer has developed training checklists specific to jobs to ensure each employee gets training.

[ ]  Employer sets goals for safety and tracks success.

[ ]  Employer gives bonuses when safety goals are met.

[ ]  Other (please specify):

**Level 3:** As per Level 2, and at least two items from above.

**Level 4:** As per Level 3, and at least three items from above.

**Score:**

**Verification methods and notes:**

Scorecard for safe and fair working conditions

|  |  |
| --- | --- |
|  | **SCORE/LEVEL** |
| Minors, children and family members in the workplace |  |
| Grievance procedures and policies |  |
| Recognizing and supporting employee input for workplace improvement |  |
| Farm Worker Support Services |  |
| Discipline process |  |
| Nondiscrimination policy |  |
| Hiring practices and communicating expectations and policies |  |
| Work force development and new skills training |  |
| Compensation practices |  |
| Employee benefits |  |
| Worker housing and family support services |  |
| Pesticide handler/applicator safety |  |
| Hazardous materials emergency management |  |
| Sanitation and general safety |  |
|  |  |
| **(1) TOTAL POINTS EARNED** |  |
|  |  |
| **Total Points Available** | **56** |
| **- Minus Total Points Not Applicable** |  |
| **(2) TOTAL APPLICABLE POINTS** |  |
|  |  |
| **(3) AVERAGE PERCENTAGE SCORE = [(1) / (2)] \* 100** | **%** |

Fixed Criteria for Food Alliance Certification

No GMO seeds (or breeds) are used

[ ]  Operation does NOT Comply

[ ]  Compliance Verified

Check the following as applicable:

[ ]  There are no GMO plants produced on the farm.

[ ]  GMO plants are produced on the farm, but they are not produced or sold as a Food Alliance Certified product (e.g. GMO soybeans).

[ ]  If GMO plants are produced on the farm, please list them here:

Check the verification method used:

[ ]  Records show the plant varieties grown. These are non-GMO varieties.

[ ]  There are currently no GMO varieties for the crops grown.

[ ]  Producer describes GMO use (if any) and labeling/marketing during interview.

[ ]  Other (please specify):

**NOTES:**

No Prohibited Pesticides used

[ ]  Operation does NOT Comply

[ ]  Compliance Verified

Check the following as applicable:

[ ]  Pesticide records indicate that none of the pesticides listed in the Food Alliance Prohibited Pesticide List (Appendix A) are used on this operation.

[ ]  Prohibited pesticides are used on the operation, but crops receiving these pesticides will not be sold as Food Alliance certified products.

If prohibited pesticides(s) are used, please list them here, and specify on which crop(s) they are used:

Check the verification method used:

[ ]  Visual inspection of hazardous material storage confirms no presence of prohibited pesticides.

[ ]  Other (please specify):

**NOTES:**

## No growth promoting hormones used

[ ]  N/A Operation not seeking certification for livestock

[ ]  Operation does NOT Comply

[ ]  Compliance Verified

Check the verification method used:

[ ]  Veterinary and production records are complete, and show no use of hormone implants.

[ ]  Visual inspection of storage area/buildings and animals confirms no use of hormone implants.

[ ]  Other (please specify):

**NOTES:**

## No sub-therapeutic (feed additive) antibiotics used

[ ]  N/A Operation not seeking certification for livestock

[ ]  Operation does NOT Comply

[ ]  Compliance Verified

Check the verification method used:

 [ ]  Feed and/or veterinary records demonstrate no antibiotics used.

 [ ]  Visual inspection of storage area/buildings confirms no feed additive (sub-therapeutic) antibiotics used.

 [ ]  Producer attests to production without sub-therapeutic antibiotics during interview.

[ ]  Other (please specify):

**NOTES:**

Continual Improvement

[ ]  N/A Initial inspection – continual improvement applies to renewals only.

[ ]  Operation does NOT Comply

[ ]  Compliance Verified

Check the following for renewing applications only.

[ ]  Producer has demonstrated progress on implementation of improvement goals which were established during the previous inspection (please provide details in Notes section below)

**NOTES:**

**Appendix A – Prohibited Pesticide List**

Products on the Prohibited Pesticide List may not be used on Food Alliance certified crops. The Food Alliance Prohibited Pesticide List (PPL) is based on the WHO Recommended Classification of Pesticides by Hazard (2009). The PPL consists of materials classified as extremely hazardous or highly hazardous on the WHO list that are registered for use by the USEPA. Exceptions will be allowed if the use of a material on the PPL is required by law or required for export.

| **Class Ia and Ib pesticides registered for use by the USEPA (See: The WHO recommended classification of pesticides by hazard and guidelines to classification: 2009.) ©Food Alliance 2011** |
| --- |
| **EPA Reg No.** | **Product Name** | **WHO Mixture Classification** | **Chemical****Name** |
| 5481-448 | AMVAC BIDRIN 8 WATER MISCIBLE INSECTICIDE  | Ib | Dicrotophos |
| 10163-95 | AZINPHOS METHYL TECHNICAL  | Ib | Azinphos-methyl |
| 66330-233 | AZINPHOSMETHYL 50W  | Ib | Azinphos-methyl |
| 5481-9032 | AZTEC 3.78% GRANULAR INSECTICIDE  | Ib | Phostebupirim |
| 5481-9028 | AZTEC 4.67% GRANULAR  | Ib | Phostebupirim |
| 5481-552 | BIDRIN XP  | Ib | Dicrotophos |
| 100-987 | BRODIFACOUM TECHNICAL  | Ia | Brodifacoum |
| 270-371 | BROMADIOLONE 2.5% CONCENTRATE  | Ib | Bromadiolone |
| 270-374 | BROMADIOLONE TECHNICAL  | Ia | Bromadiolone |
| 47629-9 | BROMETHALIN TECHNICAL  | Ia | Bromethalin |
| 279-3060 | CARBOFURAN TECHNICAL  | Ib | Carbofuran |
| 67760-43 | CHEMINOVA METHYL PARATHION 4 EC  | Ib | Methyl parathion |
| 4787-33 | CHEMINOVA METHYL PARATHION TECHNICAL  | Ib | Methyl parathion |
| 34704-259 | CLEAN CROP PHORATE 20G  | Ib | Phorate |
| 13808-7 | COMPOUND 1080 LIVESTOCK PROTECTION COLLAR  | Ib | 1080 |
| 56228-26 | COMPOUND 1080 TECHNICAL (LPC)  | Ia | 1080 |
| 47000-144 | CO-RAL COUMAPHOS 25% DUST BASE  | Ib | Coumaphos |
| 11556-98 | CO-RAL COUMAPHOS FLOWABLE INSECTICIDE  | Ib | Coumaphos |
| 11556-123 | CO-RAL PLUS INSECTICIDE CATTLE EAR TAG  | Ib | Coumaphos |
| 11556-148 | CORATHON  | Ib | Coumaphos |
| 11678-53 | COTNION-METHYL  | Ib | Azinphos-methyl |
| 66222-11 | COTNION-METHYL AZINPHOS METHYL 50W  | Ib | Azinphos-methyl |
| 11556-11 | COUMAPHOS TECHNICAL  | Ib | Coumaphos |
| 5481-545 | COUNTER 15G SYSTEMIC INSECTICIDE-NEMATICIDE  | Ib | Terbufos |
| 5481-562 | COUNTER 20G  | Ib | Terbufos |
| 5481-547 | COUNTER CR  | Ib | Terbufos |
| 5481-546 | COUNTER TECHNICAL POISON SOIL INSECTICIDE  | Ia | Terbufos |
| 5481-447 | DICROTOPHOS TECHNICAL  | Ib | Dicrotophos |
| 47629-12 | DIFENACOUM TECHNICAL  | Ia | Difenacoum |
| 7173-204 | DIFETHIALONE TECHNICAL  | Ia | Difethialone |
| 61282-5 | DIPHACINONE, TECHNICAL GRADE FOR MANUFACTURING ONLY | Ia | Diphacinone |
| 352-361 | DU PONT METHOMYL COMPOSITION  | Ib | Methomyl |
| 5481-492 | DUPONT FORTRESS TECHNICAL  | Ia | Chlorethoxyphos |
| 352-342 | DUPONT LANNATE SP INSECTICIDE  | Ib | Methomyl |
| 352-366 | DUPONT METHOMYL TECHNICAL  | Ib | Methomyl |
| 352-400 | DUPONT OXAMYL TECHNICAL 42 INSECTICIDE/NEMATICIDE  | Ib | Oxamyl |
| 5481-9043 | ETHOPROP TECHNICAL  | Ib | Ethoprop |
| 5481-493 | FORTRESS 5G GRANULAR INSECTICIDE  | Ib | Chlorethoxyphos |
| 279-2876 | FURADAN 4F INSECTICIDE/NEMATICIDE  | Ib | Carbofuran |
| 279-3038 | FURADAN 85 DB  | Ib | Carbofuran |
| 279-3310 | FURADAN LFR INSECTICIDE/NEMATICIDE  | Ib | Carbofuran |
| 10163-78 | GOWAN AZINPHOS-M 50 WSB  | Ib | Azinphos-methyl |
| 66222-162 | GUTHION SOLUPAK 50% WETTABLE POWDER INSECTICIDE  | Ib | Azinphos-methyl |
| 11678-70 | GUTHION TECHNICAL INSECTICIDE  | Ib | Azinphos-methyl |
| 61282-38 | HOPKINS COV-R-TOX ENCAPSULATED WARFARIN - 50% TECHNICAL  | Ib | Warfarin |
| 61282-39 | HOPKINS WARFARIN TECHNICAL RODENTICIDE  | Ib | Warfarin |
| 13808-8 | M-44 CYANIDE CAPSULES  | Ib | Sodium cyanide |
| 33858-2 | M-44 CYANIDE CAPSULES  | Ib | Sodium cyanide |
| 35975-2 | M-44 CYANIDE CAPSULES  | Ib | Sodium cyanide |
| 35978-1 | M-44 CYANIDE CAPSULES  | Ib | Sodium cyanide |
| 39260-1 | M-44 CYANIDE CAPSULES  | Ib | Sodium cyanide |
| 39508-1 | M-44 CYANIDE CAPSULES  | Ib | Sodium cyanide |
| 56228-15 | M-44 CYANIDE CAPSULES  | Ib | Sodium cyanide |
| 56228-32 | M-44 CYANIDE CAPSULES ARCTIC FOX  | Ib | Sodium cyanide |
| 10707-10 | MAGNACIDE B MICROBIOCIDE  | Ib | Acrolein |
| 10707-9 | MAGNACIDE H HERBICIDE  | Ib | Acrolein |
| 7173-174 | MAKI TECHNICAL  | Ia | Bromadiolone |
| 7946-11 | MAUGET INJECT-A-CIDE B  | Ib | Dicrotophos |
| 10163-252 | MESUROL 75 WDG  | Ib | Methiocarb |
| 10163-229 | MESUROL 75% CONCENTRATE  | Ib | Methiocarb |
| 56228-33 | MESUROL 75% WETTABLE POWDER AVERSIVE CONDITIONING EGG TREATMENT  | Ib | Methiocarb |
| 10163-231 | MESUROL 75-W  | Ib | Methiocarb |
| 10163-230 | MESUROL TECHNICAL INSECTICIDE  | Ib | Methiocarb |
| 100-530 | METHIDATHION TECHNICAL  | Ib | Methidathion |
| 10163-245 | METHIDATHION TECHNICAL  | Ib | Methidathion |
| 5481-9041 | MOCAP EC NEMATICIDE - INSECTICIDE  | Ib | Ethoprop |
| 279-2862 | NIAGARA FURADAN 75 BASE  | Ib | Carbofuran |
| 5481-8980 | PHORATE 20 G  | Ib | Phorate |
| 9779-293 | PHORATE 20-G  | Ib | Phorate |
| 5481-8979 | PHORATE TECHNICAL INSECTICIDE  | Ia | Phorate |
| 83100-28 | ROTAM METHOMYL 90SP INSECTICIDE  | Ib | Methomyl |
| 81598-9 | ROTAM METHOMYL TECHNICAL  | Ib | Methomyl |
| 7173-75 | ROZOL RODENTICIDE TECHNICAL POWDER  | Ia | Chlorophacinone |
| 72500-15 | SLN PHARMACHEM WARFARIN  | Ib | Warfarin |
| 5481-561 | SMARTCHOICE 5G  | Ib | Chlorethoxyphos |
| 35975-4 | SODIUM FLUOROACETATE (COMPOUND 1080) LIVESTOCK PROTECTION COLLAR  | Ib | 1080 |
| 35978-8 | SODIUM FLUOROACETATE (COMPOUND 1080) LIVESTOCK PROTECTION COLLAR  | Ib | 1080 |
| 39508-2 | SODIUM FLUOROACETATE (COMPOUND 1080) LIVESTOCK PROTECTION COLLAR  | Ib | 1080 |
| 46779-1 | SODIUM FLUOROACETATE (COMPOUND 1080) LIVESTOCK PROTECTION COLLAR  | Ib | 1080 |
| 56228-22 | SODIUM FLUOROACETATE (COMPOUND 1080) LIVESTOCK PROTECTION COLLAR  | Ib | 1080 |
| 36029-14 | STRYCHNINE ALKALOID N.F.  | Ib | Strychnine |
| 27995-1 | STRYCHNINE ALKALOID N.F. POWDER  | Ib | Strychnine |
| 37259-1 | STRYCHNINE ALKALOID NFX  | Ib | Strychnine |
| 5481-9031 | TEBUPIRIMPHOS TECHNICAL  | Ia | Phostebupirim |
| 12455-88 | TECHNICAL BRODIFACOUM  | Ia | Brodifacoum |
| 12455-70 | TECHNICAL BROMADIOLONE  | Ia | Bromadiolone |
| 12455-92 | TECHNICAL BROMETHALIN  | Ia | Bromethalin |
| 12455-25 | TECHNICAL DIPHACINONE  | Ia | Diphacinone |
| 61282-1 | TECHNICAL DIPHACINONE  | Ia | Diphacinone |
| 12455-26 | TECHNICAL WARFARIN  | Ib | Warfarin |
| 100-1015 | TEFLUTHRIN TECHNICAL  | Ib | Tefluthrin |
| 264-330 | TEMIK BRAND 15G ALDICARB PESTICIDE  | Ib | Aldicarb |
| 5481-526 | THIMET 10-G SOIL AND SYSTEMIC INSECTICIDE  | Ib | Phorate |
| 5481-527 | THIMET 15-G SOIL AND SYSTEMIC INSECTICIDE  | Ib | Phorate |
| 5481-530 | THIMET 20-G  | Ib | Phorate |
| 5481-528 | THIMET MC - 85 FOR MANUFACTURING PURPOSES ONLY  | Ia | Phorate |
| 5481-529 | THIMET TECHNICAL FOR MANUFACTURING PURPOSES ONLY  | Ia | Phorate |
| 352-532 | VYDATE C-LV INSECTICIDE/NEMATICIDE  | Ib | Oxamyl |
| 352-372 | VYDATE L INSECTICIDE/NEMATICIDE  | Ib | Oxamyl |
| 69826-1 | WARFARIN TECHNICAL  | Ib | Warfarin |
| 3282-32 | WINCON WARFARIN TECHNICAL  | Ib | Warfarin |
| 61282-3 | ZINC PHOSPHIDE 93  | Ib | Zinc phosphide |
|  |  |  |  |
| NOTE: WHO classification is based on acute risks to human health. Class Ia = extremely hazardous, Class Ib = highly hazardous.  |

1. In ornamental plant production, crop selection is often determined by customer acceptance and/or interest in a particular plant. Pest-resistant cultivars may exist but production is not economically feasible, given customer acceptance or interest. [↑](#endnote-ref-1)
2. Review of IPM activity checklist by pest category, in combination with monitoring data from the nursery. [↑](#endnote-ref-2)
3. Beneficials (pollinators, pest predators and pest parasites) provide ecological services for agricultural producers. Managing to encourage and protect beneficials, and monitoring to track populations is an essential part of sustainable production. [↑](#endnote-ref-3)
4. Evidence of implementation and records of management practices. [↑](#endnote-ref-4)
5. Coordinating IPM practices over spatial and temporal scales increases the effectiveness of IPM. [↑](#endnote-ref-5)
6. Soil conserving or soil building crop rotations include high-residue crops. Low-residue crop rotations assist with pest control, but do nothing for soil or water conservation. [↑](#endnote-ref-6)