Integrated Pest Management Plans

Integrated Pest Management (IPM) uses a wide range of pest control methods or tactics, rather than just relying on chemical controls. The goal of IPM is to maintain pest damage at acceptable levels, which usually does not require complete elimination of a pest. IPM follows a series of four steps to address pest problems:

1. Set Action Thresholds

Before taking any pest control actions, IPM users first set an action threshold — a pre-determined point at which pest control action will be taken. This threshold is often the level at which pests will become a health hazard, an economic threat, or simply cause an unacceptable level of damage. Finding a single pest does not always mean pest control is needed. An action threshold helps ensure that control measures are taken only when necessary.

2. Monitor and Identify Pests

Monitoring involves a regular and methodical procedure to quantify information needed to make sound pest management decisions. Accurately identifying pests will allow for effective controls, if necessary. The UAF Cooperative Extension Service can offer help in identifying pests. IPM users should monitor for the presence and concentration of pests in various locations at various times, as these levels can vary greatly.

3. Prevent Pests

To prevent pests from becoming a problem, IPM programs work to create unfavorable environments for pests to colonize, grow, and reproduce. Prevention for outdoor environments might include crop rotation, selecting pest-resistant varieties, or putting down physical barriers such as landscaping fabric. Indoor pest prevention might include good sanitation, removing debris, or sealing cracks and other entries into buildings.

4. Control

If action thresholds have been triggered and preventive methods are no longer effective, IPM programs then evaluate control methods to determine which would be most effective. IPM users must know which control methods are available, and should evaluate the benefits and risks of each. Non-chemical methods of controlling pests are often very effective. Some examples of non-chemical control methods include trapping, heat treatments, cutting or mowing, or cultivating soil. Chemical controls can be an effective part of IPM, but are just one of the many tools that may be used.

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Sample IPM Plan

The following pages provide an outline for developing an IPM Plan. It can be modified to meet the needs in various management areas and for various pests. The tables are filled in with example information in **gray** text. This information should be replaced with the correct information for your management area.

Integrated Pest Management Plan

IPM Plan Effective Dates:	**May 2025 through May 2027**
Management Area Name/Location:	**Department of Corrections Point Mackenzie Correctional Farm**
General Site Description:	**Correctional Facility/Farm, Crop fields and Greenhouses located at 13690 S. Guernsey Road on state owned land/right of ways.**
Land Uses:	**Farming and green house production of Food crops for Department of Corrections with Surplus to Food Banks**
Name of Person in Charge:	**Harry Moore**
Certified Applicator Name(s):	**James Gaiser**
Certification Numbers:	**11123-2703-3/2025**

1. Action Thresholds

Check the types or categories of pests that might present a problem or need to be controlled at this management site:

✓	Category
✓	**Weeds/Vegetation**
✓	**Invertebrates**
✓	**Disease agents**
✓	**Vertebrates**
	Other (describe below)

For each pest category listed above, describe the level at which the pest becomes a problem which requires control measures to be taken.

Weeds:

- Vegetation should be maintained at a level that allows for crops to grow without adverse effects any vegetation classified as a weed or other crop in comparison to that species of plant in production will not be tolerated. Unwanted vegetation competes against crops in production reducing overall performance with loss of harvestable yields. Navigation of Correctional Officers for security by foot, four-wheeler, or truck is paramount to the overall security of the camp. Vegetation for security purposes should remain less than six inches in height. Woody vegetation should remain less than six inches in height or be eradicated. This does not include crops, fruit trees and ornamental plants that are used in and around the facility or perimeter for aesthetic purposes.
- Vegetation/Weeds in fields should remain at a level that will not impact the growth and harvest of a healthy harvest of sustainable crop produce and hay for the Department of Corrections use. Corn Spurrey, Knotweed and other species that impact successful crop harvest will be kept as low as possible. Economic Threshold (ET) will be one plant per square foot or less if fiscally possible.
- All unwanted vegetation should be eradicated from the gravel parking pads, pole barns greenhouse's, garden plots and fields to allow for visible examination of structures within, including fences, and to prevent deterioration of building and structural surfaces.

Invertebrates

- Insects not beneficial or considered vectors for disease that cause damage to crops, greenhouses, plants, wood or other structural buildings or sheds should be eradicated.
- Impact on the states goal of sustainable harvests require an Economic Threshold when insects are damaging 20% of cultivated plants.

Disease agents or pathogens

- When bacteria, viruses, fungi, nematodes, mycoplasmas, and other micro-organisms are damaging or infecting the cultivated plants the Economic Threshold level of 20% will be the action level.

Vertebrates

Birds, (Ravens, Cranes), cause significant loss in economic resources caused by pecking and destruction of property and cultivated plants. Rodents and other mammals also contribute to those same losses. Economic Threshold may be set at 20% cultivated plants being affected. this does **not** include reptiles, amphibians, or fish.

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2. Monitor and Identify Pests

How often will the management area be inspected for the presence of pests?

Certified applicators or department Crew Chief designees and staff will assist to survey for the presence of pests daily as they perform the farm duties. All staff must consider how they can contribute to pest reduction and mitigation efforts.

In addition, the certified applicator will investigate reports from workers or staff who encounter pests.

Which locations will be inspected?

During each inspection, the certified applicator and or Department Crew chiefs will survey the fields, greenhouses and all areas of significance on the Point Mackenzie Correctional Farm (PMCF).

What methods will be used for identifying and quantifying the presence of pests?

The presence of pests will be determined by a visual survey. An estimate of pest populations is crucial to the identification and success of the crop harvest. In addition, photos of the specific areas and samples may be used for later reference and sent to the Plant Materials Center (PMC) and Cooperative Extension Service for additional expert advice.

The presence of pests will require a close visual examination of the farm for the identification of Weeds, Invertebrates, Disease Agents, and Vertebrates and other signs of activity that would indicate the need for control, if necessary PMCF will use all available resources for quantification and or lab/scientific analysis to confirm and properly identify what pests are present.

How will pest species be identified?

The Cooperative Extension Service, Plant Materials Center, Natural Resource and Conservation Service and the UC Davis Guides may be utilized for supportive identification. In the event a pest cannot be identified the unknown pest may be collected and sent or taken to a laboratory for identification.

Describe record keeping procedures:

Pest management records will be kept at the PMCF Farmers office in the IPM section of files and the PMCF everyone G drive for access by Department of Corrections Administrative Personnel. Information will be recorded for future reference and to help guide control decisions and action plans.

Record of inspection will include the date, locations, and extent of pest presence.

A record of each control applied will include the date, location, and details about the control that was applied. Worker Protection Standards and the Alaska Administrative Code recording requirements will be adhered to, including keeping two years of pesticides applications.

A record of each re-inspection following use of a control method or after the Restricted Entry Interval (REI) will include the date, location, evaluation of how effective the control was in reaching the target control levels, and recommendations for follow up actions.

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3. Prevent Pests

For each pest category listed under Section 1, describe preventative measures that will be taken:

Weeds, Invertebrates, Disease agents, and Vertebrates: The PMCF weeds are well established and excessive for the crops being planted, crop rotation, mechanical control methods and the establishment of cover crops will be used to suppress unwanted vegetation.

Using certified seed potato stock will reduce the potential for plant pathogens additionally including furrow fungicides, crop rotation, row spacing, irrigation and nutrient management (soil Analysis). Removal of plant and weed debris will be incorporated as well.

The Pest Management Methods in the Core Manual, WSU EM051 Introduction to Insect & Disease Management and Agricultural Weed Management Principles EM403 and cooperative extension guidance measures recommended will be carefully used for Mechanical, Biological, Cultural, Genetic and Chemical control.

How often will preventative measures be applied?

Daily for Mechanical Controls, at or below labeled rates for Chemical Controls and within the Worker Protection Standards for safety of the staff and inmate population.

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4. Control Measures

For each pest category listed under Section 1, list potential non-chemical control measures that may be used:

Cultural Controls:	Plant selection, trap crops and irrigation management and cultivation. .
Mechanical Controls:	Vegetation within the PMCF may be pulled by hand, mowed, or cut with mechanical equipment or string trimmers. This is likely to be the most effective choice if vegetation growth is minimal to moderate. Vegetation may be mowed, cut with string trimmers, cut back with pruners/chainsaws, or dug out with shovels/hoes. This is the only planned control for this vegetation, as limited control is required in these areas. There are no identified mechanical controls for wood destroying insects in natural environments.

For each pest category listed under Section 1, describe the characteristics needed in any chemical controls that may be used:

Vegetation: Preemergence or Postemergence products may be a systemic contact or translocated herbicides to ensure that the entire plant is eradicated or selective based on target pest. Herbicides must be carefully considered.

Invertebrates: consider the modes of action and persistence and the affects to beneficial insects.
Disease Agents: Fungi – consider how to maximize protective contact, timing and modes of action should be considered.

Vertebrates: Ravens and Cranes- mechanical mitigation tools & processes. Passive mechanical deterrents may be used.

For each pest category listed under Section 1, list potential chemical controls that may be used:Target Pest	Product Name	EPA Registration Number
Weeds	Cornerstone Plus	1381-192
	Gramoxone SL -3.0	/ 100-1652
	Eptam 7E	10163-283
	Low Vol 4	34704-124
	Lorox DF	61842-23
	Matrix SG	352-768
	MCP Amine 4	34704-130
	Metribuzin 75	34704-876
	Pramitol 25E	53883-505-1381
	Reglone	100-1061
	Roundup PowerMax	524-659/549
	Royal MH-30 Xtra	400-452
	Stinger	62719-73
	Treflan HFP	10163-363
	Low Vol 6	34704-125
	Previcur	264-678

Fungicide	Bravo Weather Stik	66222-276
	Curzate 60 DF	352-592
	Maxim MZ	100-1158
	Quadris	100-1098
	Ridomil Gold SL	100-1202
	Dithane	62719-402
	Zilker	34704-1190
	Fosphite	68573-2
	Phostrol	55146-83
	Mertect 340-F	100-889
Insecticide	AzaGuard	70299-17
	Azatin O	70051-9-59807

Describe how treated areas will be re-inspected and evaluated for effectiveness of controls:

Following application of controls (cultural, mechanical, or chemical), the certified applicator will re-inspect each treated area to determine if the applied controls achieved the target control level.

The certified applicator will evaluate the effectiveness of controls. If control actions did not achieve the target control level, the certified applicator will recommend modifications or additional controls.