

2022

# AGRICULTURAL PESTICIDE USERS COMPLIANCE AUDIT

*IPMA AND EMA*



Ministry of  
Environment and  
Climate Change Strategy

## Executive Summary

Beginning in April 2022, the Ministry of Environment and Climate Change Strategy's (ENV) Compliance and Environmental Enforcement Branch (CEEB) conducted an audit of the agricultural sector to verify compliance under the *Integrated Pest Management Act* (IPMA or Act), Integrated Pest Management Regulation (IPMR, or Regulation) and the Code of Practice for Agricultural Environmental Management (AEM Code) under the *Environmental Management Act* (EMA). The main purpose of this audit was to obtain a compliance snapshot of agricultural operations that use pesticides and to identify opportunities for improving compliance. The compliance criteria assessed included requirements for pesticide storage, recordkeeping, adherence to weather restrictions, and the prevention of off-target pesticide spray drift.

The agricultural sector uses various types of pesticides, such as herbicides, fungicides, and insecticides. Pesticide storage facilities can often be located near waterbodies and adjacent residential homes which increases the potential risk to human health and the environment. Factors such as low compliance rates in past inspections, ENV's introduction of new requirements under the AEM Code, and potential high risk to human health and the environment due to the amounts and types of pesticides used by the agricultural sector led to prioritizing this audit.

A total of 29 inspections under the IPMR and 28 inspections under the AEM Code were conducted in this audit. Compliance determinations were as follows:

- The overall compliance rate was 62% under IPMR and 4% under the AEM Code for all inspections.
- The inspections under the IPMR led to 18 notices of compliance (62%), eight advisories (28%) and three warnings (10%), whereas inspections under the AEM Code resulted in one notice of compliance (4%) and 27 advisories of non-compliance (96%).
- Under the IPMR, there was a high compliance rate (79-86%) for requirements covering pesticide storage facilities, including pesticide container types, labelling standards and signage.
- Under the AEM Code, low levels of compliance (4%) were assessed for requirements governing recordkeeping, and high levels of compliance (100%) were observed for mitigating spray drift.

Many of the non-compliances found were minor or administrative in nature, and these typically resulted in advisories of non-compliance, the lowest level of enforcement response. However, a small number of inspected parties received warning letters for more serious non-compliances that included agricultural operations that were storing pesticides in a manner with high potential risk to human health and the environment. In all cases, appropriate corrective measures were communicated to each inspected party.

Lack of awareness of the pesticide storage and recordkeeping requirements under the IPMR and AEM Code was among the key challenges encountered by agricultural operators.

The next steps to improve compliance of agricultural pesticide users include the following:

- Continue conducting inspections to verify and ensure compliance.
- Provide informational letters and templates outlining the recordkeeping and storage requirements.
- Ensure that agricultural operations are provided with up-to-date guidance materials on ENV website.
- Have ENV staff attend and present at association conferences, meetings, and other events.

## Introduction

The ENV CEEB conducts regular sector-wide audits as a method to obtain a snapshot of compliance within a specific sector. Audits can be conducted through a combination of on-site inspections and reviews of submitted data and reports. The primary objectives of audits are to evaluate the rate of compliance in a specific sector, determine if risks to human health or the environment are present, identify and implement compliance promotion and outreach opportunities, achieve transparency through public reporting, and provide recommendations to improve legislation or policy guidance.

Ministry policies and procedures for compliance verification recognize that:

- audits represent a point-in-time assessment of compliance within a particular sector of each inspected party.
- many non-compliances may be administrative or have minor to no impact on the environment and human health. When a single non-compliance is found during an inspection, the whole inspection is marked out of compliance, regardless of how minor the non-compliance was.

For more information on how ministry inspectors assess and respond to non-compliances, review the [Compliance and Enforcement Policy and Procedure](#). Inspection results from previous audits and compliance reports can also be found on the [Government of B.C.'s website](#).

### Overview of the Agricultural Sector

Agriculture is not regulated like other sectors under B.C.'s IPMA and IPMR, because they are not required to hold an authorization and follow the associated requirements, such as recordkeeping for each use. However, the agricultural sector's pesticide storage facilities must meet the basic storage requirements under the IPMR (see Table 1).

The AEM Code under B.C.'s EMA regulates the use of pesticides on agricultural operations and requires them to keep pesticide use records among other efforts to mitigate off-target drift and runoff (see Table 1). The AEM Code came into effect on July 7, 2021 and applies to all agricultural operations in B.C., from small hobby farms to large commercial operations.

Standards set out in the IPMR and AEM Code are intended to ensure that any person storing, transporting, or using pesticides does so only in a manner that minimizes hazards to human health and the environment. Agricultural operations use a variety of pesticides, such as herbicides, fungicides, and insecticides. Pesticide storage facilities can often be located near bodies of water and adjacent residential homes which increases the risk to human health and the environment.

Other regulating parties such as WorkSafeBC may require agricultural pesticide applicators to obtain a provincial Pesticide Applicator Certificate depending upon the toxicity of the products used. Some countries accepting produce may also require agriculture operations to maintain Good Agricultural Practices (CanadaGAP) which promotes voluntary audits to verify that fruits and vegetables are produced, packed, handled, and stored to minimize the risk of microbial food safety hazards. Within the CanadaGAP is a requirement to keep pesticide use records, as is under the AEM Code.

## Purpose of this Audit

Factors such as low compliance rates in past inspections, potential high risk to human health and the environment due to the amounts and types of pesticides used by agricultural operators, and ENV's introduction of new requirements under the AEM Code led to prioritizing this audit. This audit was conducted to verify compliance under both the IPMR and AEM Code as well as to promote compliance with the pesticide storage and use requirements to mitigate potential adverse effects of applications.

Audit and inspection activities help ensure that users of pesticides are following the environmental and human health protection requirements outlined in the federal [Pest Control Products Act \(PCPA\)](#), administered by Health Canada, and, in British Columbia, under the [IPMA](#), [IPMR](#) & [AEM Code](#).

## Methods

ENV conducted on-site inspections with all agricultural operations inspected in the audit. During each on-site inspection, in collaboration with Health Canada's Pesticide Compliance Team, ENV conducted an inspection of pesticide storage areas to assess facility and operational details, and to review pesticide application records. Site personnel were questioned on pesticide use history and operation details as necessary in order to verify compliance. Photographs of required records, pesticide storage facilities and treatment locations were taken as necessary.

Records were inspected through office review inspections including file reviews, phone calls, and email correspondence. The office review also may have included direct communication with the inspected parties to ask questions as needed to gather additional information necessary to complete the inspection. Inspections were conducted throughout the province, with a major focus on agricultural operations in the Lower Mainland. See Appendix A for a complete list of inspected parties.

The following requirements under the IPMR and AEM Code presented in Table 1 were the primary criteria inspected during this audit.

**Table 1.** Sections and categories of the IPMR and AEM Code assessed for compliance.

IPMR		AEM Code*	
Section	Category	Section	Category
65(1)	Pesticide container types	77.1(1)	Pesticide spray drift and runoff
65(2)	Pesticide labelling standards	77.1(2)	Pesticide use recordkeeping
66(1)	Pesticide storage provisions		
66(2)	Pesticide storage signage		

\* During the time of inspection, these requirements were under the AEM Code, but have since moved to the IPMR as of January 21, 2023

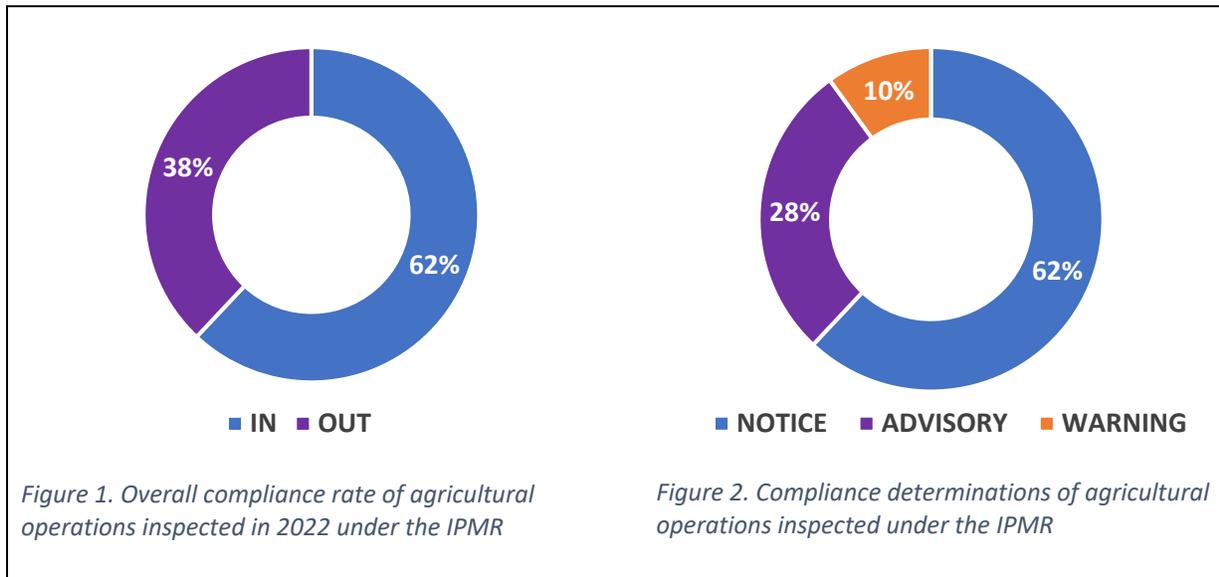
To maintain quality and consistency, inspectors were provided guidance on assessing each applicable section of the IPMR and AEM Code. Inspectors completed a total of 29 inspections under the IPMR and 28 inspections under the AEM Code between July 19, 2022 and October 31, 2022. ENV determined the appropriate administrative responses based on the compliance verification findings of the inspections

using the non-compliance decision matrix contained in ENV’s [Compliance and Enforcement Policy and Procedure](#). Inspection reports completed under this audit are available from the [Natural Resource Compliance and Enforcement Database](#).

## Results

### Compliance under the IPMR

Of the 29 agricultural operations inspected, 18 (62%) were fully in compliance, while the remaining 11 (38%) were out of compliance with at least one aspect of the IPMR (Figure 1). Inspected parties meeting all assessed regulatory requirements were issued a notice of compliance; non-compliant parties were issued advisories (8, 28%) or warnings (3, 10%) (Figure 2) per the [Ministry’s Compliance and Enforcement Decision Matrix](#). A list of all of the inspected parties and the compliance determinations made under the IPMR can be found in Appendix A.



Inspectors conducted compliance inspections to assess the following requirements for all 29 agricultural operations: pesticide container standards, pesticide labelling standards, pesticide storage requirements, and signage on pesticide storage facilities (Figure 3).

Of the 29 agricultural operations inspected, 5 (17%) were out of compliance with s.65(1) for storing pesticides in improper containers, 5 (17%) were out of compliance with s.65(2) for missing or illegible pesticide labels, 4 (14%) were out of compliance with s.66(1) for storing pesticides alongside food and other commodities, and 6 (21%) were out of compliance with s.66(2) for missing “warning” signage on pesticide storage facilities (Figure 3).

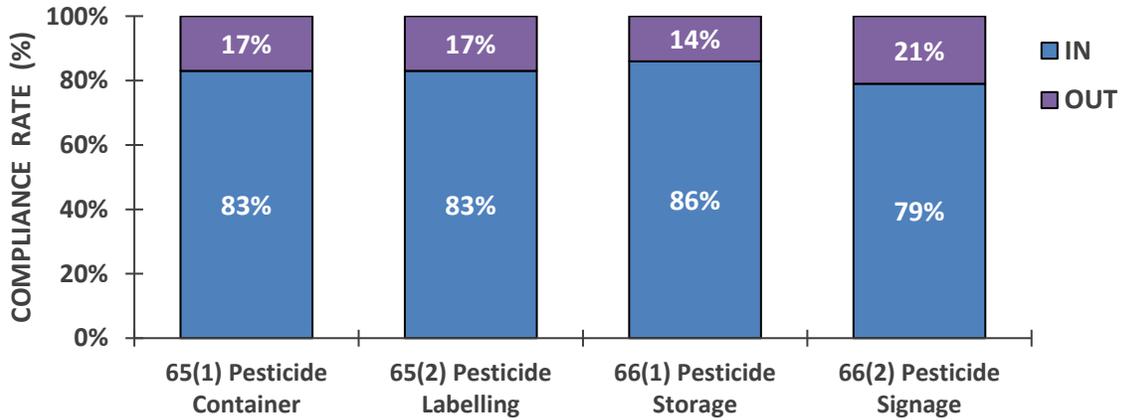


Figure 3. Compliance findings for assessed sections of the IPMR for agricultural operations in 2022

### Compliance under the AEM Code

Of the 28 agricultural operations inspected, one (4%) was fully compliant, while the remaining 27 (96%) were out of compliance with at least one aspect of the AEM Code (Figure 4). Inspected parties meeting all assessed regulatory requirements were issued a notice of compliance (1, 4%); non-compliant parties were issued advisories (27, 96%) (Figure 5) per the [Ministry’s Compliance and Enforcement Decision Matrix](#). A list of all of the inspected parties and the compliance determinations made under the AEM Code can be found in Appendix A.

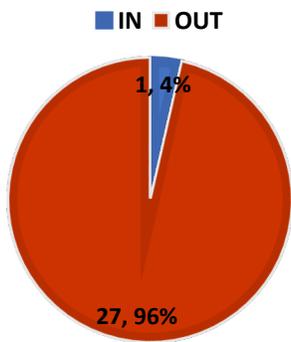


Figure 4. Overall compliance rate of agricultural operations inspected in 2022 under the AEM Code

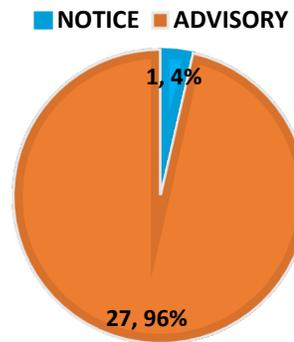


Figure 5. Compliance determinations of agricultural operations inspected under the AEM Code

Inspectors conducted compliance inspections to assess the following requirements for all 28 agricultural operations: signs of off-target pesticide spray drift and runoff (s. 71.1(1)), and pesticide use recordkeeping (s. 71.1(2)). All agricultural operations inspected were fully compliant with s. 71.1(1) as there were no signs of off-target pesticide spray drift or runoff at the time of inspection (Figure 6). The recordkeeping requirements assessed under s. 71.1(2) of the AEM Code included prescriptions for information that must be recorded for each pesticide use. Of the 28 agricultural operations inspected, only one (4%) was fully in compliance with these requirements (Figure 6). The most common non-compliances for recordkeeping were failure to keep records of pesticide use, and failure to record weather data, time of application and target pest for each pesticide use.

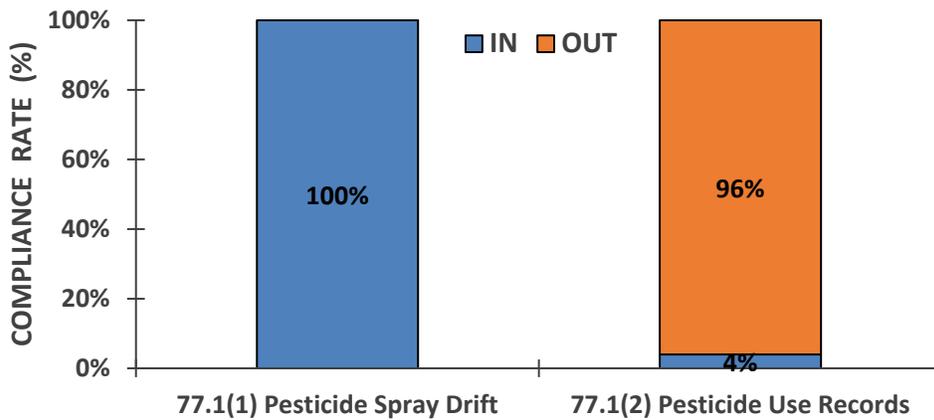


Figure 6. Compliance findings for assessed sections of the AEM Code for agricultural operations in 2022

## Discussion

The overall compliance rate of the agricultural operations inspected under the IPMR was moderate to high, as 62% of inspections conducted were fully compliant with the Regulation. However, the majority of the non-compliances were minor or administrative in nature, with low to no potential risk to human health and the environment. These inspections resulted in an advisory, the lowest level of enforcement response.

A small number of inspections (3, 10%) conducted under the IPMR resulted in warning letters for non-compliances that included agricultural operations that were storing pesticides in a manner with high potential risk to human health and the environment (see Figure 7). The non-compliant parties in receipt of warning letters responded with the corrective measures to address non-compliances.

Under the AEM Code, high levels of non-compliance (96%) with recordkeeping requirements were noted as agricultural operations either failed to keep records for each pesticide use or neglected to record the information in their pesticide use records as required under section 71.1(2).

The accurate use records for any pesticide application is key to ensuring that the use of the pesticide is necessary and justified. However, the audit determined, through supplementary questioning, that the inspected agricultural operations were unaware of the recordkeeping requirements under the AEM Code. Those who provided the use records for this audit were keeping them as part of their participation in the CanadaGAP program using “H1 form (Agronomic Input – Agricultural Chemicals)”. ENV also determined during this audit that the AEM Code requires some additional information to be recorded besides those required by the CanadaGAP program. For example, the AEM Code requires agricultural users to record time of pesticide application, target pest, and specific weather data including temperature, precipitation, wind speed and wind direction at the time of each application, but CanadaGAP’s records template being used by agricultural growers does not list these requirements.



*Figure 7. Pesticides stored in an unrestricted, unsigned area beside a water source and a ditch, with a serious potential risk to human health and the environment. There was no barrier and little distance between containers holding pesticides and a public road*

## Next Steps to Improve Compliance

Audit inspections allowed Integrated Pest Management Officers (IPM Officers) to inform agricultural operations of the requirements of the IPMR and AEM Code and determine which sections were non-compliant and could use additional guidance. The inspections conducted as part of this audit are the

best tool for increasing awareness of the requirements under the IPMR and AEM Code and improving compliance within the sector.

Two key challenges that were encountered by agricultural operations during this audit were meeting the recordkeeping requirements and safe storage of pesticides with no potential risk to human health and the environment. To improve compliance in these areas, ENV will consider improving communications outlining the recordkeeping and pesticide storage requirements and associated online resources. ENV will also continue to update the digital resources on the ENV website and provide templates and forms to help improve the rate of compliance. Effective January 21, 2023, ENV has amended the regulations and moved sections 71.1(1) and 71.1(2) from the AEM Code to the IPMR, which will further streamline ENV's compliance and promotion activities.

ENV CEEB attends conferences, webinars, and meetings held by various associations and provides answers to questions relating to the applicable legislation, and presents new information to stakeholders. Ensuring that compliance-related information reaches agricultural stakeholders is key to improving compliance throughout the industry. Ministry staff will continue to work with other regulating parties in the agricultural sector to promote compliance, and good pesticide storage and use practices through outreach such as sector meetings, webinars, and digital resources.

## Appendices

Appendix A—Inspected agricultural operations, inspection locations, and compliance responses.

EP System Number	Inspected Party	IPMR Outcome	AEM Code Outcome
IPMUA196430	Phoenix Farms	Notice	Advisory
IPMUA196429	S&S Sanghera Berry Farm	Notice	Advisory
IPMUA196428	0701635 BC Ltd. doing business as Little Fruit Stand	Notice	Advisory
IPMUA196427	Dhaliwal Bros Farm	Notice	Advisory
IPMUA196426	Singh Farm	Advisory	Advisory
IPMUA195918	Binning Farms	Advisory	Advisory
IPMUA195916	Jagtar Akali	Warning	Advisory
IPMUA195909	H and A Ross Farm	Notice	Advisory
IPMUA195908	Balwinder Chandi	Advisory	Advisory
IPMUA195902	Johal Berry Farm Limited	Advisory	Advisory
IPMUA195900	Golden Eagle Group	Advisory	Advisory
IPMUA190193	D & S Brar Holdings	Notice	Advisory
IPMUA190172	Anderton Nursery Ltd.	Notice	Advisory
IPMUA190171	M&M Pacific Coast Farms	Notice	Notice
IPMUA190169	Windover Farm	Advisory	Advisory
IPMUA190167	Gill Farm	Advisory	Advisory
IPMUA190164	McClintock Dairy	Notice	Advisory

IPMUA188473	Boparai Farms	Notice	Not Determined
IPMUA188366	AP Farm Fresh	Notice	Advisory
IPMUA127180	Sekhon Blueberry Farms Ltd.	Warning	Advisory
IPMUA188364	JP Farms	Warning	Advisory
IPMUA188363	Takhar Farms Ltd.	Notice	Advisory
IPMUA188359	JDAH Farms	Notice	Advisory
IPMUA188358	Narwal Farm Produce	Notice	Advisory
IPMUA188357	Grandpa's Blueberry Farm	Notice	Advisory
IPMUA188356	Sandy Family Farm	Notice	Advisory
IPMUA188020	G&A Farming	Notice	Advisory
IPMUA190178	Dove Creek Produce Farm	Notice	Advisory
IPMUA188360	G.S. Farm	Advisory	Advisory