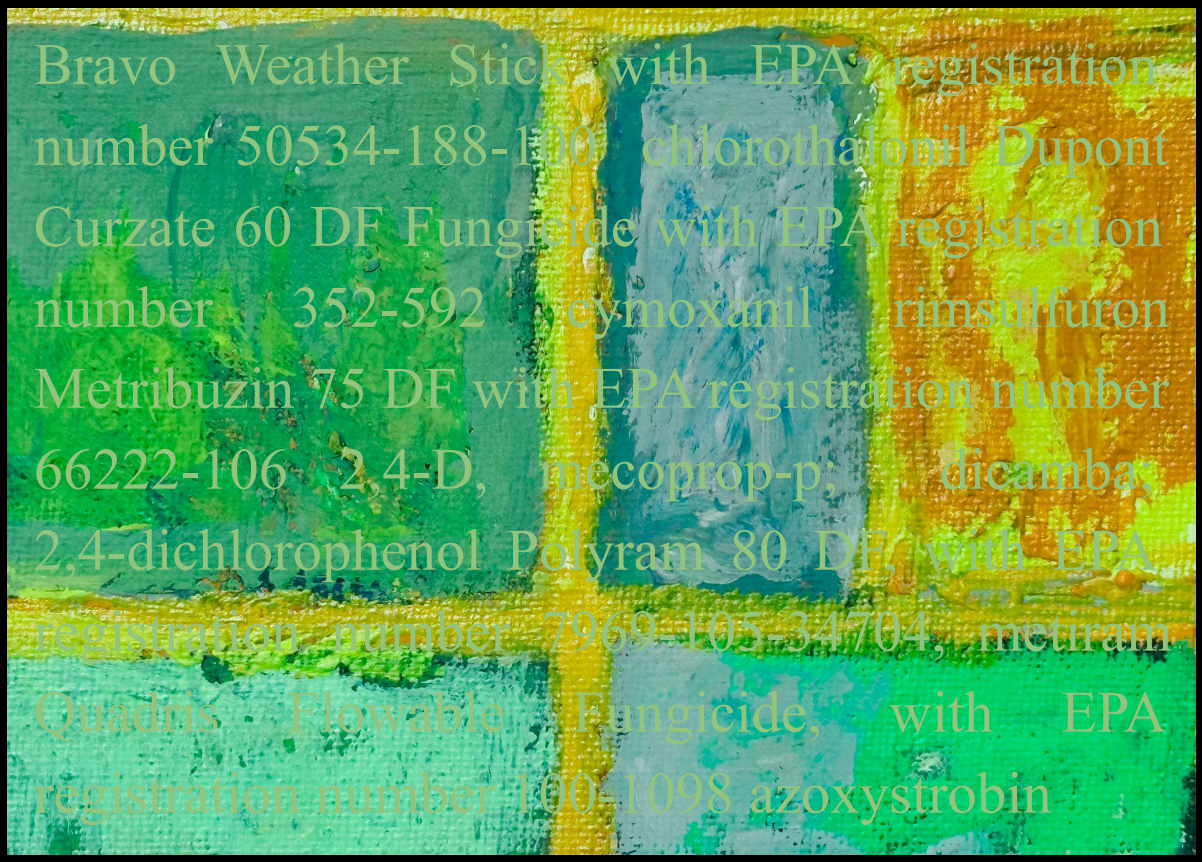
Pesticides

Pt. MacKenzie Prison Correctional Farm

ALASKA



PRISON AGRICULTURE LAB

Meadhbh Gannon, 2025

Point MacKenzie Prison

Point MacKenzie Correctional Farm is a men's prison that downsized its on site farming program, moving prisoners that were once housed in minimum security to a new facility, Goose Creek Correctional Center. Once a site that housed upward of 100 men, Point MacKenzie now operates with a skeleton crew of 12-15 prisoners. The facility claims that it will only need this small number to operate the farm with 50 to 60 prisoners lending additional labor six times to plant and weed throughout the year. A number of incarcerated individuals see working and living at the farm as a privilege Many have expressed disappointment in being moved to a more restrictive and potentially volatile prison (Boots, 2023).

While incarcerated individuals speak highly of the program and the prison boasts of saving 2.5 million dollars a year through the prison merger, there have been concerns raised about pesticide use and operations at Point MacKenzie farm (Hollander, 2014).

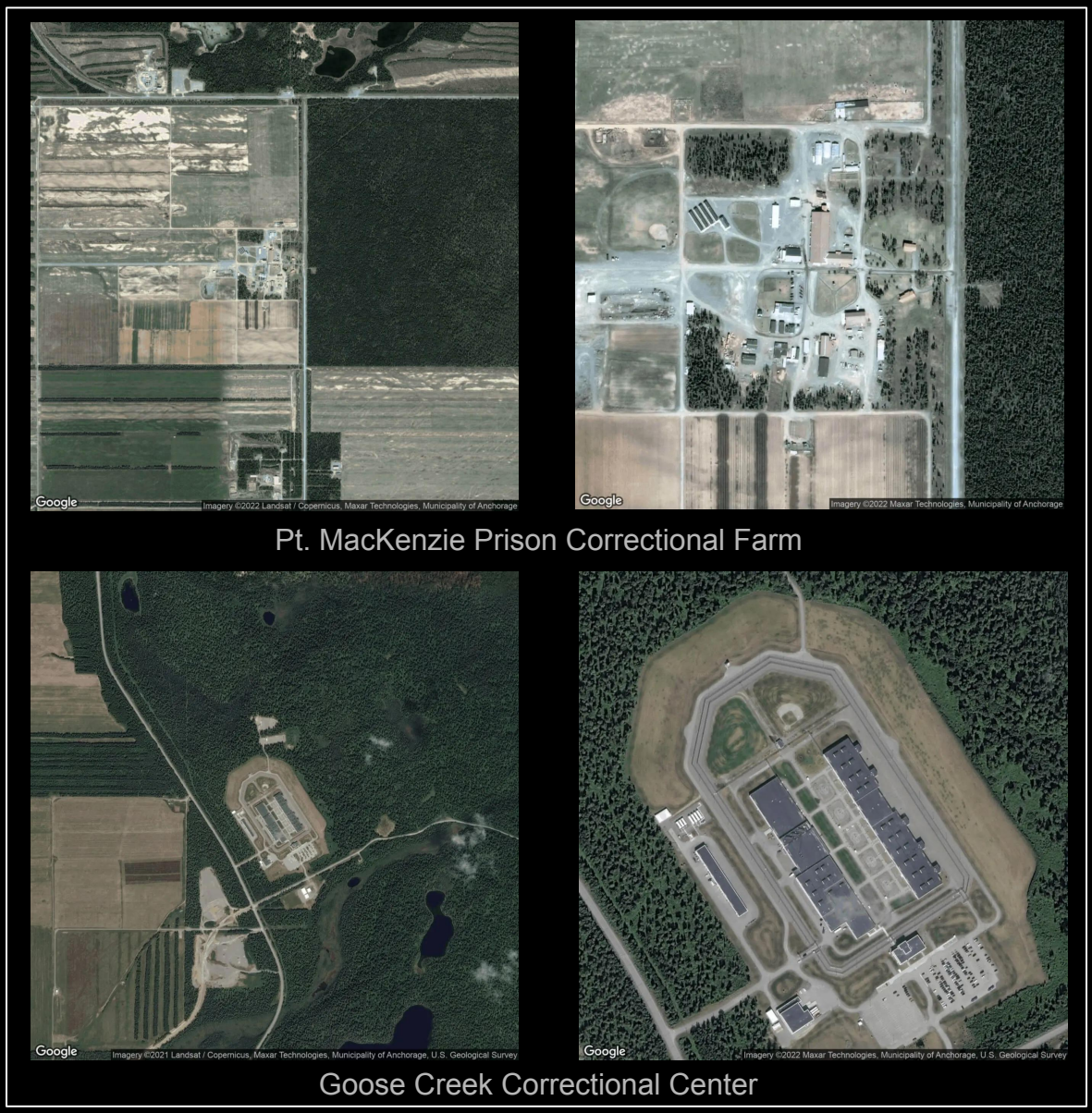


Figure 1 Satellite imagery of Point MacKenzie and Goose Creek prisons and surrounding area. From *Satellite Image Gallery*, by Prison Agriculture Lab, n.d. Used under fair use for educational purposes.

"The Point MacKenzie Correctional Farm has applied to ADEC for a pesticide use permit to apply pesticides to up to 230 acres of State-owned land located at the Point MacKenzie Correctional Farm at 13690 Guernsey Road, Wasilla, AK. Treatment is proposed to occur in from May through September 2012 and in years 2013 through 2016 if warranted, based on the agricultural need."

– Alaska Community Action Network

In 2012, Alaska Community Action Network (ACAN) alerted the public to concerns related to a permit for large scale spraying of pesticides on Point MacKenzie prison farmlands. Products named in the prison's permit application included: Dupont Curzate 60DF Fungicide, Bravo Weather Stik, Dupont Matrix Herbicide, Perfection Weed and Feed, Polyram 80 DF, Quadris Flowable Fungicide, Reglone Desiccant, Royal MH-30 Xtra. Raising the alarm, ACAN listed a number of health implications primarily focused on the broader public and the environment. They pointed out that many of the herbicides proposed for use at the farm could harm salmon streams, drinking water, farms and the Susitna Flats Game Refuge. Additional concerns focused on the impacts to human health including cancer, endocrine disruption, reproductive and developmental health risks. While not outlined as a concerns, these chemicals would pose a major risk to prisoners working on the 230 acre farm or handling these products (Alaska Community Action on Toxics, 2012). The table below shows the risks in greater detail:

Product	EPA Reg #	Active Ingredient(s)	Health / Environmental Impacts
Bravo Weather Stik	50534-188-100	Chlorothalonil (tetrachloroisophthalonitril)	Remains in the environment and is associated with **cancer concerns**, aquatic toxicity, drift incidents have prompted many EPA investigations into **respiratory** and ecological impacts
Curzate 60 DF Fungicide (DuPont)	352-592	Cymoxanil	Low exposures **cause liver, kidney and brain tissue damage** in rats, concerns for reproductive and **neurological effects in humans**
Matrix Herbicide (DuPont)	352-556	Rimsulfuron	Some lingering in soil and impact to non-target plants or aquatic life
Metribuzin 75 DF	66222-106	Metribuzin (triazinone)	Known **endocrine disruptor**, soil and groundwater contaminant
Perfection Weed & Feed 21-7-14	2217-532-2935	2,4-D / Mecoprop-p / Dicamba	**Endocrine-disrupting effects**, toxic to aquatic life and may have **effect thyroid in humans**
Quadris Flowable Fungicide	100-1098	Azoxystrobin (strobilurin)	Low human toxicity but potential impacts to aquatic life (algae, invertebrates), under review for broader ecosystem effects
Roundup Pro	524-475	Glyphosate	IARC classified glyphosate as a likely **carcinogen** but EPA, ECHA consider low cancer risk (when used properly), concern still around endocrine, reproductive development and microbiome effects
Reglone Desiccant	100-1-61	Diquat dibromide	Toxic to mammals as an **eye and inhalation irritant**, is persistent in soil and toxic to aquatic systems and birds, causes **oxidative stress and kidney/liver injury** in animals
Royal MH-30 Xtra	400-452	Maleic hydrazide	Possible **carcinogen**, potential **endocrine disruptor** that is persistent in treated tissues, regulatory screening lists include it for **reproductive concerns**

Figure 2. Summary of pesticide use and regulatory status.
Sources: Alaska Community Action on Toxics, 2012; U.S. Environmental Protection Agency, n.d.

Across the United States

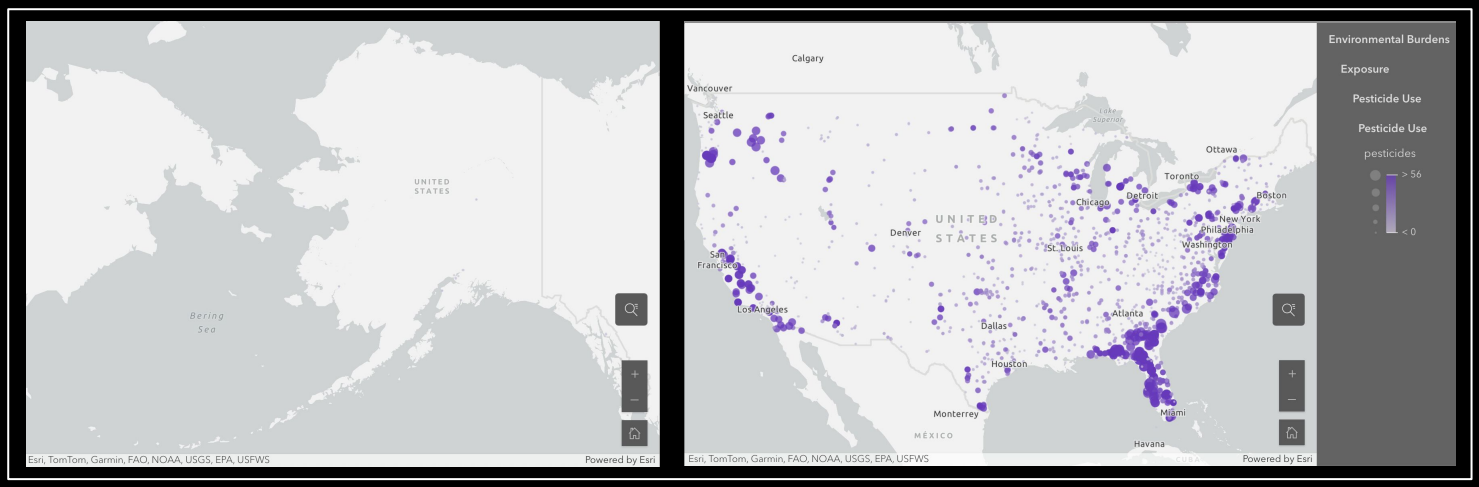


Figure 3. From *GIS map of Pesticide exposure* [Map], by Prison Agriculture Lab, n.d. Used under fair use for educational purposes

Estimates from 2015, and then projected forward to 2020 and 2025 using statistical models show pesticide use across the United States concentrated in a number of regions. The dataset used in Prison Agriculture Lab's map seen above infers potential pesticide exposure with Florida having the highest burden of pesticide exposure. The East Coast and Great Lakes Region, California, and Pacific Northwest also have elevated levels of exposure risk. This is based on data collected on the 20 most common chemicals active in pesticides, with 6 major crop types and 4 larger crop groupings represented (Prison Agriculture Lab, n.d.). In looking at Alaska there is little to no pesticide exposure indicated without zooming in to individual operations. This can be explained in part by the scale of Florida farming, number of species or concerns related to pests and types of pest management (Hoskins, 2025).

Pesticide use in prisons across the United States has long been entangled with human rights violations and ethical concerns extending beyond agricultural work. Prisoners, along with other marginalized populations were subject to unethical human experimentation throughout the 20th century. One of the most infamous examples of this is the Holmesburg Prison Pesticide Experiment conducted from 1950 through the 1970s at a Philadelphia prison. Researchers partnered with the United States Military and pharmaceutical companies to test the impact of pesticides on human skin. Prisoners were exposed to dangerous substances, including pesticides like DDT, which was one of the most common pest control and farming chemicals at the time. Individuals participating in the study were often unaware of the risks, even paying to participate in the study. Those individuals suffered from lasting health issues (Sarai, 2023; MacLure, 2021).

DDT exposure can lead to:

Dermatitis: skin inflammation, rashes, swelling, blisters

Nervous system damage: headaches, nausea, fatigue, dizziness

Liver damage, endocrine disruption

Cancer

Figure 4. DDT Health Impacts (Sarai, 2023; MacLure, 2021; Kabasenche & Skinner, 2014)

Human Health

Pesticides can cause immediate toxicity if a high dose is ingested, breathed in or comes into contact with skin or eyes. Depending on the type of pesticide, a small dose can also damage a person's health. Pesticides produce different types of toxicity for human bodies that include neurotoxicity (brain and nervous system damage), mutagenicity (changing or damaging DNA), carcinogenicity (cause cancer), teratogenicity (harm a pregnancy) and endocrine disruption (disrupt important hormones). In the immediate aftermath of an exposure, pesticide poisoning can lead to rashes, vomiting and even death. Long-term there is an increased risk of cancer, infertility, respiratory issues and neurological disorders (Ahmad et al (2024).

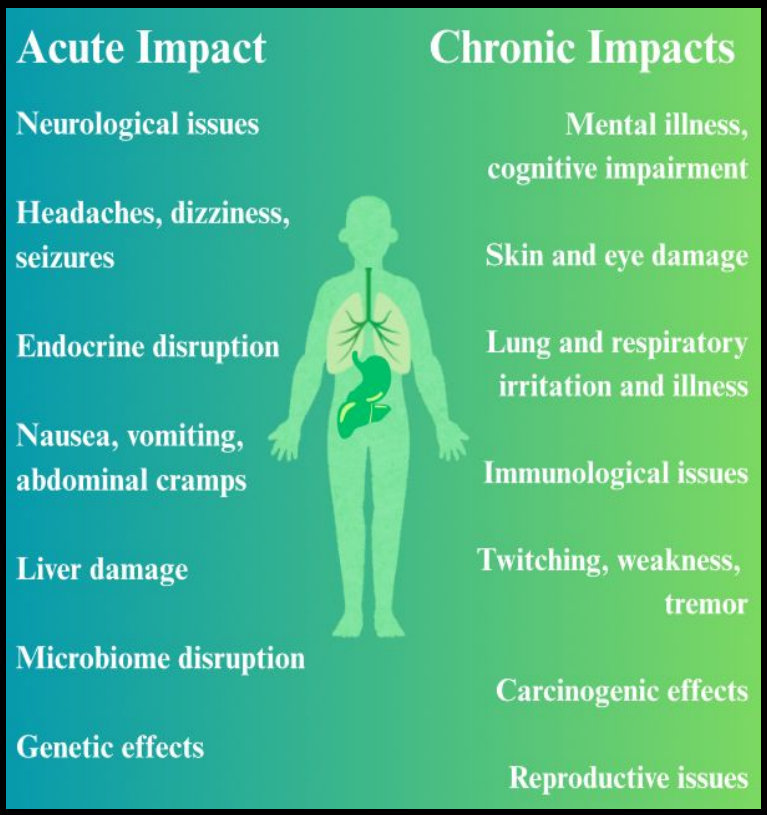


Figure 5. Acute and chronic impacts of pesticide exposure

Ahmad et al (2024) explores points of exposure:

Storage: Safely storing pesticides is a matter of great concern. Pesticides must be stored in locations away from sensitive groups in fire resistant shelter that can endure extreme temperatures or chemical changes with ventilation.

Transportation: Safely transporting pesticides requires sealed containers resistant to temperature changes. A fire extinguisher must be present throughout transport.

Use: Using pesticides is the most obvious context where caution is necessary to prevent harm or exposure to surrounding individuals or those engaging in application. After spraying or applying, clothing and hands must be thoroughly washed. Use of protective equipment is legally required.

Disposal: Pesticide waste should not be discarded anywhere other than designated locations, following state and federal regulations. Products and items should be stored until such time as they can be taken to a designated hazardous waste disposal site. Some forms of disposal include burying old containers or burning items.

According to the Center for Disease Control, every year, about 20,000 agricultural workers suffer from pesticide poisoning. According to the U.S. Government Accountability Office, that number is closer to 300,000 people (Earthjustice, n.d). Farm workers at Pt. MacKenzie Prison Correctional Farm have the potential to be exposed to harmful chemicals if the facility still uses even a portion of the pesticides outlined by Alaska Community Action Network in 2012. With the crops serving to feed and save money at Goose Creek Correctional facility, workers may be exposed in a number of ways. This might be on the job through inhalation or contact as well as ingestion of food and produce used to feed prisoners (Office of Management and Budget, 2022).

Rules and Regulations

Worker Standard Protections for pesticides do apply to farmers and workers within prison. This includes application and use of fertilizers as well as weed and insect control. As of 2024, the EPA finalized a series of legally binding rules regarding pesticide use. If pesticides are being applied to a prison farm, authorities and employers must provide annual proof of pesticide safety training and post pesticide application records. Like any other entity, prisons must follow decontamination protocols, require PPE (respirators), and adhere to restricted-entry intervals in locations where pesticides are applied. Use of pesticides requires a facility to maintain emergency transportation and medical access in case of exposure events. Unfortunately, it is hard to measure how closely prisons follow this protocol. If oversight is followed correctly, the EPA maintains compliance with these rules through monitoring, inspections and violation enforcement primarily using warnings and fines to manage compliance (U.S Environmental Protection Agency, n.d.).

Alaska, like most other states does not classify prisoner farmers or laborers as employees. Instead prisons view laborers as part of a custodial relationship. This means prisoners have limited protections. For example, OSHA does not have have jurisdiction over state or private prisons because of the custodial nature of prison workers. For this reason, prisoners are not allowed to engage in collective bargaining and their wages are determined by the state Commissioner of Corrections or Federal Bureau of Prisons (Mast, 2025). Farmworkers and laborers in Alaska like many other states face systemic barriers to refuse work under hazardous conditions. Prisoners face similar challenges and even greater risks, with their concerns about exposure often dismissed because they are considered to work under the same conditions and pesticide regulations as non-incarcerated laborers (Fernandez-Cornejo et al., 2014). Vulnerabilities are compounded when incarcerated individuals are unaware that pesticide exposure may be leading to their health problems. Furthermore linking a health concern to pesticide exposure is extremely difficult. Underreporting by prisoners as well as the lack of tracking or transparency on the part of the state mean that it is challenging to determine the scope of harm caused by pesticides (Mason & McDowell, 2024; Alaska Statutes 33.30.191., 2024).

(d) In employing prison inmates, the department shall comply with federal and state health and safety regulations, except for providing workers' compensation under AS 23.30.

(e) The provisions of AS 23 do not apply to the employment of prison inmates.

(f) Prison inmates productively employed under this section are not state employees nor do they have the rights or privileges given to state employees, including the right to participate in collective bargaining.

(g) In this section, “productively employed” includes the following kinds of employment:

(1) routine maintenance and support services essential to the operation of a correctional facility;

(2) education, including both academic and vocational;

(3) public conservation projects, including wildland fire prevention and control, forest and watershed enhancement, recreational area development, construction and maintenance of trails and campsites, fish and game enhancement, soil conservation, and forest watershed revegetation;

(4) renovation, repair, or alteration of existing correctional facilities as permitted by law; and

(5) other work performed inside or outside of a correctional facility under (b) of this section.

Figure 4. *Employment of prison inmates as defined by Alaska Statutes § 33.30.191 (2024).* Source: Alaska Statutes § 33.30.191 (2024), retrieved from https://law.justia.com/codes/alaska/title-33/chapter-30/article-3/section-33-30-191/

Challenges

Conflicting evidence and different research gaps make it difficult to attribute certain health effects or conditions to pesticides. This coupled with existing health disparities within prisons and the lack of adequate or consistent medical care at most U.S. facilities makes it very challenging to track or connect health to pesticide use at prison farming operations. Additionally, in 2013, Alaska's new pesticide management plan went into effect, eliminating public oversight, removing the public's right to know or comment on pesticide use on public lands as well as eliminating the right to know where pesticides were being used. There is no longer public participation in decisions about pesticides in Alaska with the state only having to share information with the public regarding: aerial pesticide applications, applications directly to water or multi-property government-led projects. This effectively eliminated public oversight over what was happening at MacKenzie Prison and potentially other locations. These new practices remain in effect as of 2025 (Alaska Community Action on Toxics, 2012; Alaska Department of Environmental Conservation, n.d.)

Pesticides are known to be toxic, but proving that they directly cause certain health problems, especially for incarcerated individuals is challenging. Research gaps, type of pesticide, variation in exposure level, and the influence of different environmental and biological interactions makes impact hard to measure.

In Alaska, policies, protocols, and use of pesticides in the state were once transparent. Changes to these policies make it difficult to find public information on pesticide use or permits unless administered by plane, directly to water sources, or are used for government projects across multiple properties.

When we combine challenges identifying and proving pesticide health impacts and the dismantling of environmental regulations and oversight with a population that is often neglected or ignored, we get a context where it is difficult to ensure safety.

The Future of Pt. MacKenzie Prison Farm

Farms like Pt. MacKenzie are closing because they are seen as outdated, harmful to prisoners, or no longer considered financially successful. Programs that save money for the state are not always beneficial to prisoners as jobs training. Programs that save money for the state or prison facilities do not always meet the needs of prisoners in terms of skills-building, job markets and labor trends. Pesticide use has the potential to add another downside or disincentive for funneling prisoners into farm labor roles. Point MacKenzie underscores the complexity of examining prison labor and agricultural work. While many individuals working the farm experience great relief being able to leave their cell or spend time outdoors, there is a troubling intersection between prison agriculture and environmental risks. Though the prison's story of the farm is one of rehabilitation, its farming practices and the hazards that come with the program are a concern. The downsizing of prison labor to a small crew has the potential to lead to prolonged hours of work and even greater pesticide exposure for a select few prisoners at the facility.

Incarcerated individuals are disproportionately at risk of injury or harmful exposures on the job that can lead to long term health impacts. The lack of public oversight and transparency around pesticide application broadly, and especially within prison farming operations is cause for concern. Alaska's limited environmental monitoring of correctional institutions and the remote location of Point MacKenzie make it an environment rife for exploitation of workers. Whether the facility continues to phase out its farming program or not, it is important that the public remains aware of the laws, policies, health hazards and conditions surrounding prison agricultural operations. If Alaska Community Action Network had not raised the alarm in 2012, there would be little to no information about pesticides being applied across the farm.

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