



## **Headwaters Farm Weed Management Update – Spring 2024**

In 2024 EMSWCD is investing increased attention and resources into land management of our Headwaters Farm. The District is aware of the weed issues and is responding with diligent attention, adaptive management, and a goal for continual communication. The Headwaters Incubator Program is a dynamic and intersectional program. Our weed management plan is integrated into a larger strategy to support soil health and a network of vibrant, productive, and diverse farms.

This year, close to 15 acres will be managed by staff (green, purple, and orange areas in attached map). The non-leased land is under an intensive soil-health and weed suppression regime. For land that is leased to incubator farmers (blue), the District provides support, oversight, and incentives to manage weeds and promote soil health.

Below is a high-level summary of where we are and what is ahead.

### **Key Event Timeline at a Glance**

- April – Winter cover crops terminated; perennial cover crop sown on trial plot.
- May – Sow summer cover crop; convene Weed Management Team; Headwaters Farm Soil Health Assessment Report available; pastured pigs arrive; nutrient balancing begins.
- June – Farmer/staff weed management progress reports begin (if these reports show something needs to be changed at any point in the season, staff will adjust accordingly).
- July – Farmer/staff weed management progress reports continue; weeding labor crew available to HIP farmers.
- August – Farmer/staff weed management progress reports continue.
- September – Farmer/staff weed management final assessment; winter cover crops sown.
- October – Winter cover crops irrigated, as needed; Weed Assessment Team reviews the assessment progress to make improvements for future seasons.

### **Addressing Weeds in District Managed Plots (green, orange, and purple areas on map)**

- Added capacity:
  - Contracting for 20-hours/week of added labor to support staff with mowing, field preparation, and managing cover crops.
- Cover cropping:
  - Mowed and disced the majority of the winter cover crops during the second half of April (remaining covers will be terminated at the next weather window).
  - Sourced a diverse summer cover crop blend of annual, frost-sensitive species optimized for weed smothering and soil building – anticipate sowing in May as soon as conditions allow.
  - Sourced and sowed a perennial “smother-crop” blend to trial on one plot.
  - Invested in two large sprinklers to irrigate cover crops if rains end before sowing is complete.
- Soil nutrients:
  - Worked with soil health contractor, Jen Aron, to develop a detailed nutrient balancing program based on the Headwaters Farm Soil Health Assessment conducted under the guidance of Nichole Masters, a soil health and farmland restoration specialist – report available in May.
  - Invested in a boom sprayer to enable the nutrient balancing program.



- Planned nutrient trials on a small test plot to continue to refine ideal soil chemical, structure, and biological make-up at Headwaters Farm.
- Soil microbiome:
  - Sourced beneficial microbe inoculant which will be applied to all summer cover crop seed.
  - Improved the sub-soiler to facilitate “rip-and-drip” soil inoculation and reduce compaction.
  - Sourced soil amendments to improve plant nutrition and resiliency, bolster photosynthesis, and support microbiology.
- Nutsedge:
  - Established a partnership with a local livestock farm and a beginning livestock farmer to trial pastured pigs for nutsedge management (pigs expected onsite in May).
  - Utilizing nutrient balancing and smothering from the summer cover crops to reduce nutsedge pressure in all areas under District management that aren’t part of the pig trial.

### **Addressing Weeds in Leased Plots (blue areas on map)**

- Technical assistance:
  - Requiring HIP farmers to have regular check-ins (at least bi-weekly) with farmer and educator, Jen Aron.
  - Offering a series of workshops on soil health and management.
  - Staff providing extra on-boarding with new farmers focused on topics like bed preparation and weed management systems.
- Tools and equipment:
  - Invested in a cultivating tractor with a simple, universal one, two, or three-row cultivating program that farmers can adopt with options including:
    - Spyder basket weeder
    - Finger weeder
    - Pathway sweeps
    - Seeder
  - Providing weed management tools to HIP farmers free of charge.
- Accountability for farmers:
  - Established a Headwaters Weed Assessment Team to provide farmers with weed management progress reports throughout the growing season and determine a final assessment of each farmer’s weed management effectiveness in September (see below).
- Incentives:
  - Effective weed management is a criterion for farmers to receive the Headwaters Graduate Bridge Award.
  - Farmers who effectively manage weeds this season will receive free cover crop seed for fall planting.
- Other supports and fail safes:
  - Lined up a farm labor crew to come in July and offer each HIP farmer several hours of free weed management labor.
  - Farmers have agreed to give staff the authority to mow any bed or area we deem as crop failure from weed overgrowth.
  - Provided farmers with inoculant for seeds and transplants to improve crop resiliency and vigor.



### **Collective Accountability**

There are two objectives of the Headwaters Weed Assessment Team:

1. Assess weeds in farmer fields
2. Assess weeds in District-managed plots

The committee consists of a former OSU Extension employee highly familiar with HIP, two program graduates greatly invested in Headwaters Farm and beginning farm viability, and staff. For assessing farmer fields, the staff member will be the Headwaters Farm Program Manager. For assessing the District-managed plots, the staff member will be the Rural Lands Program Supervisor.

The team will be tasked with the following duties:

- Develop a weed assessment rubric
- Conduct progress reports of each farm in June, July, and August and provide those reports to the farmers
- Issue a final report to each farm in September with satisfactory/unsatisfactory determination
- Assess weed management effectiveness in each District-managed plot

Incubator farmers will be invited to use the rubric to score themselves along with the team. This will help ensure that their voice is being captured and that all parties are engaged in a dialog of what proper weed management looks like and what approaches are working, not working, or needing additional support.

### **Communications Loop and Reporting Back**

Julie will visit Headwaters Farm bi-weekly to meet with the HIP staff to discuss and assess weed management progress. Kelley will join Julie once per month for an assessment. The Board will be kept up to date on the Headwaters weed management plan as a dedicated portion of the Rural Lands program updates during each Board Meeting.

# Headwaters Farm Field Layout for 2024

