

HEMP NEWSLETTER

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SOUTHERN OREGON RESEARCH AND EXTENSION CENTER (SOREC)

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Hemp Producers can Create Corn Earworm Monitoring Kits for this Season

Establishing or identifying pest monitoring tools can help with pest management decisions to avoid unnecessary insecticide applications, reduce expenses and minimize pesticide resistance issues in the future. The corn earworm insect (*Helicoverpa zea*), is a potential threat for Oregon industrial hemp grown for CBD and smokable flower. It will be important to monitor for this pest each growing season.

This pest feeds on a variety of crops. It goes by several common names depending on the crop where it causes economic damage such as corn earworm in sweet corn; tomato fruitworm in tomato; and cotton bollworm in cotton. In the future, it may be assigned another name if damage becomes persistent in hemp. Corn earworms may be new for Oregon hemp growers, but they are not new for Oregon sweet corn growers; they have been considered a major sweet corn pest since the late 1980s, based on available scientific literature.

The primary reason for corn earworms as high alert pests for the Oregon hemp industry is that their larvae attack harvestable portions of the plant such as flowers and flower buds. Hemp entomologists from Colorado State University and University of Kentucky have noticed that larvae are mainly green in color in hemp despite the fact that this pest has multiple other color forms



*Corn earworm larva and related damage to the hemp plant bud.
Photo Credit:
Whitney Cranshaw,
Colorado State University*

including pink, dark brown to almost black. A producer may need a magnifying lens to correctly identify corn earworm larvae, one diagnostic feature is that larva has a black or brown head with rows of dark-colored tubercles and bristles along the body. The OSU Hemp Extension team will help growers with this and other possible hemp pest identifications. We will talk more about life cycle and management options in upcoming issues.

Good news for hemp growers is that there is no need to reinvent a new monitoring tool for this pest. The monitoring tool developed for other crops can be easily used in hemp. To monitor corn earworm populations in hemp, use

Heliiothis traps baited with pheromone lures. The attractant is a sex pheromone, the chemical emitted by the female to attract a mate. This system will only capture male corn earworm adult moths.

The monitoring kit includes a Heliiothis trap (\$80-\$107), sex pheromone lures (\$15-\$20) and a fence post to set a trap in the field. You can use a trap for several years but new lures should be purchased each year. Growers can order monitoring kits from several US-based companies e.g. Great Lake IPM, Gemplers and Scentry Biological Inc.

For effective monitoring, traps should be placed in each field by late July/early August, and maintained throughout harvest. Trap captures should be regularly recorded, about two times per week. Lures need to be changed at two-week intervals. Moths should be emptied from the traps each time. When captured moth numbers are increasing incrementally, researchers at Colorado State University suggest using spray applications. The OSU Hemp Extension team will also be monitoring to determine an economical threshold in the future. Please watch this short YouTube video by Ohio State University for instructions on setting the trap (www.youtube.com/watch?v=W6b7OtUOo8Y).

Irrigate Young Transplants with Care

It seems funny to be warning growers about applying too much water to newly transplanted hemp fields during a year when Oregon is experiencing drought. However, it is worth repeating that one of the key factors in poor hemp growth is soil saturation or poor drainage.

Some growers in the Rogue Valley had their hemp transplanted by late May while others are still getting plants in the ground during the first week of July. With the triple-digit temperatures we've recently been seeing, growers need to be careful with soil moisture. Work to ensure plants are well watered at transplanting and maintain moisture at the root ball until the roots have had a chance to grow out into the field soil.



Saturated conditions significantly limit hemp growth. See the missing and stunted plants and tire ruts in an excessively wet hemp field. Photo Credit: Gordon Jones

Some growers tend to over-apply irrigation water at, or prior to, transplanting. While the hemp plants are still small, the amount of water used is quite minimal, even on a hot day. It can take several days for the soil to dry down from a saturated state. Small transplants sitting in excessively wet soil is a recipe for sluggish growth and soil-borne disease problems like Fusarium and Pythium root rot.

News and Updates



Healthy hemp seedling (left) and several Fusarium infected seedlings (right). Stress caused by saturated conditions can exacerbate Fusarium in hemp. Photo Credit: Achala KC

A few key reminders:

- Poor drainage is one of the key soil characteristics that limits hemp production.
- Avoid planting just prior to extremely high temperatures.
- Ensure that irrigation lines are wetting the root ball of newly transplanted seedlings without saturating surrounding soil.
- Check soil moisture occasionally in the root zone of new seedlings.
- Use care when managing irrigation on heavy clay soils which are apt to maintain saturated conditions at the root zone.

- **Southern Oregon Hemp Growers Forum**
On July 6, 2021, Dr. Clint Shock (OSU Professor Emeritus) provided updates on hemp irrigation trials sponsored by the Global Hemp Innovation Center; Dr. Kenneth Frost (OSU- Hermiston, Plant Pathologist) provided a review of hemp diseases in Oregon; and Dr. Govinda Shrestha (Hemp Extension Specialist) provided a review of hemp insect pests in Oregon. Watch the recorded Zoom meeting, if you've missed it: media.oregonstate.edu/media/t/1_vxu2g8e4
- **2021 Hemp Research/Extension Meeting**
On July 8, 2021, Dr. Richard Roseburg (Southern Oregon Research and Extension Center Director) organized the first hemp extension Zoom meeting. More than a dozen participants attended the meeting including OSU Research and Extension Faculty, Associate Extension Dean, Sam Angima and Global Hemp Innovation Center team members. Each participant shared their program for this year.