

## Liverwort

# LIVERWORT

*Marchantia polymorpha*

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**Family:** Marchantiaceae

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**Plant status:** Weed

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**Habit:**

Liverwort has a flat, dense, branching form. The thallus form a fleshy mat that grows prostrate over the surface of container crops and/or greenhouse and nursery floors.

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**Flowers:**

Liverworts do not have flowers (and thus do not produce seed), instead they have archegoniophores and antheridiophores (female and male sex organs). Liverworts are unisexual, with male and female sex organs forming on different plants. Antheridiophores look like an umbrella while the female archegoniophores have finger-like projections.

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**Favorable environments:** Container  
Greenhouse

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**Favorable environment notes:**

Liverworts grow vigorously in conditions with high humidity, high nutrient levels (especially nitrogen and phosphorus), and high soil moisture. Environments that foster any of these 3 conditions will make control of liverworts difficult. Nursery areas that are moist, humid environments or any areas that receive consistent moisture such as propagation benches and flats, greenhouse floors, gravel



container areas can be especially prone to liverwort infestations.

**Dissemination:**

Gemmae cups contain small asexual propagules that will splash when hit with irrigation or rain drops. It has been determined that the propagules can splash up to a distance of 60 inches when hit with irrigation or rain water. The small propagules will form another plant if it lands in a suitable environment. This is one of the primary mechanisms by which liverwort spread.

**Management link:**


PNW Weed Management Handbook  
Weed Control in Container Crops

**Of interest:**

In order to effectively control liverwort, you must make growing conditions for the liverworts as difficult as possible. To do this, you should attempt to create an environment where the ambient air is dry, the surface of the container is dry (as dry as possible), and nutrients are not available on the container surface. Cultural practices that can assist with discouraging liverwort proliferation include:

- Incorporating or dibbling fertilizers in containers rather than topdressing.
- Consider ways to modify your irrigation practices to limit overwatering. Liverworts (and pearlwort) thrive in wet conditions, and any practice that limits the amount of water will decrease liverwort vigor.
- Changing your media to a mix that has better drainage will also reduce liverwort vigor. Coarse media that drains well, especially near the surface, is ideal. Coarse bark, pumice, perlite, and vermiculite would work well to increase drainage.
- Increase air flow throughout your crop. Consider raising sidewalls of greenhouse and hoop houses when possible or using wider spacing of containers or rows. Anything that increases airflow and decreases humidity should help reduce liverwort vigor.

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