

Hemp Disease to Look Out For

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Pythium dissotocum on hemp plant

Pythium: Hemp Disease to Look Out For

Several species of *Pythium* from both greenhouse and field production of hemp have been identified in Utah. To date we have found three species – *Pythium ultimum*, *P. dissotocum* and *P. myriotylum*. *P. ultimum* has a wide host range including vegetables and field crops. *P. dissotocum* is found on lettuce, and *P. myriotylum* is found on vegetables but usually in warmer climates. So far, *P. myriotylum* was only found in greenhouses.

Symptoms

The symptoms consist of root rot and stunted plants (Fig. 1) for *P. ultimum* and *P. myriotylum*. The outer layer of the roots comes off easily leaving only the core layer. In the case of crown rot, the pathogen entered the crown right at the soil line and subsequently colonized and rotted the crown area. *P. dissotocum* did not cause a root but rather a crown rot on older plants. The tissue of the stem is discolored, which can be seen in Fig 2 and 3.

Method of infection

Pythium is a soilborne pathogen that likes wet conditions. It produces spores that can swim in a film of water using flagella (hairlike appendages) to move themselves forward. Management of *Pythium* on hemp is difficult and there is currently very little information. Based on *Pythium* diseases in other crops the following recommendations are made.

Recommendations so far

In the field, the best option is using drip irrigation and avoiding stem wetting. In a greenhouse setting it is important to keep benches, pots and tools clean and sterilized using a 10-15% bleach solution or other disinfectant. *Pythium* can be in residual potting mix in pots from the previous crop. When mixing potting soil, using a tarp to avoid the potting mix coming into contact with the bare ground can minimize contamination.

Which Diseases to Watch for in Hemp