



## YOUR HOP LATENT VIROID CHECKLIST

Hop Latent Viroid (HLVd) is a single-stranded, circular infectious RNA that causes stunted growth in cannabis and hemp plants that can decrease yield as much as 50%. Use these checklists to help you identify, eliminate, and prevent an HLVd infection in your grow

### Identification

If you observe any of the following symptoms, you may have a hop latent viroid (HLVd) infection.

#### Propagation

- ☐ High percentage of clones dampening off
- ☐ Clones unable to take root

#### Vegetative Stage

- ☐ Lateral branching
- ☐ Brittle stems
- ☐ Smaller, narrower leaves
- ☐ Discolored, malformed leaves
- ☐ Shorter internodal spacing
- ☐ Odor similar to composting leaves

#### Flowering

- ☐ Decreased flower size and/or density
- ☐ Decreased trichome production
- ☐ Decreased oil production
- ☐ Increased hermaphroditism
- ☐ Increased susceptibility to pathogens (powdery mildew, botrytis, etc.)

### Elimination

If you suspect a HLVd infection, use the following steps to eliminate it.

- ☐ Test any plants showing signs of HLVd infection with PathoSEEK Hop Latent Viroid Detection Assay and remove any plants that test positive
- ☐ Expand testing to include all mother plants and remove any plants that test positive
- ☐ Replace mothers with new plants grown from seed
- ☐ Perform a deep clean of all equipment and surfaces using a 10-20% bleach solution



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### Prevention

Use the checklist below to make sure you are taking proper steps to prevent HLVD infection.

#### Propagation

- ☐ Screen mother plants for HLVD prior to taking any cuttings
- ☐ Space out mother plants to prevent contact
- ☐ Sterilize sheers and equipment with 10-20% bleach solution before and after contact with plants
- ☐ Sterilize trays and humidity domes with 10-20% bleach solution
- ☐ Use fresh cloning gel for cuttings from different mother plants
- ☐ Quarantine and test outside clones before introducing them to clean plants

#### Vegetative Stage and Flowering

- ☐ Space out plants to prevent contact
- ☐ Sterilize pots with 10-20% bleach solution prior to transplanting
- ☐ Sterilize sheers and equipment with 10-20% bleach solution before and after contact with plants
- ☐ Sterilize irrigation lines with 10-20% bleach solution
- ☐ Require visitors and staff wear hairnets, beard nets, gloves, and Tyvek coveralls

### Test Plants In-House with Medicinal Genomics

Medicinal Genomics uses its unmatched expertise in cannabis genomics to create qPCR assays that identify microbial contamination, plant pathogens, and genetic traits.

Contact Medicinal Genomics ([info@medicinalgenomics.com](mailto:info@medicinalgenomics.com) or 866-574-3582) to get the equipment and reagents you need to start testing plants in-house!