3 Rivers Biotech Identifies Root Tissue from Mature Plants as the Most Reliable to Detect Hop Latent Viroid (HLVd)

For detecting Hop Latent Viroid (HLVd), study results indicate root tissue as the best sample type. Mature plants are better than young plants for detection.

VANCOUVER, BC, CANADA, February 28, 2023 /EINPresswire.com/ -- 3 Rivers Biotech Ltd. (“3 Rivers”), a leading plant tissue culture company, and it's pathogen testing subsidiary Genie Lab announced that after an extensive study of HLVd distribution in infected plants, testing of root samples from mature plants dramatically improves the detection of the viroid, thus limiting the potentiality of false negatives.

The previous detection of HLVd in root aphids raised concerns that sampling, absent of any root tissue, may be a leading cause of false testing negatives. 3 Rivers/Genie Lab collected tissue samples from 36 plant varieties of diverse genetic lineages to test this assertion. Each plant had three individual samples, plus one pooled sample taken from both stem and root tissue. Fourteen plants within the testing population had root tissue that tested positive for the viroid. Of these fourteen plants, ten had all three individual roots test positive. Of the remainder, one plant had two of the three individual samples test positive, and three plants had only one of the separate roots test positive. Of the three plants that returned only one positive root sample, 3 Rivers repeated testing one month later and found that the infection had spread, and all three individual samples were positive. Stem testing only detected seven positives, of which only two had all three individual samples test positive. Two of the three samples tested positive for one of the remaining stem positives, and five had only one of three samples test positive. In summary, HLVd was detected in 83.3% of the individual root samples from HLVd positive plants whereas it was detected in only 28.6% of the individual stem samples from these same plants.

Dr. Jack Munz, Head Pathologist at Genie Lab, noted, "These results strongly support focusing sample collection on multiple root sites at a minimum of two time points, three to four weeks apart to accurately detect HLVd infections. We also suggest testing mother plants rather than clones, as we have noticed a reduced ability to detect HLVd in immature clones from infected material. This is an indication that cloning may trigger a temporary suppression of the viroid. These results are preliminary, and we are doing additional testing to see if this suppression continues as the plant matures. Focusing on where and when a pathogen will be, makes testing more meaningful, providing greater value to customers."

About the Company

3 Rivers Biotech Ltd. is a plant biotechnology company dedicated to eliminating the risks and variables of commercial cultivation. Using proprietary tissue culture technology, our customers are empowered to detect and remediate infected plants, produce disease-free plants at scale, and consistently achieve great results in agriculture.

www.3riversbiotech.com

Genie Lab Testing is a division of 3 Rivers Biotech that provides industry-leading plant pathogen testing services across North America. Continual product development and optimization of qPCR methods for 11 viral pathogens and 35 fungal pathogens allows Genie Lab to provide partners with fast, transparent, and accurate testing at the lowest price.

www.genielabtesting.com

For further information about 3 Rivers Biotech or Genie Lab Testing and its solutions, please contact:

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