PRESS RELEASE

of the International Bremia Evaluation Board, United States (IBEB-US)

Salinas, CA, July 1, 2025

A new race of *Bremia lactucae*, BI: 10US, has been identified and denominated in the Western US.

Bremia lactucae, causal agent of downy mildew in lettuce, is genetically variable. Even within one lettuce production field, several races may be present. Monitoring changes in the Bremia population is important for breeders and growers. The International Bremia Evaluation Board, Unites States (IBEB-US) is a collaborative effort of private seed companies, informed by researchers from public institutions, that collects and characterizes *Bremia lactucae* field isolates and nominates new races. IBEB-US is a regional association that, along with IBEB-EU in Europe, is coordinated by the IBEB Global Coordinating Body (IBEB-G).

Previously, nine races have been denominated within the United States. However, these are not sufficient to represent the current variation of Bremia populations in the western US.

For the past three years several isolates with the sextet code IBEB-D 45-7-2 have been collected across multiple locations in California and Arizona. The isolate VP-302 from San Benito County, CA is representative of these isolates and is now denominated as the type isolate of new race BI: 10US. It breaks frequently used resistance genes, including *Dm25*, *Dm38*, and *Dm56*.

Although breeding companies supply growers with lettuce varieties possessing resistance to the denominated BI: 7 to 10US races, this resistance is not a guarantee against downy mildew. The declared resistance gives growers protection against these races. However, downy mildew disease may be caused by rarer pathotypes with novel virulence characteristics that have yet to be denominated as races. Also, resistance is defined as the ability of a plant variety to restrict the growth and development of a specified pest or pathogen and/or the damage they cause when compared to susceptible plant varieties under similar environmental conditions and pest or pathogen pressure. Resistant varieties may exhibit some disease symptoms or damage under heavy pest or pathogen pressure.

IBEB-US emphasizes the importance of chemical control and hygiene measures in addition to plant resistance. Fungicide application, especially in a young plant stage, gives additional protection to resistant lettuce crops, which will help prevent development of new Bremia races. Proper hygiene practices, such as removal of debris and diseased plants, cleaning of farm equipment and prevention of prolonged periods of leaf wetness, will reduce the spread of Bremia in lettuce crops.

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