ASIAN SOYBEAN RUST RESISTANCE

ASIAN SOYBEAN RUST (ASR) IS A DEVASTATING, WINDBORNE FUNGAL DISEASE that could result in significant yield losses in the absence of genetic resistance and fungicide control. DuPont Pioneer is identifying and testing lead genes that demonstrate resistance to ASR.

R&D PIPELINE PHASE

- **DISCOVERY**
- **PHASE 1**: PROOF OF CONCEPT
  - Continuing to identify and test lead genes to confirm efficacy against the target.
- **PHASE 2**
- **PHASE 3**
- **PHASE 4**
- **LAUNCH

GROWER VALUE

**Harvestable Yield + Input Control + Risk Management**

ANTICIPATING NEEDS / In untreated fields in South America, yield losses of up to 80 percent have been reported. Yield losses occur as a result of premature defoliation and seed quality, including seed number. In Brazil alone, growers typically spend $1.0 to $1.5 billion annually in chemical and application costs to minimize losses from ASR. In order to meet grower needs and deliver local solutions, Pioneer researchers are actively screening for genetic resistance and investigating biotech solutions for ASR disease management.

DELIVERING SOLUTIONS / Pioneer researchers are actively screening for genetic resistance to ASR pursuing both native and transgenic research approaches for ASR resistance for the South American market. Pioneer® brand soybean varieties with resistance to ASR will require less fungicide treatment, reduce application costs, and have greater yield stability than susceptible varieties. Pioneer continues to be committed to delivering products with superior agronomics that provide sustainable, on-farm solutions that meet disease resistance needs.

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Pioneer® brand hybrids with the biotech ASR trait will not be offered for sale or distribution until completion of field testing and applicable regulatory reviews.

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