Flooding or submergence

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Rice Fact Sheet

What it does

Flooded fields lead to abnormal plant growth. It limits oxygen and sunlight, thus limiting the plants' food.

Why and where it occurs.

Flood can occur anywhere that causes water accumulation over large areas which are not normally submerged. Rice stems have nodes, which break when there is tremendous pressure due to strong wind/rainfall occur. Cloudiness decreases the process of photosynthesis in plants. Less food makes rice plant to weaken and susceptible to lodging. Some pests also attack rice crops grown in flooded fields, such as the yellow stem borer and the Ufra nematode. At the field, different varieties have different reactions to flood.

How to identify

- Plants damaged by flood are usually elongated and weak. Plants lose their color turning gradually white, and leaves have a mud film.
- The symptoms of flood damage are similar to lodging due to strong wind, strong rainfall, and long period (e.g., a week) of cloudiness, which happens during monsoon periods.
- To confirm cause of damage, check the field and/or ask farmer about recent flooding and water levels.

Why is it important

Damage is most severe during flowering. When flooding occurs at flowering, fertilization would not occur resulting to total grain yield loss.

How to manage

- Ensure waterways are clear to make sure drainage is quick
- Adjust planting time to fit water fluctuations in the area

Assam Agribusiness and Rural Transformation Project (APART)

The World Bank is the funding agency of APART
Department of Agriculture, Assam is the nodal department for implementation of APART
ARIAS Society is the State level coordinating and monitoring agency for APART
Assam Agricultural University is the leading Agricultural University of the State and implementing agency of APART, imparting research and scientific support.
International Rice Research Institute (IRRI) is the rice global leader providing technical and hand-holding support in the implementation of APART