Muddy water

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Rice Fact Sheet

What it does
Muddy water reduces oxygen supply for the germinating seed, thus leading to low crop establishment.

Why and where it occurs

The problem occurs when seeds germinate and/or grow in Muddy water reduces the oxygen supply of the germinating muddy water. The problem only occurs in direct-seeded seeds fields.

Crops can be surface-broadcasted (wet or dry), drill-seeded (using machines) or broadcast and incorporated when sown on dry fields. Pre-germinated seed is typically used when wet direct seeding. Direct-seeded fields tend to have greater problems of lodging, especially when the seed is surface-sown. Some fields are sown into standing water, or the water enters the field shortly after seeding.

Muddy water reduces the oxygen supply of the germinating seeds

How to identify
Fields with muddy water usually have low crop establishment. The pattern of damage is usually general across the field.

Various problems causing problems of crop establishment (e.g., cloddy soil, seed too deep, soil too soft at seeding, poor emergence in low spots in fields, heavy rainfall at seeding, soil crusting, poor seed quality, poor seed distribution, low seed rate, water stress, clogged seeder and/or pests such as ants, birds and rats that remove seed at planting.
To confirm the cause of the problem, check or ask the farmer about the color of water at the time of crop establishment (direct seeding only).

How to manage
For good establishment, manage water properly and ensure well-leveled water, allowing water to settle
Ensure an appropriate seed rate with even distribution of seed
Crop stand should be of the order of 100-200 plants per m^2, use seed rates between 40-60 kg per ha

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