

What it does

Soils that are too soft have poor crop emergence and poor stand establishment.

Why and where does it occur

The problem of soil being too soft occurs in wet direct-seeding systems where insufficient time to settle soil is given between final wet land preparation (puddling) and sowing.



How to identify

Check the field for the following symptoms:

- Poor crop emergence in direct-seeded fields
- Plants fail to emerge, as seeds sink too deep and have problems of reaching the soil surface

The pattern of damage across the field can be general, but often occurs in low spots of the field with standing water.

Various factors that may cause problems of crop establishment are undulating topography cloddy soil, too deep seeding, too shallow seeding, too soft soil at seeding, poor emergence in low spots in fields, heavy rainfall at seeding, soil crusting, poor seed quality, low seed rate, poor water/irrigation management, water stress, muddy water at seeding, clogged seeder and/or pests such as ants, birds and rats that remove seed at planting.

To confirm cause of problem, check or ask farmer about soil conditions at the time of direct seeding. Check if seed has sunk to more than 0.5 cm depth. Check soil consistency. The problem is likely to be greater with the looser consistency of the soil-water mix.

Why is it important

Good planting or crop establishment is the foundation for good yield. If soils are too soft, the crop stand in direct-seeded fields can be greatly reduced. Its economic effect is direct due to a reduced plant stand and subsequent yield reduction.

How to manage

Soil consistency is primarily important just at the time of crop emergence.

A general thumb rule is that, the field is ready to be sown when a small "V" channel made in the soil with a stick holds its shape. If the small "V" collapses quickly, it is likely that the soil is still too soft for sowing.