

# Managing rust diseases in wheat and barley

Wheat and barley are among the important grain crops in the world other than with rice and maize but they are affected by rust diseases which causes decrease in yield.

Management of the disease is by use of resistant varieties. These reduce on the attack of rust diseases. Seed treatment protects the seed from rust diseases and is important to grow a healthy crop. You can coat your seeds with cow urine and dung. To coat 1 kg of seed, mix half a glass of cow urine with 1 cup of fresh cow dung and drop the seed into the slurry then dry the coated seeds in a shade before sowing. Seeds can also be coated with trichodema.

## Field control

Always scout and monitor for rust especially when the weather is wet and rainy. In the field, you can spray with an organic solution of trichodema 3 weeks after transplanting.

You can make your own organic fungicide by mixing one handful of cow dung, half a litre of urine and 2 handfuls of neem leaves in 10 litres of water. Keep the solution in a shade for 2 days and then filter the solution. For half a hectare, mix the filtered solution in 250 litres of water and spray in the morning or evening.

Incase all the above fail, use 10 to 15 days' old sour butter milk for spraying. For half a hectare, mix 7 litres of sour milk in 250 litres of water and spray.

You can also mix half a tab of dry powdered leaves of red amaranthus, mint or hibiscus and mix in 250 litres of water. Keep it over night and filter to spray the next day and again after 15 days.