



India building defences against wheat epidemic

By Chandrika Mago/TNN

New Delhi: As the warning on a global stem rust epidemic in wheat resounds around the world, India is racing to get three new varieties — lines in scientific parlance — which are resistant to the latest strain of the disease into fields across north India.

India has been alert to the new threat emerging from Africa since 2002. Over the past three years, tests have confirmed that PBW 343, India's leading wheat variety grown in Punjab, Haryana, western UP, even Bihar and Rajasthan, is vulnerable if Ug99, the new strain of stem rust disease, attacks South Asia. PBW 343 has a hold on six million hectares of India's 26 million hectares under wheat. Millions of

hectares of wheat fields in Pakistan and Bangladesh are as vulnerable.

Scientists have yet to test whether wheat varieties popular in south or central India are also susceptible to Ug99, which was first reported in Uganda in 1999 and has spread to Kenya and Ethiopia. They now plan to do this.

Indian Council of Agricultural Research chief Mangala Rai says they have been working since 2002 to breed lines resistant to Ug99. Rather than test these here and risk the disease coming in, they sent 22 released lines and some registered genetic stock for testing to Kenya — probably one of the first countries to do so.

New protective genes introduced in three worked — one of these is PBW 343. All

of the PBW 343 which presently grows in fields is susceptible, says M Prashar, the Indian wheat scientist who returned on Monday from a two-day international conference on a global rust initiative in Kenya. Introduced in 1996, this variety has spread fast since it yields about five tonnes a hectare, against the usual average of just over four tonnes a hectare.

Stem rust, which shows up as deep brown spots on the plant, uses up the food supply meant for the seed and reduces the yield drastically. Spores of this fungus are carried by the wind. Even a 10% drop in yield, fear scientists, could see India's production of about 74 million tonnes plummet close to "a begging bowl" situation.