



CROP HEALTH SITUATION DURING MARCH AND EARLY APRIL, 2009

Incidence of yellow rust was widespread on PBW 343 at many places in North Western Plain Zone (NWPZ), especially in Punjab. The rust, though appeared in February, but it was visible on large scale in the month of March when crop was in dough stage. The reports were received from Jammu (Vishal Gupta), Ludhiana (I.Sharma), Faizabad (B.N. Singh), Malan (S.K.Rana), Pune (S.C.Misra), Mahabaleshwar (B.P. Kurundukar) and Jaipur (V.L.Majumdar) for the month of March, while Drs. S. S. Karwasra, B. D. Sharma, and R. S. Beniwal of CCS HAU, Hisar surveyed the north-eastern districts of Haryana on April, 2-4 2009. Besides, DWR crop protection programme sent specially constituted team to visit parts of Punjab and Haryana from March 20 – 22, 2009. Crop protection Scientists of DWR (Drs. A.K. Sharma, M.S. Saharan, M.C. Jat, K.S. Babu) visited several villages in Karnal, Kaithal and Kurukshetra districts. Tour reports of Dr. D.P.Singh as part of NEPZ monitoring team (March,13-19) and Dr. D. Mohan's visit to Gujarat (March, 6-7) have also been consulted to see the disease situation in those areas. The detailed crop health situation is described in the following paragraphs.

North Western Plain Zone: DWR team (Drs. M.C. Jat, K.S. Babu and Mangal Singh) visited the parts of Haryana and Punjab covering areas along the following route: Ambala----->Rajpura----->Kharar----->Ropar----->Garhshankar-----> Nawanshahr----->Ludhiana----->Jalandhar----->Tanda----->Gurdaspur-----> Batala----->Beas----->Ludhiana----->Patiala----->Pehowa----->Karnal.

The team undertook the monitoring visit during 20th -22nd March, covering 115 fields at 45 sites. The variety, PBW 343 was planted in the most of the fields surveyed. It was found to be infected with yellow rust at almost all the places and severity varied from 20S to 80S. The area along foot hills and international border was having more incidence (40S to 60S) in about 95% fields, having uniform spread of the disease, while the area in the districts of Patiala, Sirhind and Kurukshetra showed a lesser incidence (20S to 40S) with limited spread. In certain fields (about 5 – 7%), foci covering 15 – 20% of the fields with severity, 20S to 40S were observed. The other varieties like PBW 550, HD 2687 and unknown/non PBW 343, were having less incidence of yellow rust ranging from 10S to 20S. The triticales were completely free from yellow rust incidence in the area of Patiala and Ropar districts. The fields having less incidence of yellow rust were also observed with PBW 343, but some of them were sprayed with propiconazole in Gurdaspur area. Due to high winds and

rainfall on 20th March, 2009 night, there was lodging in the fields that were irrigated one or two days earlier.

Survey team of CCS HAU, Hisar (Drs. S. S. Karwasra, B. D. Sharma, and R. S. Beniwal) surveyed Jind, Kurukshetra, Karnal, Yamunanagar, Ambala, Kaithal and Hisar districts in the first week of April (2-4 April). The team reported that the yellow rust severity ranged from Ts-80S on vars. PBW 343, PBW 373, PBW 502, UP 2338 and HD 2329. Leaf rust severity recorded was 10-60S. Powdery mildew incidence was noticed in districts of Karnal, Ambala, Kurukshetra and Yamunangar with a disease score of '2'-'6'. PBW 343 was heavily infected at certain spots. Loose smut was noticed on all the varieties in the range of traces to 1%. Flag smut was noticed in village Sachha Khera in variety, PBW 343. It was interesting to note that WH 542 was free from yellow rust. Harvesting has already started in the zone. Hail storm, strong winds and rainfall during the last week of March and first week of April in several places in the zone, caused lodging and hampered harvesting. Even the harvested grain was drenched in the *mandies* in Karnal and Kaithal districts.

The survey done on 4.3.09 in Gheed and 18.3.09 in Rer Kalan villages of Karnal, showed PBW 343 infected with yellow rust and powdery mildew. In the early sown crop, focii of yellow rust on PBW 343 were seen while timely and late sown crop had less disease in a sporadic manner. The powdery mildew was seen in more intensity in fields near the water channels and shaded parts of the fields. The surveys done in Kaithal and Kurukshetra districts during mid March had shown focii on timely sown crop of PBW 343 in about 15-20% of the fields and yellow rust severity ranged from 10S – 40S at Seevan, Pehowa, Kurukshetra and in between areas.

The PAU team found yellow rust with a severity range of 20 – 40 S on PBW 343 at Pakhowal, Bathinda and upto 40S on PBW 502 at Khirkianwala near Muktsar on 5th March, 2009. The yellow rust severity in south-west area of Punjab, i.e. Mansa, Bathinda, Faridkot and Muktsar was traces to 10S and the spread was limited. In contrast, the stripe rust incidence was widespread in Gurdaspur and Hoshiarpur districts. The report from Jaipur indicated that the flag smut was noted in the range of 20 – 70 % in few fields at vill. Paota in Jaipur district on PBW 343 and WH 147 with an incidence of 20-70%. Yellow rust up to 100S was noticed on these varieties.

In general, it was observed that many farmers had sown the non-recommended and old varieties in this region. Varieties like HD 2733 (recommended for NEPZ), UP 2338, HD 2687, PBW 175 and WH 147 with known susceptibility to yellow rust, helped in heavy inoculum built-up, leading to wide spread development of disease in the region. However, WH 542 was found almost free, wherever it was grown, though the area was less under this variety. It was also observed that powdery mildew was severe in areas near water channels or tree plantations and in the fields that were having higher fertilizer dose or higher nitrogen level.

North Eastern Plain Zone: Leaf blight and yellow rust were in traces at the research farm of Ranchi, however, at Samastipur, these two diseases were observed in all the

coordinated trials and nurseries. The leaf blight and brown rust development was very good at Varanasi in all the coordinated trials and nurseries. At Faizabad, in addition to these two diseases, powdery mildew in severe form was also recorded at research farm, however, at Kanpur the disease development was low. The report received from Faizabad indicated that the brown rust was noted on PBW 343, HD 2733, HD 2824, K 9006 and HUW 234 with severity ranging from 20 – 60S. Yellow rust was recorded on PBW 343 (upto 40S) in the first week of March. Foliar blight incidence was moderate to severe. Powdery mildew was observed in a few pockets. Some damage due to termite and stem borer was also seen. The strong winds and rain on 29th March caused lodging in a few pockets. The timely sown crop was in maturity stage while late sown was in hard dough stage by March end. It was alarming to note yellow rust in the zone, even upto Samastipur. Hence this issue has to be looked into in future.

Central Zone: Wheat crop in Gujarat was affected by shorter winter period. Termites and diseases like black rust at Vijapur and foliar blight at Anand were observed in coordinated trials. Black rust was recorded from traces to 20S in entries in various trials and nurseries at Vijapur.

Peninsular Zone: The report received from Mahabaleshwar indicated that the crop was nearing maturity and off season rains occurred during 13 – 15th March in districts of Kolhapur, Sangli, Satara, Pune and Ahmednagar, affecting the quality of the grains. There was no report of stem rust from the farmers' fields. Report received from Pune (Dr.S.C. Misra) tells that the early, normal and rainfed wheat crop in Pune area was harvested while the late sown crop was at maturity by the end of March. Over all crop health was good during the season.

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