

WHEAT CROP HEALTH NEWSLETTER

Directorate of Wheat Research
P.B. 158, Karnal-132 001



भक्त अनुप
ICAR
Volume: 19 (2013-2014)

January, 2014



Issue: 2

Available on website: www.dwr.res.in

The second issue of Vol. 19 (2013-14) is being brought out this month. Crop health survey was carried out in various parts of the country by the scientists of DWR, cooperating scientists of AICW&BIP and KVK scientists during December, 2013 to January 10, 2014. Crop health reports were received from Dr. R. S. Taya (KVK, Yamunanagar), Dr. S. C. Bhardwaj (Flowerdale, Shimla), Dr. S. K. Rana (Malan, Palampur), Dr. Dhanbir Singh (Dhaulakuan), Dr. Madhu Meeta Jindal (PAU, Ludhiana), Dr. S. P. Singh (Faizabad), Dr. Javed Bahar Khan (Kanpur), Wheat Rust Mycologist, Mahabaleshwar, Dr. O. P. Gangwar (Flowerdale, Shimla), Dr. Deep Shikha (Pantnagar), Dr. B. K. Honrao (ARI, Pune), Dr. I. K. Kalappanavar (UAS, Dharwad), Dr. A. P. Padhye (Niphad). Specially constituted team (Drs. R. Devlash, CSKHPKVV, Bajoura, Dr. R. Selvakumar, DWR, Karnal and Dr. O. P. Gangwar, Flowerdale, Shimla) surveyed Punjab from December 27-29 December, 2013 with special emphasis on stripe rust of wheat.

- Stripe rust (Yellow rust) was observed 1st time on January 1, 2014 in village Ratangarh in Yamunanagar district of Haryana on variety WH 711.
- On January 7, 2014, stripe rust was observed in village Dabkhera Upperla (near Nangal) in Punjab on variety HD 2967.
- On 9th January, stripe rust was observed in Khurdban in Yamunanagar in var. HD 2967. On 10th January, stripe rust on few plants was observed in village Hanshumajra (Karnal) in var. HD 2967.
- The disease has not been observed from HP, J & K and Uttarakhand so far
- Advisory for stripe rust management was issued by DWR, Karnal on December 17, 2013 and January 2, 2014.
- A meeting was organized by DAC, Ministry of Agriculture, Govt. of India at Una (HP) on January 8, 2014 for stripe rust management in NWPZ and NHZ. Dr. J. S. Sandhu Agriculture Commissioner, Department of Agriculture & Cooperation, Ministry of Agriculture, Govt. of India chaired the meeting. Dr. P. L. Gautam, former Chairperson, Protection of Plant Varieties and Farmers' Rights Authority, Govt. of India was the Chief Guest.

North Western Plain Zone (NWPZ) and Northern Hill Zone (NHZ)

Wheat rusts survey was carried out by Dr. M. S. Saharan, PI-Crop Protection, DWR, Karnal in Yamunanagar and Ambala districts on December 12, 2013. On December 21, 2013, survey for wheat rusts was conducted by Dr. O. P. Gangwar, Dr. Hanif Khan and Dr. Subash Katare in Yamunanagar district of Haryana. No rust was observed. Dr. Indu Sharma, Project Director, DWR, Karnal surveyed the area between Karnal to Ludhiana on December 29. No rust was observed in any farmers field. On December 23, 2013, wheat crop health was monitored by Drs. M. S. Saharan and Subash Katare in Kaithal district of Haryana. In Harsola village (Kaithal), some fields (zero tillage) were noticed with pink stem borer infestation.

A team of scientists comprising Dr. R. Selvakumar (DWR, Karnal), Dr. R. Devlash (CCSHPKVV, Bajoura) and Dr O. P. Gangwar (DWR Flowerdale, Shimla) monitored new virulences of rusts in NWPZ (foot hills areas of Yamunanagar, Ropar,

Hoshiarpur and Una districts) during 27. 12. 13 to 29. 12. 2013. On 27th Dec. 2013, the farmer's fields were surveyed in the route starting from Karnal via Sangipur, Kanjnuo, Yamunanagar, Chandigarh and Una. On 28th Dec. 2012, the survey team visited Akrot, Amb, Bharwain, Gagret (Distt. Una), Hoshiarpur, Sarlran, Jandu Janda, Khanpur, Mehna, Chhabewal, Jian, Jahankhelan (Distt. Hoshiarpur) and Pandoga, Jhalera, Basal, Tyuri, Dhusara, Diara, Bruhi, Takrala (Distt.Una). On 29th December, 2013, the team visited Rampur, Varana, Nangra, Fatehpur, Santoshgarh, Tahaliwal (Distt. Una), Garahshankar, Balachaur (Distt. Hoshiarpur), Kiratpur, Ropar and Kurali (Distt. Roop Nagar). In general, the crop was very good. Most of the fields were in seedling stage to tillering stage. Stripe rust was not observed in any of the field in the surveyed areas.

On 1st January, 2014, one farmer Sh. Nathi Ram s/o Sh. Jandhu Ram of village Ratangarh (Yamunanagar) informed Dr. R. S. Taya, Senior Plant Pathologist, KVK, Damla about stripe rust symptoms in his field in var. WH 711. This variety was sown on Oct. 29, 2013. Dr. R. S. Taya immediately visited the field and confirmed the stripe rust symptom. As per the information received from Dr. R. S. Taya as well as from Dr. S. S. Karwasara, Head, Deptt. of Plant Pathology, CCS HAU, Hisar, DWR team (Drs. M. S. Saharan, Mangal Singh, Vipin Panwar) visited the field on 2nd January. On 4th January, Dr. Indu Sharma, Project Director, DWR, Karnal also visited the field and suggested the necessary measures to be taken by the farmers of area. Dr. Indu Sharma surveyed the Una area of HP and Banur area of Punjab on January 8, 2014. The crop was very good and no rust was observed. Dr. S. C. Bhardwaj, Head, DWR Regional Station, Flowerdale, Shimla surveyed the area enroute Una to Shimla on January 8, 2014. No rust was observed.

On January 8, 2014, the incidence of stripe rust was observed by Mr. Hem Raj Kamboj, A.D.O. in the field of Sh. Bhupinder singh s/o Sh. Satpal Singh in variety HD 2967 in village Khuradban. A team of DDA Yamuna Nagar and scientists of KVK Damla visited the affected field of wheat on same day. DWR team (Drs. M. S. Saharan, Selva R Kumar) alongwith Sh. Hem Raj, ADO visited the field again on January 10, 2014. The stripe rust foci (2 sq m) was of 60S in var. HD 2967 sown on Oct. 30, 2013. Dr. S. C. Bhardwaj, Dr. O. P. Gangwar and Dr. Subodh Kumar surveyed the area enroute from Shimla to Yamunanagar on January 10, 2014. No rust was observed. Both teams (DWR Flowerdale, Shimla and DWR, Karnal) visited the field of Sh. Nathi Ram in Ratangarh village (near Damla, Yamunanagar) in the afternoon of January 10, 2014 and collected stripe rust samples.

As per report received from Dr Madhu Meeta Jindal, Senior Plant Pathologist, PAU, Ludhiana, stripe rust was not observed till January 3, 2014 in Nawanshahar and Ferozpur area of Punjab. On January 7. 1. 2014, Dr Madhu Meeta Jindal, Dr Puja Srivastava (Asstt Breeder), Deptt of Plant Breeding and Genetics, PAU, Ludhiana and Dr Jagdish Arora, Asstt extension specialist from KVK, Ropar surveyed wheat crop area of district Ropar and Sri Anandpur Sahib. Incidence of stripe rust was observed in village Dabkhera Upperla on variety HD 2967 on one acre field. The infection foci of 40S was of 3 meter radius. In the field, scattered rust infected plants were also observed. The crop was sown on 28.10.2013. The variety DPW 621-50 grown in adjacent field was free from rust.

Tarai/Plains of Uttarakhand were surveyed for stripe rust of wheat by Dr. Deepshikha, JRO and Dr. Kanak Srivastava, Jr. Scientist, Plant Pathology on 3rd and 4th Januray 2014 in different wheat growing areas, en route Bazpur (Kanori, Kanora, Karbola and Tanda Azam), Kashipur (Corbett Sun City, Dhanauri and Bhogpur), Gadarpur (Prem Nagar, Mehtosh nagar, Dhaulpur, Kiratpur, Daanpur, Bagwala and

Bhagwanpur), Deneshpur, Rudrapur, Kichcha (Village-Sirsa Chowki), Sitarganj (Village-Katanghari, Gurunanak farm, Bari, Jhoka, Kunda Ashraf, Pindari and Turkandasur) and Sara Saria Khatima (Village-Baghura and Uttamnagar). The dominant varieties sown in the areas were DBW 17, PBW 550, PBW 502, UP 2338, HD 2967 and PBW 226. The timely sown crop was in tillering stage whereas the late sown crop was in seedling stage. The crop health was good and crop was found free from stripe rust at all the locations.

Wheat crop health was monitored by Dr. S. K. Rana, Senior Plant Pathologist, CSKHPKV, Malan, Palampur in parts of Dehra, Pragpur, Kangra and Nagrota Bagwan blocks of district Kangra (HP) during second fortnight of December. Wheat crop at locations viz. Bangoli, Bhatoli, Maleta, Karol, Lower Ghalor, Kangra, Trind etc. was critically monitored for germination, general performance and appearance of stripe rust. Overall performance of crop was good. Stripe rust was not recorded anywhere at these locations. Poor germination was recorded under trees in rainfed areas. Striping due to moisture stress was recorded in rainfed areas especially at Karol in Pragpur block. Wheat varieties viz. HPW 349 (FLDs at Bangoli), HS 295, S - 308, VL 829, Raj 3777, PBW 621 etc. were grown by the farmers at these locations during current rabi season. Dr. Dhanbir Singh, Senior Plant Pathologist, CSKHPKV, Dhaulakuan conducted survey in third week of December in Paonta and Nahan blocks of District Sirmour. No disease was recorded anywhere in both the blocks. Crop was in tillering development stage. Good rains were received on 22, 23 and 31 December, 2013. Overall condition of crop was very good.

Peninsular Zone

Dr.S.D.Patil, Entomologist and Dr.K.P.Deolankar, Agronomist of Agril. Research Station, Niphad conducted survey in Nasik and Dhule districts of Maharashtra state during last week of December 2013 and first week of January 2014. The wheat crop was at tillering, booting or flowering stage. Late sown wheat crop was at crown root initiation to seedling stage. The varieties grown by farmers were, NIAW-1415, NIDW-295, Lok-1, HD-2189, NIAW-301, NIAW-34, WHD-948 and, GW-496. The rust infection was not noticed in any surveyed field. However, heavy infestation of foliar aphids was recorded on early and timely sown wheat in Nasik and Dhule districts. Initiation of aphids was recorded in first week of December 2013. Among FLDs, heavy incidence of root aphids was also observed in farmer's field in the villages viz., Waghadi, Bharwade Tal. Shirpur, Dist. Dhule.

Survey was undertaken by Mr. B. C. Game, Jr. Wheat Pathologist, ARS Niphad on 10/01/2014, in the Dindori Tehsil of Nasik district. Farmers fields from Mohadi, Janori, Materwadi, Khadak Sukena and Jopul village were surveyed for disease incidence. Majority of the fields were disease free and in tillering stage. Some of the early sown wheat fields were in dough stage. Natural incidence of leaf rust was recorded in two fields at Jopul village (Dindori Tehsil, Nasik). The variety grown in both the fields was Lok-1. Farmers own saved seed was used for sowing in both the fields. In first field, off-types were upto 20% and infection in patches recorded on off-type was 100S, while on Lok-1 it was upto 50S. The crop was sown on 7/10/2013 and was in dough stage. The second field which is adjoining to first one, was sown on 10/11/2013 and was in flowering stage. The rust incidence was low i.e. upto 20S and in patches. Control measures were suggested to farmers for rust control. Wheat disease monitoring nursery sown at Pimpalgaon (Baswant) was free from diseases as observed on 9/1/2014.

Dr. B K Honrao, Senior Plant Pathologist of ARI, Pune surveyed the different fields in surrounding areas of Pune in December, 2013. The wheat crop was at tillering to stem elongation stage in different fields. In some farmer's fields and Hol farm, infestation of foliar aphids was noticed in traces. Overall crop health was good. There was no natural incidence of any rusts, blight and other pests. Dr. Ishwar K. Kalappanavar, UAS, Dharwad surveyed the Dharwad area on December 13, 2013. Leaf rust was observed in Amrut variety planted in rain fed condition for the multiplication of seeds. Leaf rust had appeared in small patch during 1st week of December 2013. Incidence of shoot fly was also observed at Dharwad center during 2nd week of December, 2013. No wheat rust was observed in farmers fields in Mahabaleshwar area till January 1, 2014.

North Eastern Plain Zone

As per report received on January 6, 2014, from Dr. Javed Bahar Khan, Asstt. Wheat Pathologist, CSAUA&T, Kanpur, wheat crop was generally good in Kanpur area. Termite infestation (15 %) was observed in wheat rainfed trial. Leaf blight, rust and other diseases were not observed. Dr. S. P. Singh, Asstt. Wheat Pathologist, NDUAT, Kumarganj, Faizabad informed the crop health status of Faizabad area. Incidence of root rot, foot rot and blight symptoms were noticed in some fields. Light rains were observed on 27 and 31-12-2013. In general the crop was good in Faizabad area.

Advisory for Stripe Rust (Stripe Rust) Management in NWPZ and NHZ

Keeping in view the favorable weather for stripe rust development and its further spread, farmers are advised to visit their crop regularly for observing stripe rust incidence. Farmers should give special emphasis in the early sown crop and the crop planted under trees. Farmers are advised to inform or consult the wheat scientists/experts/extension workers for confirmation of stripe rust disease symptoms as sometimes yellowing of leaves may be due to other factors than disease. If farmers observe stripe rust in patches in their wheat fields, following measures are recommended:

- One spray of Propiconazole 25EC (Tilt 25 EC) @ 0.1 per cent or Tebuconazole 250 EC (Folicur 250 EC) @ 0.1 per cent or Triademefon (Bayleton 25 WP) @ 0.1 per cent be given at the foci of infection to avoid its further spread.
- One ml of chemical should be mixed in one litre water and thus 200 ml of fungicide mixed with 200 L of water should be sprayed in one acre wheat crop. If need, farmers are advised to repeat the spray.
- Farmers who have applied one type of fungicide previous year, it is suggested to apply alternate recommended fungicide this year.
- Farmers should spray the crop when weather is clear - no rain, no fog/dew etc.

A training course on Techniques and Procedures in Crop Health Monitoring and Field Evaluation of Host Resistance in Wheat and Barley will be organized for the co-operators of AICW&BIP at DWR, Karnal from January 29-31, 2014.

Issued by: Crop Protection, Directorate of Wheat Research, Karnal-132 001
Compiled and Edited by: M. S. Saharan, Selva Kumar and Indu Sharma
Phone: 0184- 2266092, 2267490, 2267830, 2267495, **Fax:** +91-0184-2267390
E.mail: mssaharan7@yahoo.co.in, picpdwr@hotmail.com