



Wheat Summer Nursery

e-newsletter



Regional Station, ICAR-Directorate of Wheat Research, Dalang Maidan,
Lahaul-Spiti, Himachal Pradesh - 175140

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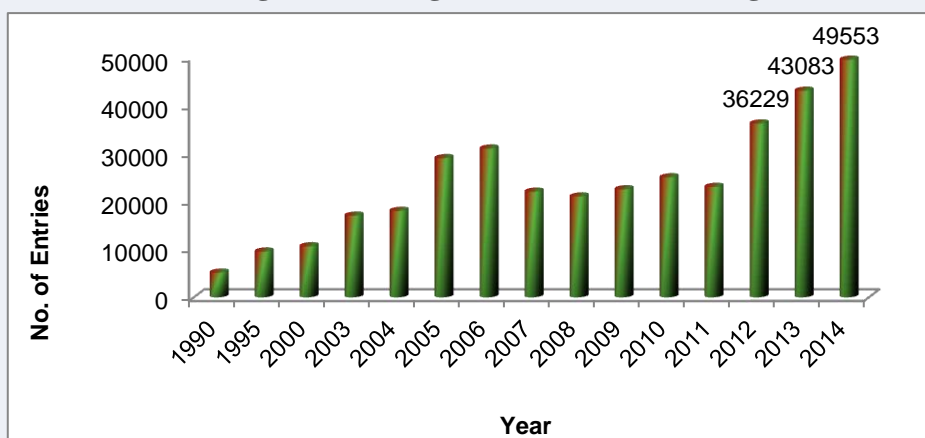
Progress Report of the Station

The ICAR-DWR Regional Station also known as Wheat Summer Nursery is located at Dalang Maidan, Lahaul & Spiti district of Himachal Pradesh. This station acts as a national service centre for providing various kind of support to the researchers across the country in the form of off-season for wheat, barley, mustard, chickpea, lentil and field pea. The progress made under different mandated activities of the centre during the year 2014 is presented under following heads.

Generation advancement of wheat, barley and mustard during off season (May-October, 2014):

During the period of May-October, 2014, 48138 lines of wheat, 833 lines of barley and 582 lines of mustard from 21 co-operators of different institutes were advanced at ICAR-DWR Regional Station, Dalang Maidan, which was highest till date. The material from cooperating centres across the country was advanced at the station. The maximum material was obtained from different centres in the North Western Plains Zone. Apart from this some winter wheats were also grown at the centre. All the research material was harvested and supplied to the respective researchers well in time.

No. of entries grown during 1990 to 2014 at Dalang Maidan



No. of wheat, barley and mustard entries of different institutes grown at Dalang Maidan during summer 2014

Name of Institute	No. of entries
Wheat	
ICAR-DWR, Karnal	22145
ICAR-IARI, New Delhi	11307
NABI, Mohali	4772
CCS HAU, Hisar	2100
GBPUA&T, Pantnagar	1863
ICAR-IARI, Regional Station, Shimla	1354
PAU, Ludhana	1320
ICAR-VPKAS, Almora	955
IGKVV, Bilaspur (Chattisgarh)	451
CSKHPKV, Palampur	394
SDAU, Vijapur	356
ICAR-IARI, Regional Station, Indore	320
JAU, Junagarh	305
ICAR-IARI, Regional Station, Pusa	250
SKUAST, Jammu	129
RVSUA&T, Gwalior	103
AAU, Anand	14
Total Wheat Lines	48138
Barley	
ICAR-DWR, Karnal	356
CCS HAU, Hisar	180
Others	297
Total Barley lines	833
Mustard	
ICAR-DRMR, Bharatpur	582
Total entries	49553

Corrective Hybridization

About 500 corrective crosses were attempted by the Scientists who visited the station during the month of July-August, 2014.

Conduct reporting of Very High Altitude wheat varietal trial

As a part of wheat coordinating system, AVT-TS-VHA trial was conducted during summer of 2014 at Dalang Maidan. The trial comprised of 8 genotypes replicated four times. Data has been reported.

Disease screening

As a routine exercise, this year also wheat lines supplied by different cooperators were evaluated for resistance to yellow rust. Overall 24533 lines were screened under natural conditions and data was reported to the concerned scientists.

Farmer's training on "Modern Cultivation of Seed Potato, Wheat and Agroforestry

Raj Pal Meena, C N Mishra, Vikas Gupta and Indu Sharma
ICAR-Directorate of Wheat Research, Karnal, Haryana- 132001

The farmer's training programme on "modern cultivation of seed potato, wheat and agroforestry was organised at DWR RS Dalang Maidan from 5-8 Aug 2014. The scientists from NRC Agroforestry, CPRI Shimla, CSKHPKV Palampur, Dr. YS Parmar University of Horticulture and Forestry and Directorate of Wheat Research, Karnal helped in successful organisation of the training programme. The scientists visited the farmer's field and identified their problems regarding the crops in general and specifically potato and willow.

After the registration of the participating farmers, the inauguration session was held in the chairmanship of Dr SK Dhyani, Director, National Centre of Agro-Forestry. After brief introduction of farmers and experts Dr Dhyani briefed the gathering about the role of agroforestry in life of farmers and how the farmers of the valley can utilize the different species of the trees and resistant clones of willow to solve their problems to some extent.

Dr RajPal Meena briefed the gathering about the activities of the DWR RS Dalang Maidan in which he briefly explained the importance of the station in wheat breeding, germplasm storage, seed production etc.

Dr NK Pandey and Dhurv Kumar from CPRI, RS, Merrut interacted with the farmers regarding varietal selection, diseases and pests, weed management, nutrient & water management and proper cultivation of seed potato. The pest management of willow tree was well explained by Dr Kishore Khosla. Dr Rameshwar clearly explained the concept of composting and how it can help the farmers in maintaining the fertility of the soil along with the source for micronutrients. Dr KS Pant deliberated on the forestry trees for the hilly areas and what options the farmers have apart from willow.



Dr CN Mishra interacted with the farmers regarding wheat cultivation and briefly explained the farmers about the features of cultivar HS 375 and yellow rust management.

The experts visited the farmers' field as per schedule and observed their problems for willow crop and seed potato. About 10 farmers were selected for further training and visit at CPRI Shimla.

The Directorate of Wheat Research agreed to provide area to NRC, Agro-Forestry for demonstration of modern clones of willow and other tree species so that farmers can themselves observe the performance of these species in valley.



Screening and evaluation of wheat germplasm for powdery mildew resistance

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Wheat production is globally hampered by several biotic factors of which rusts and powdery mildew are the most important. Powdery mildew is becoming a disease of major importance in the North Western Plains Zone and Northern Hills Zone of the country. In the present context of climate variability, diseases like powdery mildew can assume greater importance in wheat breeding programs. Identification of new sources for powdery mildew resistance is the need of hour. A set of 82 germplasm lines including susceptible checks, PBW 343, PBW 550 and WL 750 were screened for natural incidence of powdery mildew at Dalang Maidan during summer 2014. Out of 82 lines, a powdery mildew infection score of 02(8 lines), 03(26 lines), 04(12 lines), 05(13lines), 06(4lines), 07(15lines) and 08(4 lines) was recorded (Table 1). Only eight lines TP 114, Arstide, Amigo, NC96BGTD3, NC96BGTD5, NC96BGTD7, Anza and Heines Kolben were found to be resistant with a powdery mildew score of 02. These lines will be retested in the next crop season for their resistance and simultaneously used in transferring resistance to cultivated wheat varieties.

Table: Powdery mildew reaction of germplasm accessions at Dalang Maidan

S. No.	Powdery mildew Scale	No. of Lines	Powdery mildew reaction
1	0	-	Immune
2	1	-	Resistant
3	2	8	Resistant
4	3	26	Resistant
5	4	12	Moderately Susceptible
6	5	13	Moderately Susceptible
7	6	4	Moderately Susceptible
8	7	13	Highly susceptible
9	8	3	Highly susceptible
10	9	-	Highly susceptible