

on its performance under above mentioned situations the variety CR *Boro* Dhan-601 has been recommended for *boro* areas in the states of Odisha, West Bengal and Assam.

CR *Boro* Dhan-601 is a semi-dwarf variety with height ranging from 87 to 90 cm. characterized as semi dwarf thus fulfilling the requirement of a new plant type. It produces about 8-10 responsive tillers, more number of grains/panicle (> 250), compact, dense and long panicles, dark green foliage, medium slender with white kernel and golden husk colour. The variety with location and production conditions.

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#### **Mash 479, a disease resistant variety of *kharif* urdbean**

Mash 479, an urdbean (*Vigna mungo* L. Hepper) variety was developed by Pulses Section, Department of Plant Breeding and Genetics, Punjab Agricultural University, Ludhiana. It was identified during All India Group Meet of MULLaRP and Pigeonpea Workers held on May 16-18, 2010 at CSKHPKV, Palampur. This variety was released and notified by the Central Sub-Committee on Crop Standards Notification and the Release of the vaieties for Agricultural Crops Govt. of India vide notification No. 3-8/2010-SD-IV dated January 11, 2011; for commercial cultivation in thecomprising the states of Punjab, Haryana, Delhi, Rajasthan, parts of Jammu, Western Uttar Pradesh and Plains of Uttarakhand during *kharif* season. Mash 479 has been derived from the cross UG 562 x PantU19 through pedigree method. It has been tested in the All India Coordinated Programme on MULLaRP crops in Initial Varietal Trials and Advance Varietal Trials during 2007 to 2009. It recorded an average yield of 11.77 q/ha, which was 20.34, 43.76 and 8.61 per cent higher than the checks viz., Uttara (9.78 q/ha), WBU108 (7.86 q/ha) and PantU31 (10.79 q/ha), respectively. The average plant height of this variety is 55 cm. The distinguished morphological characteristics of Mash 479 include triangular leaflets, green stem without hairs with medium dark purple tinge. It flowers in 41-45 days. The maturity period of this variety varies from 74 to 93 days depending upon

location and production conditions.

The variety Mash 479 has shown a high degree of tolerance against several diseases, namely, mungbean yellow mosaic virus (MYMV), leaf crinkle virus (LCV), bacterial leaf spot (BLS), powdery mildew (PM), web blight and anthracnose. It is also moderately resistant against root knot nematode at different locations in North West Plain Zone. This variety possesses good culinary properties. It is a medium bold seeded variety with 4.2 g seed weight 100<sup>-1</sup> seeds, 4.0 ml 100-seed volume and 1.14 g/ml seed density. Its water absorption and volume expansion percentage after soaking is 58.66 and 125.0, respectively. This variety is free from *kokroos* after soaking in water and it takes 36 minutes cooking time for *dal* preparation. Its water absorption and volume expansion percentage after cooking is 96.24 and 112.53, respectively. This variety has 15.12 per cent solid dispersion after cooking which is a desirable feature. The grains of this variety contain 25.25 per cent protein with tryptophan and methionine contents as 0.80 and 0.97 per cent, respectively. The salient features of this variety are high yield potential, resistance to various diseases with good culinary properties.

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#### **Urdbean variety Mash 391**

Mash 391, an urdbean (*Vigna mungo* L. Hepper) variety was developed by Pulses Section, Department of Plant Breeding and Genetics, Punjab Agricultural University, Ludhiana. It was identified by the All India Group Meet of MULLaRP and Pigeonpea Workers held on May 16-18, 2010 at CSKHPKV, Palampur. This variety was released and notified by the Central Sub-Committee on Crop Standards Notification and the Release of the vaieties for Agricultural Crops Govt. of India vide notification Number 3-8/2010-SD-IV dated January 11, 2011 for commercial cultivation in South Zone consisted of Karnataka, Andhra Pradesh, Orissa and Tamil Nadu states in summer season. This variety

was developed from the cross KUG 92 x UG 841 following pedigree method. It has been tested in the All India Coordinated Programme on MULLaRP crops in Initial Varietal Trials and Advance Varietal Trial during 2007 to 2009. The average yield of Marsh 391 was 7.68 q/ha, which was 23.3 and 11.1 per cent higher over the checks viz., PantU19 (6.23 q/ha) and PantU30 (6.91 q/ha). It flowers in 38 days and matures in 71 days. However, its maturity period varies from 66 to 77 days depending upon location and production conditions. Its distinguishable morphological characteristics include green stem with medium dark purple tinge and dense prominent hairs on stem. The average plant height of Mash 391 is 25.2 cm. This variety has shown a high degree of tolerance against several diseases, namely, mungbean yellow mosaic virus (MYMV), leaf crinkle virus (LCV), bacterial leaf spot (BLS), powdery mildew (PM) and anthracnose. It was found tolerant against stemfly and leaf roller at different locations in south zone.

It is a medium bold seeded variety with average 100-seed weight of 4.4 g. The 100-seed volume of this variety is 3.0 ml and seed density is 1.35 g/ml. Its per cent water absorption and volume expansion after soaking was 118.5 and 200, respectively. No hard shelled grains and *kokroos* were found after soaking. The cooking time required for *dal* preparation is 35 minutes. The percent water absorption and volume expansion after cooking is 127.3 and 200.0, respectively. Its solid dispersion after cooking is 17.8 per cent. The grains of Mash 391 contain 26.25 per cent protein with tryptophan content of 0.88 per cent. Overall, it is a high yielding variety of summer urdbean having resistance to various diseases, insects/pests alongwith good culinary properties.

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### **HD 2967, a rust resistant wheat variety for timely sown irrigated conditions**

A group of wheat breeders at Division of Genetics, Indian Agricultural Research Institute, New Delhi, have developed a bread wheat (*Triticum aestivum* L.em. Thell) variety HD 2967, which was released and notified by the Central Sub- Committee on the Crop Standards, Notification and Release of the Varieties for Agricultural Crops, Government of India vide Notification number SO 2326(E) dated October 10, 2011 for timely sown irrigated conditions of North Western Plains Zone (NWPZ) of the country. The variety was developed from a cross ALD/COC//URESH//HD 2160 M/HD 2278. Using shuttle breeding approach, the rigorous selection was practiced in segregating generations of this cross at New Delhi and Regional Station, Wellington, Tamilnadu. The variety was first evaluated as CL1738 in station trial and subsequently in Common Varietal Trial of IARI bearing designation DW 1331 during 2005-06. The variety was entered in All India Coordinated Wheat Improvement Programme as HD 2967 in 2006-07. It was identified for release in 2009 and continues to be used as identified check till 2010-11. HD 2967 gave an average yield of 5.11 t/ha as compared to 4.8 t/ha of widely grown check variety PBW 343 in 109 coordinated trails conducted over five years. It appeared 55 times in first non-significant group out of 109 trials as compared to 32 times of PBW343. The variety appeared 52 times in first non-significant group in comparison to other checks like DBW 17 (average yield of 5.02 t/ha), and PBW 550 (average yield of 4.93 t/ha), which appeared 42 and 32 times in first non-significant group respectively in 99 coordinated trials.

The plant height of this variety varies from 82 - 108 cm with an average value of 96 cm. The plants have semi-spreading growth habit, profuse tillering, waxy, semi-erect green coloured leaves, non-pubescent glumes and tapering, dull white coloured, dense ear. Its' amber coloured, ovate shaped grains are hard, lustrous and attractive having average thousand grain weight of 40 g. The heading and maturity periods of the variety vary from 81-120 days (average 99 days) and 120-162 days (average 143 days), respectively in NWPZ over the years and locations. HD 2967 has shown superior performance in coordinated agronomical trials in 2008-09 in NWPZ and ranked first under both timely and late sown conditions with an average grain yield of 5.48 and 4.35