PUSA

Rajendra Agricultural University
Bihar

This center was established in the year 1980 by Rajendra Agricultural University, Bihar. The main focus is on the rice research for deep water and boro rice ecologies.

Major contributions

Crop Improvement

Varieties developed / released

Sl. No.	Year of Release	Name of the Variety	Yield (q./ha.)
1.	1972	Sita	40-45
2.	1972	Saket-4	35-40
3.	1983	Sugandha	25-30
4.	1983	Janki	15-25
5.	1983	I.R.-36	45-50
6.	1985	Sujata	40-50
7.	1984	Radha	50-60
8.	1987	Kanak	50-60
9.	1987	Rajshree	45-50
10.	1989	Sudha	20-25
11.	1994	Pusa Basmati	30-40
12.	1994	Prabhat	65-70
13.	1994	Vaidehi	30-35

Sl. No.	Year of Release	Name of the Variety	Yield (q./ha.)
14.	1995	Shakuntala	35-45
15.	1995	TurantaDhan	25-30
16.	1995	Gautam	70-75(Boro)
17.	1999	Kishori	45-50
18.	1999	Satyam	45-50
19.	2000	Richaria	35-40 (Kharif),50-60 (Boro)
20.	2000	Dhanlaxmi	45-50 (Kharif) 60-65 (Boro)
21.	2001	Saroj	45-50 (Kharif), 60-65 (Boro)
22.	2001	Santosh	45-50
23.	2003	RajendraMahsuri	50-60
24.	2003	RajendraSuwasani	45-50
25.	2004	RajendraSweta	40-50
26.	2004	Rajendrakasturi	40-45
27.	2006	RAU-3036	35-40
28.	2006	RAU-724	45-50
29.	2010	Swarna Sub-1	50-55
30.	2010	RajendraBhagwati	45-50

The salient features of some of the recently released varieties for different ecosystems are given here.

RAJENDRA BHAGWATI
Ecology : Upland and Medium
Duration : 110-115 days
Grain Type : Long Fine
Yield : 45-50 Q/ha
Special Feature : Tolerant to pest and diseases, Suitable for Boro season also.
Aroma: Mild

RAJENDRA MAHSURI
Ecology : Lowland
Year of release : 2005
Duration : 140-145
Yield potential : 60-65q/ha.
Head rice recovery : 50-60%

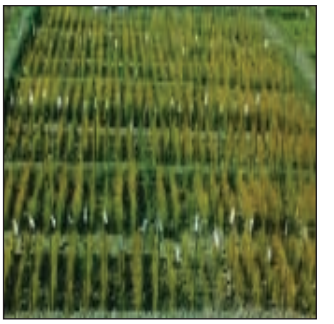
RAJESHREE

Ecology	: Lowland
Year of release	: 1987
Duration	: 135-140
Yield Potential	: 40-45q/ha.
Head rice recovery	: 50-60%

VAIDEHI

Ecology	: Deep water
Year of release	: 1995
Suitability	: For deep water where water stands 1 meter or above
Yield potential	: 30-40q/ha.
Head rice recovery	: 60%

- Screening a large number of boro rice genotypes at Pusa, a hot spot. Five varieties Gautam, Richharia, Dhanlaxami, Saroj & Prabhat have been developed for Boro cultivation.



- Facilities for screening for abiotic stresses were developed at this center.

Deep water screening facility

Rain Shelter facility

Crop Production

Agronomy

- Agronomic practices for rainfed upland rice : Concurrent growing of dhaincha (up to 25 DAS with 40 kg seed rate of dhaincha and its subsequent killing with the help of 2, 4-D @ 0.8 kg ai/ha) with rice along with 80-50-30 kg NPK/ha under rainfed upland condition.
- Nitrogen and weed management practices in Aerobic rice: Pre-emergence application of pretilachlor @ 0.75 kg a.i. ha^{-1} or pendimethilin @ 1.0 kg a.i. ha^{-1} followed by one hand weeding at 60 DAS along with 100 kg N ha^{-1} in rice + dhaincha system.
- NPK requirement of transplanted rice: NPK requirement for mid and long duration varieties were reformulated as 120-60-40 kg NPK ha^{-1} against the earlier recommendation of 80-40-20 kg NPKha^{-1}.
- Deep water rice: Seed rate of base crop (rice) and companion crops like sesame and moong bean was standardized (2:1) to obtain maximum total yield in the system in farms of rice equivalent but also appreciably reduced the weed dry weight.
- Agro-technique for quality rice: Transplanting during 15-20 July along with 25-50% substitution of Inorganic N with organic sources (Preferably vermicompost) is ideal for quality rice.
- Agronomy of hybrid rice: NPK combination 150-60-60 kg NPK ha^{-1} with Nitrogen in four splits – $1/4^{th}$ each at Basal, AT, PI and PE and Potassium in two splits – 70% Basal and 30% PI; saturation or cyclic submergence (5 DAD) recorded maximum yield of hybrid rice.
- FYM schedule in Rice-wheat system: With regard to frequency of FYM @ 10 t ha^{-1} along with RDF in rice-wheat system, application of FYM in Kharif was more beneficial than rabi. Again FYM application in rice in alternate year is more economical. This schedule was able to control the occurrence of khaira disease after two years.
- Standardizing Agro-technique for SRI : 15 days old seedling along with concurrent growing of dhaincha @ 40kg ha^{-1} for 20 days for brown manuring with the help of 2, 4-D spray @ 0.8 kg a.i ha^{-1} followed by two cono weedings at 25 and 35 DAT gave highest yield and economic return under SRI method of rice cultivation.