

### **Azad Mahak (KMR(E)-15-2):**

Recommended for entire Uttar Pradesh, Yield Potential (24-25 q/ha) and bold seed and size (5.20g/1000seed), suitable for Early sown condition, Early maturity(120-125 days), escapes from disease specially Alternaria blight and White rust, tolerance to high temperature at seed germination stage, Oil content range (41.6-42.1%) oil yield 852 kg/ha which is 9.20% higher in comparison to PM 27(ZC)



### **Azad Chetna (TKM 14-2):**

Recommended for entire Uttar Pradesh, Yield Potential (12-14 q/ha) and bold seed size(3.3g/1000 seed), suitable for early sown condition, early maturity (90-95 Days), escapes from disease specially Alternaria blight and White rust, most suitable for multiple cropping, oil content ranged (42.2-42.4%), oil yield 608 kg/ha which is 18.98% higher in comparison to Bhawani (ZC).



### **Aparna (LCK 1611):**

Suited for irrigated condition, medium plant height, matures in 140 days, non shattering medium size capsule, seed medium bold, colour light brown, average yield 13-15 q/ha, oil content 37%, Omega -3 54%, resistant to rust & wilt.



### **Shekhar 8 (KLB 13-6):**

Suitable for timely sown condition of whole U.P. specially for Bundelkhand region having dark green foliage, semi-erect, seed reddish grey, profuse branches with high number of pods, maturity (105-115 days), bold seeded, good yielder (16-18q/ha), wide adaptability, resistant to wilt and rust, tolerant to pod damage easily cooked having good taste and palatability, easily digestible having antioxidant property



### **Wheat (K-1616):**

Suitable for rainfed timely sown condition of whole U.P. bold, oblong, amber colour and semi hard texture of grains, height 106 cm, early flowering 81 days and maturity 121 days and high test grain weight 82.0gm. High protein content 11.77%, national average 35.2 q/ha. resistance against brown, yellow and black rust along with leaf blight.



### **Barley (K-1425):**

Suited for saline/alkaline condition, timely sown, irrigated ecosystem, crop mature in 120-125 days, plant height 90cm, grain yellow coloured bold seeded with 12.7 % protein, av yield 30-35q/ha and yellow & brown rust resistant and tolerant to foliar blight



### **Azad Pragya (LCK-1516)**

Developed for whole Uttar Pradesh for irrigated condition, yield potential 2028kg/ha and average yield 1360kg/ha Oil yield 500kg/ha. Seed oil content is contains 35%, Omega-3 content (45%), Resistant to Powdery mildew rust and moderately resistant to wilt. moderately resistant to bud fly, blue flower, Plant height medium, brown colour seed with medium seed weight.



## **Success stories of Directorate of Research**

### **Varietal Development**

#### **High Yielding Varieties**

University has developed more than 300 high yielding, diseases resistant varieties of cereals, oilseeds, pulses and vegetables. Out of which, following varieties are internationally known.

#### **International Fame**

<b>Wheat</b>	<b>Deva (K-9107)</b>	<b>Adopted by Bangladesh for large scale cultivation</b>
	<b>Ujiyar (K-9006)</b>	<b>Adopted by Nepal, released as Achutya</b>
<b>Lentil</b>	<b>Malika (K-75)</b>	<b>High export quality &amp; high seed demand</b>

**Nationally Fame:** University developed varieties are also occupying sizeable area at national level given as under:

<b>Chickpea: KGD-1168</b>	<b>Wilt resistant, very popular in west Bangal, Assam, Orissa, Bihar</b>
<b>Field pea: Rachna</b>	Powdery mildew resistant, popular throughout country
<b>Table pea: Azad P-3</b>	High yielding, Popular throughout country
<b>Urdbean: T-9</b>	Black Seeded, widely adopted throughout country
<b>Urdbean: Shekhar-2</b>	Green seeded, widely adopted throughout country
<b>Urdbean: Azad -3</b>	Black seeded, widely adopted throughout country
<b>Moongbean: KM-2241</b>	Multiple diseases resistance, synchronous maturity, widely adopted throughout country
<b>Moongbean: Azad Moong-1</b>	YMV resistant, high yielding
<b>Mustard: Varuna</b>	High yielding, popular throughout country
<b>Yellow Sarson: Pitambari</b>	High yielding, high oil content
<b>Wheat : Deva</b>	High Protein, High yield
<b>Wheat : Halna</b>	Thermo tolerant, suited for late sown condition
<b>Wheat : K-1317</b>	For restricted irrigation

#### **Most popular among farming community**

<b>Wheat</b>	<b>Deva, Ujiyar, Halna, Unnat Halna, Mandakini, Mahi, Mamta, Shatabadi, K 1006, K1317</b>
<b>Barley</b>	K-557, Prakhar
<b>Sorghum</b>	Bundela
<b>Pigeonpea</b>	Amar, Azad
<b>Urdbean</b>	Shekhar 1, Shekhar 2, Shekhar3, Azad 1, Azad 2, Azad 3
<b>Mungbean</b>	Sweta, Azad Moong 1
<b>Chickpea</b>	Avarodhi, Udai, KGD 1168, KWR 108, Radhey
<b>Field pea</b>	Rachna, Sapna, Swati, KPMR 400 (Indra), KPMR 522 (Jai)
<b>Lentil</b>	Malika, Azad Masoor 1, Shekhar 2, Shekhar 3
<b>Groundnut</b>	Divya, TG 37 A, Utkarsh, Parkash, Kaushal, Avatar (Zaid)
<b>Mustard</b>	Varuna, Rohani, Maya, Kanti, Urvashi, Ashirvad
<b>Yellow Sarson</b>	Pitambari
<b>Toria</b>	Bhawani, Tapeswari
<b>Sesame</b>	Shekhar, Pragati
<b>Linseed</b>	Laxmi, Padmini, Shekhar, Parvati, Surya, Anu, Aparna
<b>Tomato</b>	Azad T8
<b>Vegetable pea</b>	Azad P3
<b>Cucumber</b>	Kalyanpur green

**Varieties** – Scientists were sensitized and motivated for development of need based location specific agro-techniques and varieties of different crops.

- ? During period under report three varieties viz; linseed-01(Aparna), Azad Pragya, toria-01 (Chetna) & Mustard-01 (Azad Mahak) and were notified by CVRC.
- ? During period under report three varieties viz. Wheat -1(K1616), Barley-1 (K 1425) & Lentil-1 (KLS 1431) were identified by State Seed Subcommittee.

## Cereals

Wheat	C-13 (Awnless), C-46, C-13 (Awned), Padova I, Padova II, K 19 -3, K-21, K-25, K-53, K-54, K-68, K-65, Kundan (K-101), K-816, K-852, Bithoor(KML-7406), K Poorvi (K-7410), K-72(K-7229), K-78(K-827), Sangam (K-7915), Mandakini(K-9351), Triveni (K-8020), Magahar(K-8027), K-088(K-8804), Indra(K-8962), De va(K-9107), Ujiyaar(K-9006), Gomti (K-9465), Atal(K-9644), Halna (K-7903), Gangotri (K-9162), Prasad (K-8434), Unnant Halna(K-9423), Naina(K-9533), Shatabdi (K-0307), Sona (KD-9851), Mahi(K-0402), Mamta(K-0607) K-1006, Deva K-1317 and K-1616
Barley	C-251, CN-292, CN-294, K-12, K-14, K-18, K-19, K-24, K-169, K-252, Jyoti(K-572/10), Amber (K-71), Vijaya, Azad(K-125), K-253, K-257, K-141, K-318, Lakhan (K-226), Jagrati(K-287), K-341, K-370, Manjula(K-329), K-1155, Geetanjali(K-1149), Pragati(K-0508), Pr etti(K-409), Haritima(K-560), Archana (K-0713), Ritambhara(K-551), Narmada (K-603) Prakhar and K1425
Paddy	Ashwani and Usar 1
Maize	K-41, Azad Uttam, Sharad Mani, Azad Kamal, Chandra Mani, Azad Shankar Makka-1 and Azad Shankar Makka-2
Sorghum	Mau Type 1, Mau Type 2, Bundela, Varsha, Vijeta

## Pulses

Gram	T-3, K-5, Radhey, K-468, K850, K-4, KWR-108, Udai, Pragati, Sadabahar-13, Avrodhi KGD-1168 and K-3256(Kabuli)
Pea	T-163 Shikha Swati Rachna Sapna Indra (KPMR 400) and Jai (KPMR 522)
Lentil	T-36, T-8, KLS-218, KLB-303, KL-320, Maliika, Shekhar-2, Shekhar-3, LentilAzad-1, Shekhar-4(KLB345), KLB 13-6Krish, Krati and KLS 1431 Shekhar-5(KLB-122) and Shekhar-8(KLB 13-6)
Pigeon pea	T-17, T-7, T-21, Amar & Azad
Black gram	T-27, T-77, T-65, T-9 Shekhar-1 Azad Urd-1 Shekhar-2 Azad Urd-2 Shekhar-3 Azad Urd-3 & KU-99-21
Green gram	T-44, K-851 Sweta Swati KM-2241KM-2195 and Azad Moong-1 (KM-2342)

## Oilseed

Mustard	T-11, Laha-101, Type-16, Type-1, Type-10, Type-151, Type-42, Type-9, Type-36, Type-59, B.S-2, B.S-70, K-88, Varuna, Kanti, Shekhar, Rohini, Vardan, Vaibhav, Urvashi, Basanti, Maya, Ashirvad, Pitambari and Azad Mahak KMR(E)15-2)
Toria	T-9, T-36, Bhawani, Tapeshwari and Chetna
Sesame	T-12 T-4 T-13 T-78 Shekhar Pragati and Trun
Linseed	T-1, T-477, T-126, T-603, T-397, Mukta, Hira, Neelam, Garima, Sweta, Shubhra, Luxmi-27, Padmini, Sheela, Shekhar, ShardaGaurav, Shikha, ashmi, Parvati, Ruchi, Uma, Indu, Surya, Rajan, Mau Azad Alsi -1, Mau Azad Alsi -2, Anu (LCK-1021), Aparna and, Azad Pragya (LCK-1516)
Groundnut	T-25, T-99, T-32, T-28, T-64, Chandra, Kaushal, Chitra, M.A-16, Amber, Prakash, T.G-37A, Utkarsh, Divya and Avtar
Safflower	Type-65
Castor	Type-3, Tari-4, Kalpi-6, Chandra Prabha and Balliachayan (7911)

## Vegetable

Brinjal	Kalyanpur Type -3, Azad B-1, Azad B-2, Azad B-3, Azad Kranti, Azad Hybrid and Azad Sankar
Tomato	Angoorlata, Type-1, Azad T-2, Azad T-3, Azad T-5, Azad T-6, KTH-1 (Hybrid), KTH-2 (Hybrid) and Azad T-8
Table Pea	Azad P-1, Azad P-2, Azad P-3, Azad P-4 and Azad P-5
Bitter guard	K. Sona, Baramasi and Kalyanpur
Okra	Azad Bhindi-1, Azad Bhindi-2, Azad Bhindi-3(Azad Krishna) and Azad Bhindi-4 (Mohani)
Chilli	Azad Mirch-1 and Azad Mirch - 2 KCH - 3 (Hybrid)
Spong guard	Kalyanpur Hari Chikni, Azad torai Chikani -1 and Azad Torai - 2
Bottle guard	Kalyanpur Long Green, Azad harit, Azad nutan (long) and Azad sankar Lauki-1(Hybrid)
Bitter gourd	Kalyanpur Baramasi -7 and Kalyanpur sona
Pumpkin	Azad Pumpkin -1
Cucumber	Kalyanpur Green
Sem	Type - 2, Rajni and Azad Sem -1
Rajmash	Azad Rajama 1
Lobia	5269
Zimikand	Azad Suran -1
Radish	Kalyanpur No-1
Termeric	Azad haldi-1
Colocasia	Azad arbi-1
Onion	Kalyanpur Red Round
Coriander	Azad Dhania-1 and Azad Dhania-2
Fennel	Azad sauf-1
Fenugreek	Azad methi -1 and Azad methi-2
Ajwain	Azad Ajwain -1
Nigella	Azad Kalaunji -1

## Other

Cotton	Pramukh, Syamali, Lohit, Vikasha and CAD 4
Tobacco	Azad Kanchan

## Varieties developed (Last five years)

### Linseed Uma (LCK1101):

Developed for rainfed condition, erect, blue flower, 60 cm plant height, resistant to *alternaria blight*, rust and wilt, medium capsule, light brown seeded, 7.8 g test weight with yield potential 8-10q/ha.



### Linseed Indu (LCK1108):

Developed for irrigated condition, erect, blue flower, 72-75 cm plant height, resistant to *alternaria blight*, rust and wilt, medium capsule, brown seeded, 9.6 g test weight with yield potential 10-12q/ha dual purpose.



### Wheat K 1317:

Developed for rainfed timely sown condition of Eastern & Central Uttar Pradesh, Bihar, Jharkhand, West Bengal and Assam, crop matures in 120 -128 days, average yield 27.13 Q/ha and yield potential 54.2 Q/ha, grain contain 43.05 PPM Iron and 38.3 PPM Zinc and resistant to rusts.



### Lentil Shekhar 4 (KLB 345):

Developed for late sown conditions, high yielding (18-20 q/ha), early maturity (110 days), resistant to wilt and rust bold seeded with red cotyledons and recommended for whole Uttar Pradesh.



### Lentil Shekhar 5 (KLB 122):

Developed for late sown condition (December sowing) for entire Uttar Pradesh, maturity 110 -115 days, resistant to wilt and rust, seed reddish grey, small seeded, yield potential 15-16 Q/ha.



### Moongbean Azad Moong-1 (KM-2342):

Developed for both Zaid and Kharif season of entire U.P., yield potential 10-12Q/ha, crop matures in 60-62 days, grain Shinee green, synchronous maturity, resistance to YMV, CLS, Anthracnose, Web blight and white fly.



### Linseed Surya (LCK-1404):

Developed for zone I which includes Himachal Pradesh, Punjab, Haryana and Jammu for irrigated condition, yield potential 2270 kg/ha under best field condition higher Oil yield 500kg/ha. It contains higher Omega -3 content (62.34%) than the other existing varieties of linseed, highly resistant to rust and moderately resistant to wilt. moderately resistant to bud fly, blue flower, dwarf, bushy in habit, twisted aestivation, medium size capsule, brown colour seed with medium seed weight.

