

Front Cover



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Front Inner

Nirmal's new high-tech "class 10000" laboratory for mass multiplication of Mycorrhizae by "ROC" technology established at Pachora



Newly established Bio Manufacturing Unit of Nirmal Seeds Pvt. Ltd. in Gujarat



Nirmal Seeds.... Seeds for Prosperity....



Agri Bio-tech for Healthy Nation...

About Us

Accredited with ISO 9001:2015 Certification, Nirmal Seeds Pvt. Ltd. (NSPL) was established in 1988 by a group of agropreneurs at Pachora in Jalgaon district of Maharashtra, India. The organization was started with an idea of 'Need based Research' in the field of seed technology for the farming community. The mandate includes crop improvement with respect of development hybrids and varieties suitable for different agro climatic zones having high tolerance to biotic and abiotic stresses coupled with high yield and superior quality. The organization is focused towards maximizing the yield for sustainability of agriculture with special emphasis on nutrition breeding for developing the elite genotypes having high levels of essential nutrients. The research on development of newer generation bio-organic inputs is also another priority area of R & D for organic farming as well as Integrated Crop Production (ICP) for sustainable Agriculture.

Nirmal Seeds is a name that carries an unmatched legacy & reputation in the agricultural sector. It has a presence in about 23 states of the country comprising major agricultural centres across India with marketing offices at Akola, Jalna, Nagpur, Pune, Ahmedabad, Indore, Jabalpur, Raipur, Agra, Lucknow, Jaipur, Jodhpur, Patna,

Chandigarh, Hyderabad, Kurnool, Hubli, Bangalore, Trichy, Bhubaneswar, Guwahati, Ranchi and Siliguri.

Our Vision...

To become the market leader in the seed industry by catering the needs of Indian farmers.

Our Mission....

- To create an environment that focuses on 'Need based Research' for the development of seeds of various crops and eco-friendly bio organic inputs required by the farming community across India. The emphasis will be to ensure biotic and abiotic stress tolerance, nutrition breeding and research in biotechnology for specific improvement in the desired traits.
- Build 'state-of-the-art' high-tech infrastructural facilities of International standards to support the Research Mandate.
- Continual Human Resource Development to meet the challenges in the agriculture sector and discover the possibility with the concept of "Parallel Wheel, Common Goal".





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Hirsutum Cotton



Hybrid Cotton Aishwarya (NCH-744)

Characteristics

Plant habit.....	Tall, erect, semi-open & wide spreading
Duration.....	Medium to late (160-170 days)
Boll size and shape.....	Medium big, round oblong
Boll Weight (gm).....	4.0 to 4.5
Staple length (mm).....	28-30
Fibre Strength (g/tex).....	21-22
Micronaire (µg/inch).....	4.0-4.5
Ginning (%).....	40-41

Special features

- Tall spreading plant type
- Good bearing and boll retention capacity
- Highly tolerant to leaf reddening & sucking pests
- Suitable for irrigated and rainfed cultivation
- Suitable for Central and South zones of India

Hybrid Cotton Chandramukhi (NCH-996)

Characteristics

Plant habit	Midtall, compact & medium spreading
Duration.....	Medium (150-160 days)
Boll size and shape.....	Medium big, oblong
Boll Weight (gm).....	4.5 to 5.0
Staple length (mm).....	30-32
Fibre Strength (g/tex).....	21-22
Micronaire (µg/inch).....	3.5-4.0
Ginning (%).....	38-40

Special features

- Midtall, compact, medium spreading plant type
- Medium big bolls with excellent boll bursting
- Superior long staple
- Tolerant to leaf reddening & sucking pests
- Suitable for irrigated and rainfed cultivation
- Suitable for Central and South zones of India



Hirsutum Cotton



Hybrid Cotton NCH - 1993

Characteristics

Plant habit.....	Midtall, Semi open, Less spreading
Duration.....	Early (140-150 days)
Boll size and shape.....	Very big, round
Boll Weight (gm).....	5.5-6.0
Staple length (mm).....	30-32
Fibre Strength (g/tex).....	23-24
Micronaire (µg/inch).....	4.0-4.5
Ginning (%).....	38-40

Special features

- Midtall, sturdy, less spreading plant type
- Very big bolls, superior long staple and excellent boll bursting
- Suitable for high density planting system (HDPS) and once over harvesting
- Moderately tolerant to sucking pests & leaf reddening
- Recommended for Central and South zones of India

Hybrid Cotton Poornima (NCH-1166)

Characteristics

Plant habit.....	Midtall, compact & less spreading
Duration	Early to medium (145-155 days)
Boll size and shape.....	Medium big, oblong
Boll Weight (gm).....	4.0 - 4.5
Staple length (mm).....	29-30
Fibre Strength (g/tex).....	20-21
Micronaire (µg/inch).....	4.5-5.0
Ginning (%).....	37-38

Special features

- Midtall, less spreading, glabrous plant type
- Good boll setting with excellent boll bursting
- Suitable for irrigated and rainfed cultivation
- Ideal for high density planting systems (HDPS)
- Recommended for Central and South zones of India



Hirsutum Cotton



Hybrid Cotton NCH - 2438

Characteristics

Plant habit.....Tall, erect, open plant type
Duration.....Early to Medium
 (140-150 days)
Boll size and shape.....Very big, round to oblong
Boll Weight (gm).....6.0-6.5
Staple length (mm).....31-32
Fibre Strength (g/tex).....24-26
Micronaire (µg/inch).....3.7-4.2
Ginning (%).....36-38

Special features

- Tall, sturdy, erect, open plant type with zero monopodia
- Very big boll with excellent boll bursting
- Suitable for high density planting and once over harvest
- Suitable for irrigated and rainfed cultivation.
- Tolerant to sucking pests & leaf reddening
- Recommended for Central & South zones of India

Cultivation Practices for American Cotton (*G. hirsutum* L.)

Soil.....Medium to heavy

Sowing period.....North Zone:- April to May Central Zone:- 25th May to 30th June
 South Zone:- June 1st week with onset of monsoon

Spacing (feet) :	Irrigated	Rainfed
Heavy Soil	5 x 4	4 x 3
Medium Soil	4 x 3	3 x 3
Light Soil	3 x 3	3 x 2

Manures.....Apply 10 ton / acre FYM at the time of land preparation

Fertilizer dose (kg/ha) :	N	P	K
Irrigated	100	50	50
Rainfed	80	40	40

Plant Protection:-

Sucking Pests:- Use Phorate 10 G granules @ 5kg/acre at the time of sowing or Acetamiprid 20 sp @ 15 g.a. % /ha or Imidacloprid @ 0.33 ml/lit or Thiomethoxam @ 0.33 ml/lit or Acephate @ 1.5-2.0 gm/lit or Spiromesifen 22.9 % SC @ 10 ml/10lit of water

Special Recommendations

- Tall growing hybrids topping should be done at 80 to 85 & 100 to 110 days after sowing including monopodia
- Foliar application of micronutrients likes MgSO4 1.0% + ZnSO4 0.5% or MgSO4 1.0% + KNO3 2.0% in regular interval is effective for boll development.
- Spraying of DAP at the rate of 2% at the time of flowering and boll development stage gives 10 to 20% higher seed cotton yield as well as reduces the leaf reddening.
- Use 25 kg **Nirmal Bio Power gold** per hectare at 30 to 35 days with chemical fertilizers
- Apply **Nirmal Rizamica** @ 250 gm/ ha through drip or drenching method.
- 3 foliar spray of **Nirmal Bio Force** or **Berryllon** with any pesticide or fungicide at flowering to boll development stage.

Arboreum Cotton



Hybrid Deshi (Arboreum) Cotton Ambika (NACH-12)

Characteristics

Plant habit.....Tall, open, medium spreading
Duration.....Medium late (160-170 days)
Boll size and shape.....Big, Round to oblong
Boll Weight (gm).....3.5-4.0
Staple length (mm).....26-27
Fibre Strength (g/tex).....20-22
Micronaire ($\mu\text{g}/\text{inch}$).....5.5-6.0
Ginning (%).....38-40

Special features

- Big boll, long staple
- Very good boll bursting and reflush
- Suitable for irrigated and rainfed cultivation
- Recommended topping of main shoot and monopodia at 4 to 4.5 feet height
- Highly tolerant to sucking pests and diseases
- Recommended for Central and South zones of India

Notified hybrid by Govt. of India

Hybrid Deshi (Arboreum) Cotton NACH - 18

Characteristics

Plant habit.....Tall, open, medium spreading
Duration.....Medium to late (165-175 days)
Boll size and shape.....Big, Round to oblong
Boll Weight (gm).....3.5-4.0
Staple length (mm).....25-26
Fibre Strength (g/tex).....22-23
Micronaire ($\mu\text{g}/\text{inch}$).....5.8-6.2
Ginning (%).....36-38

Special features

- Violet pigmented calyx & stem
- Big boll, good bursting and long staple
- Excellent reflush and high yielding
- Recommended topping of main shoot and monopodia at 4 to 4.5 feet height
- Suitable for irrigated and rainfed cultivation
- Highly tolerant to sucking pests and diseases
- Recommended for Central, South and North zones of India

Notified hybrid by Govt. of India



Arboreum Cotton



Hybrid Deshi (Arboreum) Cotton NACH - 433

Characteristics

Plant habitTall, open, medium spreading
Duration.....Medium (150-160 days)
Boll size and shape.....Big, Round to oblong
Boll Weight (gm).....3.5-4.0
Staple length (mm).....20-22
Fibre Strength (g/tex).....20-22
Micronaire (µg/inch).....Above 7.0
Ginning (%).....38-40

Special features

- Big boll size with excellent bursting
- Excellent locule retention
- Short coarse staple
- Resistant to sucking pests
- Suitable for irrigated and rainfed cultivation
- Recommended topping of main shoot and monopodia at 4 to 4.5 feet height
- Recommended for Central, South and North zones of India

Notified hybrid by Govt. of India

Hybrid Deshi (Arboreum) Cotton NACH-560

Characteristics

Plant habit.....Mid tall, erect, Open, less spreading
Duration.....Early (130-140 days)
Boll size and shape.....Medium, Round to oblong
Boll Weight (gm).....3.0 to 3.5
Staple length (mm).....22-23
Fibre Strength (g/tex).....23
Micronaire (µg/inch).....6.5
Ginning (%).....40

Special Features

- Violet pigmented calyx & stem
- Excellent boll bursting & excellent locule retention
- Suitable for irrigated and rainfed cultivation
- Recommended for close planting (90 x 30 cm) & once over harvest
- Recommended topping of main shoot at 3.5 to 4 feet height
- Recommended for Central, South & North zones of India.



Arboreum Cotton



Hybrid Deshi (Arboreum) Cotton Radha (NACH-461)

Characteristics

Plant habit.....Tall, open, Semi-spreading
Duration.....Medium to late (150-160 days)
Boll size and shape.....Big, Round to oblong
Boll Weight (gm).....3.5-4.0
Staple length (mm).....24
Fibre Strength (g/tex).....19
Micronaire (µg/inch).....6.5
Ginning (%).....39

Special Features

- Big boll, long staple with excellent boll bursting
- Resistant to sucking pests and diseases
- Tolerant to drought
- Suitable for irrigated and rainfed cultivation
- Recommended topping of main shoot and monopodia at 4 to 4.5 feet height.
- Recommended for Central and South zones of India.

Cultivation Practices for Hy. Desi Cotton (*G. arboreum L.*)

Soil.....Medium to heavy
Sowing period.....**North Zone** : April to May
Central Zone : 25th May to 30th June
South Zone : June 1st week with onset of monsoon
Spacing (feet).....Heavy Soil 3 x 3
Medium to Light Soil 3 x 2
Manures.....Apply 10 ton / acre FYM at the time of land preparation
Fertilizer dose (kg/ha): N P K
Rainfed/irrigated 80 : 40 : 40

Plant Protection:

Bollworm : Quinalphos 25 EC @ 20 ml / 10 lit of water or Cypermethrin 10 EC @ 7.5ml/10lit of water
or Chlorophyriphos 20% EC @ 20 ml/10 lit of Water or Lambda Cyhalothrin 5 % EC @ 8ml/ 10 lit of water
or Profenofos 50% EC @15-20 ml/10 lit of water or monocrotophos 36 WSL @ 17ml/ 10 lit of water

Special Recommendations

- Foliar application of micronutrients likes MgSO₄ 1.0% + ZnSO₄ 0.5% or MgSO₄ 1.0% + KNO₃ 2.0% at regular interval is effective for boll development.
- Spraying of DAP at the rate of 2% at the time of flowering and boll development stage gives 10 to 20% higher seed cotton yield.
- Due to tall growing nature of desi cotton hybrids topping should be done at 75 (4.0 feet height) & 90 to 110 days after sowing including monopodia.
- For prevention of boll and square shedding, apply spray of Planofix and fungicide (Tilt) at regular 15th days interval from flowering to boll development stages.
- For effective control of bollworm spray should be taken at 3 days before and 3 days after every no moon night.
- Use 25 kg **Nirmal Bio Power gold** per hectare at 30 to 35 days with chemical fertilizers
- Apply **Nirmal Rizamica** @ 250 gm/ ha through drip or drenching method.
- 3 foliar spray of **Nirmal Bio Force** or **Berrylon** with any pesticide or fungicide at flowering to boll development stages.

Sorghum



Hybrid Sorghum Ratna (NJH-40)

Characteristics

Duration.....105 - 110 days
Plant Height (cm).....210 - 220
Earhead Size & Shape.....Semi loose,
big longer earheads
Grain Quality.....Pearly white bold grains

Special features

- Good quality fodder and grains
- Tolerant to shoot fly & aphids
- Tolerant to drought and lodging
- Not recommended for sowing in hilly cold areas and winter season
- Recommended for kharif cultivation.

Hybrid Sorghum NJH-1175

Characteristics

Duration.....105-110 days (Kharif)
120-125 days (Rabi)
110-115 days (Summer)
Plant height (cm).....210-220 (Kharif)
170-180 (Rabi)
160-170 (Summer)
Earhead size & Shape.....Semi loose,
big long earheads
Grain quality.....Pearly white
shiny bold grains

Special features

- Good quality fodder and grains
- Tolerant to shoot fly & aphids
- Tolerant to drought and lodging
- Photo and Thermo insensitive hybrid
- Recommended for Kharif, Rabi & Early summer cultivation



Sorghum



Rabi Sorghum

Suvarna (NSRR-259)

Characteristics

Duration.....120 - 125 days

Plant Height (cm).....230 - 240

Earhead Size & Shape.....Semi compact, big,
oblong earhead

Grain Quality.....Excellent shiny bold grains

Special features

- Good fodder quality
- Excellent roti quality and taste
- Tolerant to shoot fly and charcoal rot disease
- Tolerant to drought
- Suitable for medium to heavy soils
- Suitable for rabi Cultivation

Rabi Sorghum

Aparna (NSRR-676)

Characteristics

Duration.....115 - 120 days

Plant Height (cm).....240 - 250

Earhead Size & Shape.....Semi compact, big oblong
conical earheads

Grain Quality.....Excellent Shiny bold grains

Special features

- Good fodder yield & quality
- Excellent grains, roti quality and taste
- Tolerant to shoot fly & charcoal rot disease
- Tolerant to drought and lodging
- Recommended for rabi cultivation
- Recommended for deep black soils with good water holding capacity



Sorghum

Cultivation Practices For Sorghum

Soil.....	Kharif - Well drained medium heavy soils
	Rabi - Medium heavy soils with good water holding capacity
Seed rate.....	3-4 kg/acre
Sowing period.....	Kharif - Onset of Monsoon
	Rabi - September-October
	Early Summer - January - February
Spacing.....	45x15 cm
Manures.....	Apply 10 ton / acre FYM at the time of land preparation
Fertilizers dose (kg/ha).....	N : P : K
	Irrigated 80 : 40 : 40
	Rainfed 60 : 30 : 30

Plant protection

Shoot fly and stem borer

Timely sowing is most important. Apply Phorate-10G @ 15-20 kg/ha. at the time of sowing.

Spray chloropyrifos @ 15 ml/ 10 lit of water at 7 and 15 days after sowing.

Aphids : Spray Metasystox 35 EC @ 2 ml/lit of water

Seed treatment : Thiamethoxam @ 3 g/kg of seed for the control of shoot fly and stem borer

Special recommendation

- Apply 25 kg **Nirmal Bio Power Gold** granule per ha at the time of sowing
- Apply **Nirmal Rizamica** @ 250 gm/ ha with organic fertilizer



Sorghum



Hybrid Fodder Sorghum Green Gold

Characteristics

Days to 1st cut.....55 - 60 days
Days to 2nd cut.....35 - 40 days after 1st cut
Plant Height (cm).....260 - 270 (1st cut)
Leaf length (cm).....85 - 90
No. of leaves/plant.....10 - 12
No. of tillers/plant.....3 - 5

Special features

- Multicut thin quality fodder
- High TSS and good fodder palatability
- **Red seeded hybrid**
- High fodder yield due to more tillering ability
- Highly tolerant to leaf diseases

Hybrid Fodder Sorghum Green Pearl

Characteristics

Days to 1st cut.....55 - 60 days
Days to 2nd cut.....35-40 days after 1st cut
Plant Height (cm).....275 - 280
Leaf length (cm).....80-85
No. of leaves/plant.....8 - 10
No. of tillers/plant.....3 - 5

Special features

- Multicut hybrid
- Thin quality fodder with high TSS
- Highly tolerant to leaf diseases
- **White seeded hybrid**



Pearl Millet



Hybrid Pearl Millet NPH - 5423

Characteristics

Duration.....80 - 85 days (Kharif)
Plant Height (cm).....220 - 225 (Kharif)
No. of Tillers/ Plant.....2 - 3
Earhead length (cm).....28-30

Special features

- Well exerted compact non bristled earheads
- Shiny ash grey bold grains
- Highly tolerant downy mildew disease
- Stay green quality fodder
- Recommended for Kharif and early summer (Jan. Sowing) seasons

Hybrid Pearl Millet NPH - 4915 (Yashwant)

Characteristics

Duration.....80 - 85 days (Kharif)
Plant Height (cm).....250 - 260 (Kharif)
No. of Tillers/ Plant.....3 - 4
Earhead length (cm).....30-32

Special features

- Non bristled compact well exerted long earheads
- Shiny ash grey bold grains
- Stay green quality fodder
- Highly tolerant to downy mildew disease.
- Recommended for A zone of India ie. Rajasthan, Punjab, Haryana, UP, North MP & North Gujrat for Kharif and early summer cultivation.



Pearl Millet



Hybrid Pearl Millet

NPH - 1651

Characteristics

Duration.....85 - 90 days (Kharif)

Plant Height (cm).....250 - 260 (Kharif)

No. of Tillers/ Plant.....4 - 5

Earhead length (cm)...30-32

Special features

- Tall & late maturity
- Non bristled compact, long earheads
- Shiny ash grey bold grains
- Stay green & clean fodder
- Highly tolerant to downy mildew disease
- Recommended for kharif season only
- Recommended only for A zone of India..ie Eastern Rajasthan, Western UP, Punjab, Hariyana & North MP states.

Hybrid Pearl Millet

NPH - 40+

Characteristics

Duration.....75 - 80 days (Kharif)

Plant Height (cm).....180 - 190 (Kharif)

No. of Tillers/ Plant.....3 - 4

Earhead length (cm).....32-34

Special features

- Non bristled compact, long earheads
- Stay green fodder
- Highly tolerant to downy mildew disease
- Recommended for kharif & early summer (January sowing) seasons



Pearl Millet



Hybrid Pearl Millet Shabari (NPH - 4506)

Characteristics

Duration.....65 - 70 days (Kharif)
Plant Height (cm).....220 - 230 (Kharif)
No. of Tillers/ Plant.....3 - 4
Earhead length (cm)...26-28

Special features

- Early maturity
- Non bristled compact earheads
- Shiny ash gray bold grains
- Good fodder quality
- Highly tolerant to downy mildew disease
- Recommended for Kharif and early summer (January sowing) seasons
- Recommended for all zones of India

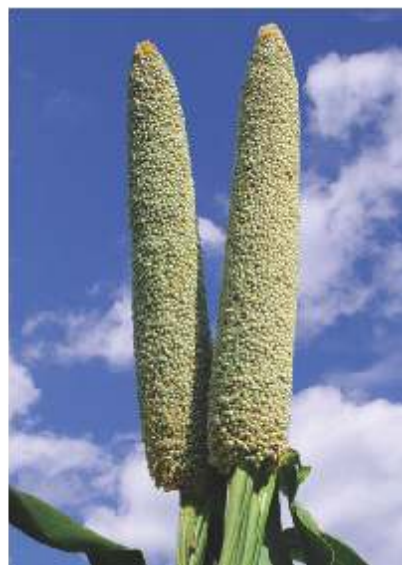
Hybrid Pearl Millet NPH - 9

Characteristics

Duration.....70 - 75 days (Kharif)
Plant Height (cm).....200 - 210 (Kharif)
No. of Tillers/ Plant.....3 - 4
Earhead length (cm).....26-28

Special features

- Non bristled compact earheads
- Shiny bold grains
- Excellent roti quality & taste
- Highly tolerant to downy mildew disease
- Recommended for Kharif & Early summer (Jan. Sowing) season
- Recommended for B zone (Central & South) of India



Pearl Millet



Hybrid Pearl Millet

NPH - 5286

Characteristics

Duration.....80 - 85 days (Kharif)

Plant Height (cm).....210 - 220 (Kharif)

No. of Tillers/ Plant.....3 - 4

Earhead length (cm).....30 - 32

Special features

- Compact, well exerted bristled earheads
- Shiny ash gray bold grains
- Stay green fodder quality
- Highly tolerant to downy mildew disease
- Recommended for Kharif and early summer (Jan. Sowing) season for B zone (Central & South) of India

Pearl Millet

Dhanashakti (ICTP - 8203 Fe)

Characteristics

Duration.....70 - 75 days (Kharif)

Plant Height (cm).....180 - 200 (Kharif)

No. of Tillers/ Plant.....2 - 3

Earhead length (cm).....26-27

Special features

- Non bristled compact well exerted earheads
- Shiny slate gray coloured bold grains
- Highly tolerant to downy mildew disease
- High Fe content, than original ICTP-8203 with good Bhakari quality
- Recommended for all zones of India, in Kharif season



Pearl Millet

Cultivation Practices For Pearl Millet

Soil.....Light to medium
Seed rate.....1.5 to 2.0 kg per acre
Sowing period.....Kharif - 15th June - 15th July (as per local conditions)
Early summer - January
Manures.....Apply 10 ton / acre FYM at the time of land preparation
Fertilizers dose (Kg/ha) N P K
100 : 50 : 50

Irrigations : During kharif seasons as a rainfed crop there is no such irrigation required. But in summer season sufficient moisture is to be available at following critical growth stages.

1) Tillering stage 2) Flag leaf stage 3) Flowering stage 4) Seed set / grain filling stage

Plant Protection

- **Downy mildew** : Use resistant hybrids for sowing
- Use Metalaxyl treated seed for sowing.

Special Recommendations

- Apply 25 kg **Nirmal Bio Power Gold** granule per ha at the time of sowing.
- Apply **Nirmal Rizamica** @ 250 gm/ ha with organic fertilizer



Maize



Hybrid Maize

Nilesh (NMH-51+)

Characteristics

Duration.....	90 - 100 days (Kharif) 115 - 120 days (Rabi) 140 - 145 days (Rabi Bihar)
Plant Height (cm).....	250 - 260 (Kharif) 280-290 (Rabi)
Cob Length (cm).....	20 - 22
No. of grain rows/cob.....	14 - 16
No. of grains/row.....	40 - 42
Shelling.....	82 - 83 %

Special features

- Early maturity, semi erect plant type
- Semident, yellowish orange grain colour
- Suitable for green cob consumption also
- Highly tolerant to fusarium stalk rot, Rajasthan Downy mildew, Bactirial stalk rot, Maydis leaf blight and common rust disease
- Recommended for kharif, rabi and early summer cultivation

Hybrid Maize

NMH-3095

Characteristics

Duration.....	105 - 110 days (Kharif) 145 - 150 days (Rabi-Bihar) 125 - 130 days (Rabi-Rest of India) 115 - 120 days (Spring)
Plant Height (cm).....	260 - 270 (Kharif) 290-300 (Rabi)
Cob Length (cm).....	20 - 22
No. of grain rows/cob.....	16 - 18
No. of grains/row.....	38 - 40
Shelling.....	84-85%

Special features

- Full maturity with semi erect plant type
- Semiflnt, medium orange bold grains
- Highly tolerant to TLB disease and stem borer
- Good tip filling with uniform cylindrical cob
- Stay green nature & good fodder quality
- Recommended for kharif, rabi and early summer cultivation





Hybrid Maize NMH-666

Characteristics

- Crop maturity
 - Kharif.....120-125 days
 - Rabi Bihar.....150-155 days
 - Rabi Rest of India...130-135 days

Special features

- High Shelling percentage 84-85%
- High grain weight
- Cylindrical and Uniform Cobs
- Good tip filling
- Attractive grain color
- Stay green till harvest
- Semident grain type

Hybrid Maize NMH-3662

Characteristics

Duration.....110 - 115 days (Kharif)
 130 - 135 days (Rabi-Rest of India)
 155 - 160 days (Rabi Bihar)

Plant Height (cm).....240 - 250 (Kharif)
 280-290 (Rabi)

Cob Length (cm).....20 - 22

No. of grain rows/cob.....16 - 18

No. of grains/row.....38 - 40

Shelling.....83-84%

Special features

- Full maturity with semi erect plant type
- Semident, yellowish orange bold grains
- Uniform ear size and shape
- Recommended for heavy black soils & irrigated conditions
- Highly tolerant Turcicum leaf blight, Leaf rust diseases and stem borer
- Recommended for Kharif and Rabi cultivation



Maize



Hybrid Maize NMWH - 27+

Characteristics

Duration.....	100 - 110 days (Kharif) 125 - 130 days (Rabi- Rest of India) 140 - 150 days (Rabi Bihar)
Plant Height (cm).....	250 - 260 (Kharif) 290-300 (Rabi)
Cob Length (cm).....	20 - 22
No. of Grain Rows/cob.....	16 - 18
No. of Grains/row.....	40 - 42
Shelling.....	84 - 85%

Special features

- Medium maturity with semi erect broad leaf plant type
- Semident, white shiny bold grains
- Stay green nature with good fodder quality
- Highly tolerant to maize streak virus, leaf blight and maize rust disease
- Recommended for Kharif and Rabi cultivation

Hybrid Sweet Corn NSCH - 130 (Sweet honey)

Characteristics

Duration (green cob).....	70 - 75 days (Kharif) 90- 95 days (Rabi)
Plant Height (cm).....	180 - 190 (Kharif) 210-220 (Rabi)
Cob Length (cm).....	20 - 22
No. of Grain Rows/cob.....	14 - 16
No. of Grains/row.....	38 - 40

Special features

- Early maturity (green cob)
- Whitish yellow shiny bold grains
- High TSS (15°-16° Brix)
- Very juicy, sweet grains and easy thresh ability
- Tolerant to major leaf diseases
- Long cylindrical cobs



Cultivation Practices For Maize

Soil.....Medium to heavy
Seed rate.....5-7 kg /acre (Depend on hybrid recommendation) /
2-3 kg/ acre (Sweet corn)
Sowing period.....Kharif - June to July
Rabi - October to November
Summer - 15th January to 15th February
Spacing.....60 x 25 cm
Manures.....Apply 10 ton / acre FYM at the time of land preparation
Fertilizers dose (Kg/ha) N P K
 120 : 60 : 60

Plant protection

Turcicum leaf blight and banded leaf sheath blight :

Spray Trifloxystrobin 25%+ Tubuconazole 50% (Nativo 2 gm/lit.) before flowering

Fungal and bacterial leaf diseases :

Apply Tilt 25 EC or Bavistin @ 2 ml/ lit. Plantomycine 1.5 gm/15 lit. of water for fungal & bacterial leaf diseases

Seed treatment : Bavistin + Captain in 1:1 Ratio- 2 gm/kg for

Turcicum leaf blight, banded leaf sheath blight and maydis leaf blight diseases

Special Recommendations

- Apply 25 kg **Nirmal Bio Power Gold** granule per ha with chemical fertilizers at the time of sowing
- Apply **Nirmal Rizamica** @ 250 gm/ ha with organic fertilizer
- Apply **Nirmal Sniper** 1.5 Kg/ acre @ 100 gm / pump after 20 days after sowing against fall Armyworm
- Apply nitrogen fertilizers in 3 splits at the time of sowing, 30 days after sowing and 60 days after sowing mixed with zink sulphate 10 kg per acre



Wheat

Wheat

Nirbhay (NW-1)



Characteristics

Duration.....115 - 120 days

Plant Height (cm).....90 - 95

No. of Tillers/ Plant.....25 - 30 (standard cultivation)

Spike Length (cm).....12 - 15

Special features

- Midlate maturity
- Medium bold shiny quality grains
- Recommended for timely sowing
- Recommended seed rate 30 kg per acre
- Good response under higher management practices
- Recommended for Maharashtra, Andhra, Karnataka, Telangana & chhattisgarh states

Wheat

NW-139 (Uday)

Characteristics

Duration.....100 - 105 days

Plant Height (cm).....85 - 90

No. of Tillers/ Plant.....12 - 15

Spike Length (cm).....10 - 12

Special features

- Very early maturity.
- Medium bold shiny grains
- Highly tolerant to rust disease
- Recommended for timely & late sowing (December)



Wheat



Wheat

Ajay (NW-72)

Characteristics

Duration.....105 - 110 days

Plant Height (cm).....90 - 100

No. of Tillers/ Plant.....15 - 20

Spike Length (cm).....10 - 12

Special features

- Early maturity
- Medium bold shiny quality grains
- Excellent Chapati quality and taste
- Highly tolerant to rust disease
- Recommended for timely & late sowing (December)

Wheat

Supreme (NW-74)

Characteristics

Duration.....110 - 115 days

Plant Height (cm).....95 - 100

No. of Tillers/ Plant.....15 - 20

Spike Length (cm).....10 - 12

Special features

- Medium bold shiny grains
- Excellent grain quality & taste
- Highly tolerant to rust diseases
- Recommended for timely sowing



Cultivation Practices For Wheat

Soil.....Medium to heavy
Seed rate.....40 kg per acre
Sowing period.....Region wise timely sowing
Spacing.....22.5 cm between rows
Manures.....Apply 10 ton / acre FYM at the time of land preparation
Fertilizer dose (Kg/ha) N P K
 120 : 60 : 60

Irrigation :

- At tillering stage
- At boot leaf stage
- At flowering stage
- At grain filling stage

Irrigation required depends on duration of variety and soil type (4-6 irrigation)

Plant Protection

- **Aphids:** Spray-Chloropyrifos @1.5 ml/lit. Of water
- **Rust:** Spray-Dithane M-45 or Dithane Z-78 @ 2 gm/lit. of water with 0.1 SS-100

Special Recommendations

- Apply 25 kg **Nirmal Bio Power Gold** granule per ha at the time of sowing
- Apply **Nirmal Rizamica** @ 250 gm/ ha with organic fertilizer
- 3 foliar spray of **Nirmal Bio Force** @2 ml/lit. of water at the time of preflowering, flowering and grain filling stage.



Paddy



Hybrid Paddy NPH - 150

Characteristics

Duration.....	115 - 120 days
Plant Height (cm).....	90 - 100
No. of productive tillers/ plant.....	18 - 20
Panicle Length (cm).....	26 - 28

Special features

- Extra long slender, fine grains
- Excellent cooking quality & taste
- Tolerant to major pests & diseases
- Recommended for Kharif & Rabi cultivation
- Not recommended for low-lying coastal areas in Kharif

Hybrid Paddy NPH - 101

Characteristics

Duration.....	120 - 125 days
Plant Height (cm).....	100 - 110
No. of tillers/ plant.....	16 - 18
Panicle Length (cm).....	28 - 30

Special features

- Long slender non scented grains
- High grain setting percentage with more numbers of spikelets per panicle
- Excellent cooking quality
- High hulling, milling percentage & good Head Rice Recovery (HRR) Percentage
- Highly tolerant to major pests & diseases
- High yielding hybrid





Hybrid Paddy
NPH - 30

Characteristics

Duration (Days).....	130-135
Plant height (cm).....	110-115
No. of productive tiller/plant.....	20-22
Panicle length (cm).....	27-29

- Special features**
- Mid late duration (130-135 days)
 - Long bold non scented grains
 - High grain setting percentage with more number of spikelets per panicle
 - High milling percentage with more Head Rice Recovery (HRR) Percentage
 - Non lodging with good field stand
 - Recommended for lowland cultivation

Hybrid Paddy
Sahyadri - 4 (Hansa)

Characteristics

Duration.....	115 - 120 days
Plant Height (cm).....	90 - 100
No. of tillers/ plant.....	16 - 18
Panicle Length (cm).....	26 - 28

- Special features**
- Long slender non scented grains
 - Excellent cooking quality
 - Recommended for kharif, rabi/boro & direct seeding cultivation.
 - **Notified hybrid (Govt. of India)**



Paddy



Hybrid Paddy NPH - 242

Characteristics

Duration.....120 - 125 days
Plant Height (cm).....100 - 110
No. of productive tillers/ plant.....20 - 22
Panicle Length (cm).....28 - 30

Special features

- Long slender non scented grains
- High grain setting percentage with more no. of spikelets per panicle
- High milling percentage with good head rice recovery (HRR)
- Highly tolerant to major pests and diseases
- Recommended for kharif, rabi & direct seeding cultivation

Paddy Sairam (NR - 09)

Characteristics

Duration.....140 - 150 days
Plant Height (cm).....110 - 120
No. of productive tillers/ plant.....18 - 20
Panicle Length (cm).....22 - 24

Special features

- Very short slender, fine & non scented grains
- Excellent cooking quality & taste
- Tolerant to major pests and diseases
- Recommended for lowland cultivation



Paddy



Paddy

Supriya (NR - 81)

Characteristics

Duration.....115-120 days
Plant Height (cm).....90-100
No. of productive tillers/plant.....18-20
Panicle length (cm).....22-24

Special Features

- Short slender, fine non scented grains
- High yielding and non lodging culm attitude.
- High grain setting percentage with more no. of spikelets per panicle
- Excellent cooking quality & taste
- Tolerant to major pests & diseases

Paddy

Vaishnavi (NR - 241+)

Characteristics

Duration.....120 - 125 days
Plant Height (cm).....90 - 100
No. of productive tillers/ plant.....16 - 18
Panicle Length (cm).....24 - 26

Special features

- Medium slender non scented grains.
- Compact panicle with high spikelet density & high grain setting percentage
- Excellent cooking quality & taste
- Tolerant to major pests and diseases.
- High yielding



Paddy



Paddy Sai (NR - 212)

Characteristics

Duration.....	140 - 145 days
Plant Height (cm).....	85 - 90
No. of productive tillers/ plant.....	14 - 16
Panicle Length (cm).....	22 - 24

Special features

- Short slender, fine non scented grains
- Excellent cooking quality & taste
- Tolerant to major pests and diseases
- Recommended for lowland cultivation

Paddy Parvati (NR - 48)

Characteristics

Duration.....	130 - 135 days
Plant Height (cm).....	100 - 105
No. of productive tillers/ plant.....	16 - 18
Panicle Length (cm).....	26 - 28

Special features

- Long slender scented grains
- Highly tolerant to lodging due to deep root system
- Excellent cooking quality with aroma
- Highly tolerant to major pests and diseases
- High yielding



Paddy



Paddy NR - 1011

Characteristics

Duration.....115 - 120 days
Plant Height (cm).....90 - 100
No. of productive tillers/ plant.....18 - 20
Panicle Length (cm).....24 - 26

Special features

- Long slender non scented grains
- Excellent cooking quality
- Highly tolerant to blast disease & drought
- Suitable for kharif, rabi/boro cultivation
- Suitable for direct seeded cultivation

Paddy Kranti (NR - 89)

Characteristics

Duration.....120 - 125 days
Plant Height (cm).....100 - 110
No. of productive tillers/ plant.....16 - 18
Panicle Length (cm).....26 - 28

Special features

- Medium slender non scented grains
- Excellent cooking quality
- Highly tolerant to major pests and diseases
- Suitable for upland & direct seeded cultivation
- Recommended for kharif & rabi/boro cultivation



Paddy



Paddy NR - 348

Characteristics

Duration.....130 - 135 days
Plant Height (cm).....100 - 110
No. of productive tillers/ plant.....18 - 20
Panicle Length (cm).....24 - 26

Special features

- Medium slender non scented grains.
- Blackish colour of panicle at the time of flowering & golden colour of grains at maturity
- High grain setting percentage with more no. of spikelets per panicle
- Excellent cooking quality & taste
- Highly tolerant to major pests and diseases
- Non lodging with high yielding ability
- Recommended for lowland cultivation

Paddy Madhumati (NB - 3)

Characteristics

Duration.....120 - 125 days
Plant Height (cm).....110 - 115
No. of productive tillers/ plant.....18 - 20
Panicle Length (cm).....26 - 28

Special features

- Extra long slender, fine, mild scented basmati quality grains
- Excellent cooking quality & taste
- Tolerant to major pests and diseases
- Recommended for kharif & rabi cultivation
- Very high yielding



Cultivation Practices For Paddy

Soil.....Medium to heavy

Seed rate.....10 kg/acre for varieties

6 kg/acre for hybrids.

Sowing period.....Kharif : May to June

Rabi : November to December

Manures.....Apply 10 ton / acre FYM at the time of land preparation

Fertilizer dose (kg/ha).....N : P : K

100 : 50 : 50 for varieties &

120 : 60 : 60 for hybrids.

Application of Nitrogen in four split doses at basal, at tillering, at flage leaf stage & pre flowering stage.

All P should be applied as basal dose while K to be applied in the ratio of 60:40 at basal & flage leaf stage.

Plant Protection

● **Stem borer** : Spray - Chloropyriphos @ 1.5 ml/lit. of water

● **Blast** : Use Thiram treated seed for sowing and healthy seedling for transplanting

Spray - Tricyclazole @ 2.5gm/lit. of water or Dithane M - 45 @ 2 gm/lit. of water.

● **Sheath blight** : Spray -Copper oxychloride @ 2.5 gm/lit. of water

● **False smut** : Spray - Copper oxychloride @ 2.5 gm /lit. of water at panicle emergence stage

Special Recommendation

● Transplanting age of seedling must be 1/5th days of its total duration.

● Apply 25 kg **Nirmal Bio Power Gold** granule per ha at the time of transplanting

● Use **Nirmal Rizamica** @ 250 gm/ ha by dipping seedling before transplanting

● 3 foliar spray of **Nirmal Bio Force** @ 2ml/lit of water at the time of preflowering, flowering & grain filling stage



Mustard



Hybrid Mustard NIMH-10

Characteristics

Duration.....120 - 130 days
Plant Type.....Midtall semi compact
Plant Height (cm).....170 - 180
Grain Type.....Grayish brown
bold round seed

Special features

- Early maturity open silique angle
- Profuse basal branching with very long main shoot length
- Long silique with open silique angle
- Wider adaptability with high silique density
- Tolerant to white rust and sclerotinia rot diseases
- High yielding hybrid

Mustard Ganga

Characteristics

Duration.....125 - 135 days
Plant Type.....Midtall & semi compact
Plant Height (cm).....190 - 200
Grain Type.....Brownish black
bold round seed

Special features

- Midlate, midtall and semi compact plant type
- Long main shoot length with open silique angle
- Wider adaptability
- Tolerant to white rust and sclerotinia rot diseases



Mustard



Mustard

Nirmal Bold (NML-64)

Characteristics

Duration.....130 - 140 days
Plant Type.....Tall and semi compact
Plant Height (cm).....200 - 210
Grain Type.....Grayish black and
very bold rounded seed

Special features

- Tall, midlate and semi compact plant type
- Very long main shoot length with appressed silique angle
- Long silique length with very bold seed size
- Tolerant to white rust and sclerotinia rot diseases
- High yielding

Mustard

Black Gold (NML-100)

Characteristics

Duration.....110 - 120 days
Plant Type.....Midtall semi compact
Plant Height (cm).....160 - 170
Grain Type.....Grayish brown, round seed

Special features

- Early maturity
- Long silique length with open silique angle
- Wider adaptability with tolerant to terminal heat stress
- Tolerant to powdery mildew, white rust and sclerotinia rot diseases



Mustard



Mustard NML-151

Characteristics

Duration.....130 - 140 days
Plant Type.....Tall and semi compact
Plant Height (cm).....210 - 220
Grain Type.....Grayish brown
very bold round seed

Special features

- Tall and midlate maturity
- Very long main shoot length
with high silique density
- Very long silique length
with appressed silique angle
- Tolerant to white rust and
sclerotinia rot diseases

Yellow Sarson NYM-283

Characteristics

Duration.....120 - 130 days
Plant Type.....Dwarf and semi open
Plant Height (cm).....110 - 120
Grain Type.....Shiny yellowish bold seed

Special features

- Midlate maturity with dwarf plant type
- Very long tetra-locular drooping silique
- Tolerant to white rust and powdery mildew
diseases
- Recommended for only yellow sarson
growing states



Mustard

Cultivation Practices For Mustard

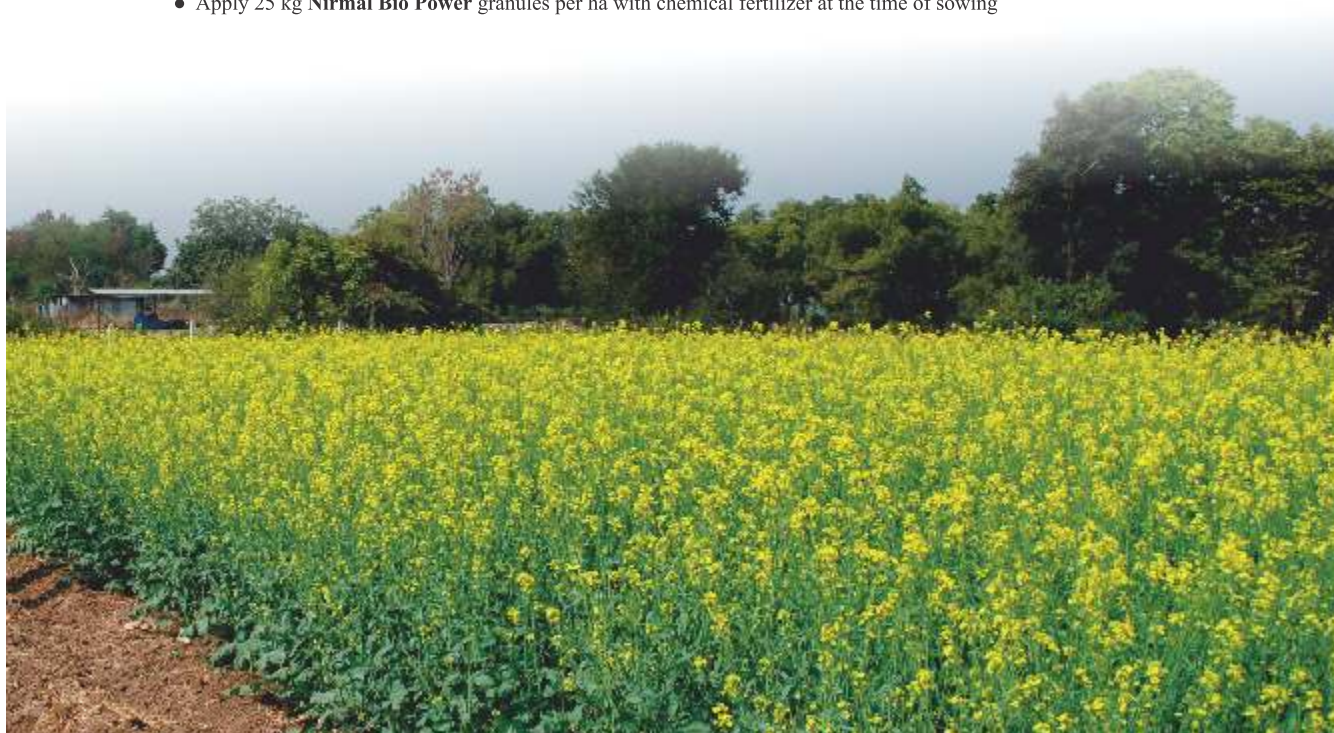
Soil.....Medium to heavy
Seed rate.....Variety – 1 to 1.5 kg per acre
Hybrid – 1 kg per acre
Sowing period.....During rabi season
Spacing.....Variety - 45 x 15 cm
Hybrid – 45 x 20 cm
Manures.....Apply 10 ton / acre FYM at the time of land preparation
Fertilizer dose (Kg/ha) N P K S
80 : 40 : 20 : 20

Plant Protection

- **Aphid** : Spray - Dimethoate 30 EC @ 2 ml per litre of water
- **Painted bug** : Spray - Imidacloprid 17.8 SL @ 0.5 ml per litre of water
- **Sclerotinia rot** : Spray - Carbendazim @ 0.5 g per litre of water twice during the flowering period at 20 days interval (at 50 and 70 days after sowing).
- **Downy mildew** : Spray - Dithane M - 45 @ 2 gm/lit. of water
- **White rust** : Spray - Mancozeb or Redomil MZ 72 W.P (mixture of matalaxyl 64 percent and mancozeb 8 percent) @ 2 g per litre of water
- **Powdery mildew** : Spray - Wettable Sulphur @ 2 g per litre of water or Dinocap 1g per litre of water or canbandazim @ 0.5 g per litre of water

Special Recommendations

- 3 foliar spray of **Nirmal Bio Force** @ 2ml/lit. of water at the time of pre-flowering, flowering and grain filling stage
- Apply 25 kg **Nirmal Bio Power** granules per ha with chemical fertilizer at the time of sowing





Hybrid Castor NTCH - 198

Characteristics

Days to maturity (primary spike).....120-130 days
 Plant height upto the base of
 primary spike.....110-120 cm
 Stem colour after removal of bloom.....Mahogany
 Primary spike length (cm).....70-75
 Secondary spike length (cm).....45-50

Special features

- Midlate maturity with double bloom plant type
- Long conical compact spikes
- profuse branching with more number of effective spikes per plant
- Tolerant to fusarium wilt and gray mold diseases
- High yielding hybrid with wider adaptability

Hybrid Castor NTCH - 324

Characteristics

Days to maturity (primary spike).....110-120 days
 Plant height upto the base of
 primary spike.....100-110 cm
 Stem colour after removal of bloom.....Mahogany
 Primary spike length (cm).....75-80
 Secondary spike length (cm).....50-55

Special features

- Midlate maturity with triple bloom plant type
- Very long semi compact conical spikes
- More number of effective spikes per plant
- Highly tolerant to fusarium wilt disease
- High yielding hybrid



Cultivation Practices for Castor

Soil.....Medium to heavy
Seed rate/acre.....2 kg
Sowing period.....Kharif (July to Aug)
Spacing (cm).....120 x 60
Manures.....Apply 10 ton / acre FYM at the time of land preparation
Fertilizer dose (kg/ha.). N : P : K : S
75 : 50 : 00 : 20

Plant protection

Semi Looper, tobacco caterpillar and capsule borer :

Spray- Chlorantraniliprole 18.5 SC @0.3 ml per litre of water OR flubendiamide 480 SC @0.2 ml per litre of water

Leaf hopper : Spray- Dimethoate 30 EC @ 2 ml per litre of water

Fusarium wilt : Seed treatment- cymoxanil 8% mancozeb 64% WP @ 1 gm per kg of water

Soil drenching- Nirmal Biosanjivani [Trichoderma viride (5gm)+Pseudomonas fluorescence (5gm)]10 gm per litre of water

Special recommendation

- Apply 25 kg **Nirmal Bio Power Gold** granule per ha at the time of sowing near root zone
- Use **Nirmal Rizamica** @ 250 gm/ ha through drip or drenching method



Pigeonpea



Pigeonpea NTL-724

Characteristics

Duration.....130 - 140 days

Plant Height (cm).....170 - 180

Grain Colour.....Red

No. of grains/ Pod.....4 - 5

Special features

- Early maturity
- Semi spreading plant type and long fruiting branches
- Excellent dal and cooking quality
- Recommended for cultivation in all zones of India

Pigeonpea Durga (NTL-30)

Characteristics

Duration.....150 - 160 days

Plant Height (cm).....170 - 180

Grain Colour.....Red

No. of grains/ Pod.....4 - 5

Special features

- Mid early maturity
- Spreading plant type and cluster bearing ability
- Excellent dal and cooking quality
- Highly tolerant to wilt and SMD diseases
- Good reflush under irrigated condition
- Recommended for cultivation in central and south India



Pigeonpea



Pigeonpea Pinky (NTL - 900)

Characteristics

Duration.....155 - 165 days

Plant Height (cm).....180 - 190

Grain Colour.....Red

No. of grains/ Pod.....4 - 5

Special features

- Midlate maturity
- Spreading plant type and long fruiting branches with cluster bearing ability
- Medium bold grains and excellent dal and cooking quality
- Good reflush under irrigated condition
- Recommended for cultivation in central and south India

Pigeonpea NTL - 539

Characteristics

Duration.....150 - 160 days

Plant Height (cm).....160 - 170

Grain Colour.....White

No. of grains/ Pod.....4 - 5

Special features

- Mid early maturity
- Spreading plant type and cluster bearing ability
- Excellent dal and cooking quality
- Recommended for central and south zone of India



Pigeonpea



Pigeonpea NTL - 873

Characteristics

Days to 1st green pod picking.....	125 - 130 days
Duration.....	140 - 150 days
Plant Height (cm).....	190 - 200
Grain Colour.....	White
No. of grains/ Pod.....	5 - 6

Special features

- Mid early maturity
- Erect drooping plant type
- Extra long prominent pod and sweet bold grains due to high TSS
- White bold seeds with excellent dal and cooking quality
- Excellent reflush under irrigated conditions
- Suitable for dual purpose (vegetable and grain purpose)

Pigeonpea Neelam (NTL-2)

Characteristics

Duration.....	180 - 190 days
Plant Height (cm).....	210 - 220
Grain Colour.....	White
No. of Seeds/ Pod.....	5 - 6

Special features

- Late maturity
- Tall, erect drooping plant type
- Extra long prominent pod with more number of seeds per pod
- Sweet bold grains due to high TSS
- Excellent dal quality
- Tolerant to pod borer due to escape mechanism
- Recommended for kharif irrigated condition with wider spacing
- High yielding dual purpose variety



Pigeonpea/ Black Gram

Cultivation Practices of Pigeonpea

Soil.....Medium to heavy
Seed rate.....2-3 kg/acre
Sowing period.....June to July
Spacing.....90 x 60 cm (mid late group)
120 x 90 cm (late group & irrigated)
Manures.....Apply 10 ton / acre FYM at the time of land preparation
Fertilizer dose (Kg/ha) N P K S
25 : 50 : 50 : 20

Plant Protection

- **Leaf webber** :Spraying of Chloropyrifos @ 2 ml/lit of water
- **Pod borer** :Spraying of Emamectin benzoate @ 0.3 gm/lit of water or Spraying of Profenofos @ 2 ml/lit of water or Spraying of Chlorontraniliprole @ 0.3 gm/lit of water
- **Fusarium wilt** :Cultural control: Select non infected field, uproot infected plants and crop rotation with sorghum or castor.
- **Chemical control**: Drenching of Carbendarim or COC @ 1.5 ml/lit of water
- **Sterility mosaic disease** : Spraying of Kelthane @ 0.1% or Dicofol @ 2 ml/lit of water to control mite vector in different stages of crop.

Special Recommendation

- Seed treatment with **Nirmal Bhuparis RB** (Rizobium) and Tricoderma
- Apply 25 kg **Nirmal Bio Power Gold** granule per ha at the time of sowing
- Apply **Nirmal Rizamica** 250 gm/ ha through drip or drenching method
- Three foliar spray of **Nirmal Bioforce** @ 2 ml/lit of water at the time of pre flowering, flowering and grain filling stage.

Black Gram

Vikas (NUL-242 +)

Characteristics

Duration.....65 to 70 days
Growth habit.....Determinate
Grain colour.....Black bold grains
No. of grains/pod.....6-8

Special features

- Early and determinate plant type
- Non shattering and synchronous maturity
- Highly tolerant to yellow mosaic virus and powdery mildew disease
- Suitable for Kharif, rabi and summer season cultivation as per SAU recommendations



Black Gram



Black Gram Vishwas (NUL - 7)

Characteristics

Duration.....70 - 75 days
Growth habit.....Compact, Determinate
Grain colour.....Black bold grains
No. of grains/pod.....6-8

Special features

- Early, determinate and compact plant type
- Less foliage and synchronous maturity
- Tolerant YMV and powdery mildew diseases
- Recommended for Kharif and rabi (south) cultivation
- **Notified variety (Government of India)**

Cultivation Practices of Black Gram

Soil.....Medium to heavy
Seed rate.....Kharif - 5 to 6 kg per acre
Rabi /Summer - 6-8 kg/acre
Sowing period.....Kharif - 15 June - 15 July
Rabi - 15 Sept – 15 October
Summer -15 Feb- 15 March
Spacing.....45 x 5-8 cm (Kharif)
30 x 5-8 cm (summer)
Manures.....Apply 10 ton / acre FYM at the time of land preparation
Fertilizers (Kg/ha) N P K S
20 : 40 : 40 : 20

Plant Protection

- **Sucking pest** : Spraying of Imidacloprid @ 0.2 ml/lit of water
- **Hairy caterpillar** : Spraying of Chloropyriphos @ 1.5 ml/lit of water
- **Powdery mildew** : Spraying of Wettable sulphur @ 2.5 ml/lit of water

Special Recommendation

- Apply 25 kg **Nirmal Bio Power Gold** granule per ha at the time of sowing
- Apply **Nirmal Rizamica** @ 250 gm/ ha with organic fertilizer
- Three foliar spray of **Nirmal Bioforce** @ 2 ml/lit of water at the time of pre flowering, flowering and grain filling stage.

Green Gram



Green Gram Naval (NVL-1)

Characteristics

Duration.....60 - 65 days

Growth habit.....Determinate

Plant height (cm).....50 - 60

No. of grains/ pod.....12 - 14

Grain colour.....Shiny green,
glossy and bold grains

Special features

- Determinate, semi spreading plant type
- Very long pods with more number of grains per pod
- Non shattering and synchronous maturity (suitable for once over harvest)
- Highly tolerant powdery mildew and moderate tolerant to YMV diseases

Special recommendation

Recommended for timely sowing during kharif season

Green Gram NVL - 516

Characteristics

Duration.....60 - 65 days

Growth habit.....Determinate

Grain colour.....Shiny green, glossy and
medium bold grains

No. of grains/pod.....10-12

Special features

- Early and synchronous maturity
- More numbers of pods /cluster
- Non shattering variety
- Highly tolerant to Mungbean yellow mosaic virus (MYMV) disease
- Recommended for cultivation in all seasons as per respective SAU recommendations



Green Gram

Cultivation Practices of Green Gram

Soil.....Medium to heavy
Seed rate.....Kharif - 5 to 6 kg per acre
Rabi /Summer - 6-8 kg/acre
Sowing period.....Kharif - 15 June - 15 July
Rabi - 15 Sept – 15 October
Summer -15 Feb- 15 March
Spacing.....45 x 5-8 cm (Kharif)
30 x 5-8 cm (summer)
Manures.....Apply 10 ton / acre FYM at the time of land preparation
Fertilizers (Kg/ha) N P K S
20 : 40 : 40 : 20

Plant Protection

- **Sucking pest** : Spraying of Imidacloprid @ 0.2 ml/lit of water
- **Hairy caterpillar** : Spraying of Chloropyriphos @ 1.5 ml/lit of water
- **Powdery mildew** : Spraying of Wettable sulphur @ 2.5 ml/lit of water

Special Recommendation

- Apply 25 kg **Nirmal Bio Power Gold** granule per ha at the time of sowing.
- Apply **Nirmal Rizamica** @ 250 gm/ ha with organic fertilizer
- Three foliar spray of **Nirmal Bioforce** @ 2 ml/lit of water at the time of pre flowering, flowering and grain filling stage.



Back Inner





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