



Nirmal **SEEDS...**
Seeds for **PROSPERITY...**



Agri Bio-tech for Healthy Nation



**FIELD CROPS, VEGETABLES
& BIO INPUT**
Catalogue



Nirmal's new high-tech "class 10000" laboratory for mass multiplication of Mycorrhizae by "ROC" technology established at Pachora Dist. Jalgaon (MH)



Newly established Bio Manufacturing Unit & Seed Processing Plant 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".





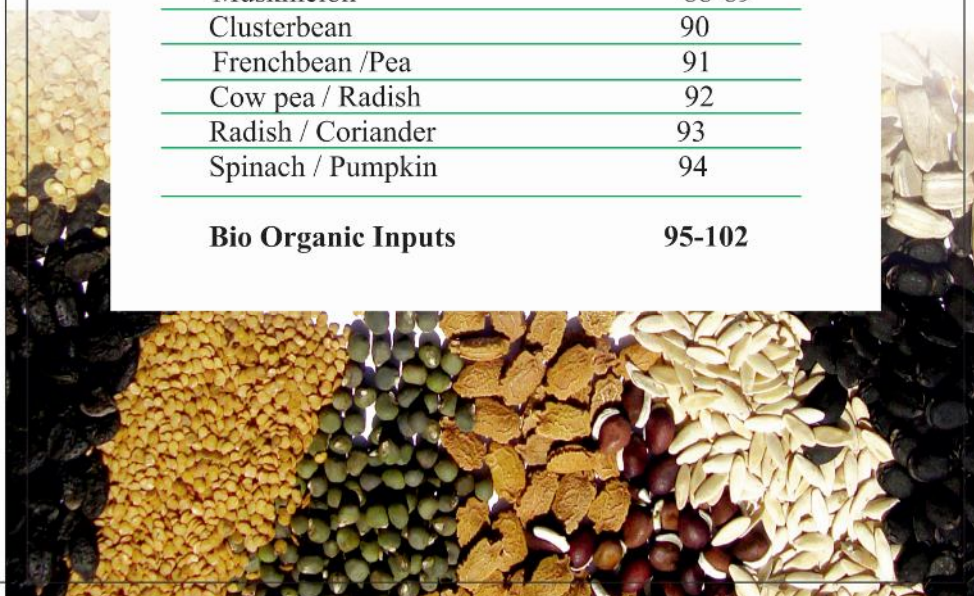
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Arboreum Cotton

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 & 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

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 ($\mu\text{g}/\text{inch}$).....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 & North zones of India

Notified hybrid by Govt. of India

Arboreum Cotton

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 (μ g/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.

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 $MgSO_4$ 1.0% + $ZnSO_4$ 0.5% or $MgSO_4$ 1.0% + KNO_3 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.



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 grains and fodder
- Tolerant to shoot fly & aphids
- Tolerant to drought
- Photo and Thermo insensitive hybrid
- Recommended for Kharif, Rabi & Early summer (Jan.) cultivation

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 grains and fodder
- 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 only

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

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

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 only
- Recommended for deep black soils
with good water holding capacity

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



Fodder Sorghum

Fodder Sorghum NFSH-3048 (Anmol)



Characteristics

Duration.....First cut 55 - 60 days
Subsequent cuts 45-50 days
Plant Height (cm).....275 - 280
Leaf length (cm).....70 - 75
No. of leaves / Plant.....10 - 12
No. of tillers /Plant.....3 - 5

Special features

- Multicut, white grains hybrid
- More leafyness and very high stay green fodder quality
- Good platability and more digestibility
- Tolerant to leaf disease
- High fodder yield

Cultivation Practices for Multi-cut Fodder Sorghum Hybrid

- **Soil**.....Well drained sandy loam to loam soils with a pH range of 6.5 to 7.5. The crop can't tolerate longer water stagnation hence, provision of good drainage is essential.
- **Seed Rate**.....10 kg/acre
- **Sowing Method**.....Drilling with 30 cm row to row distance. The seed should not be placed more than 2.0 - 2.5 cm depth.
- **Sowing Period**.....**Kharif** : June - July
Rabi : September - October
Summer : February - March
- **Fertilizers Dose (kg/acre)** : **Basal dose** : 24 : 24 : 24 (N:P:K)
Top dressing (After each cut) : 20 kg (N)
- **Weed Management**.....Pre-emergence application of atrazine @ 1 g/lit of water before germination.
- **Plant Protection**
Shoot fly....Sowing in Kharif season should be done before 7 July. Spray Chloropyrriphos @ 1.5 ml/lit of water at 7 and 15 days after sowing.
Aphids : Spray Metasystox 35 EC @ 2 ml/lit of water
Seed treatment.....Thiomethoxam 70 WS @3g/kg for the control of shoot fly & stem borer.
- **Harvesting management**.....The first cut should be harvested at 55-60 days after sowing (50% flowering stage) and subsequent cut at 45-50 days of intervals. For good re growth, first cut should be taken at 8-10 cm above the soil surface.
- **Special Recommendation**.....Apply 10 kg **Nirmal Bio Power Gold** Granule per acre at the time sowing. Apply **Nirmal Rizamica** @ 100 g/acre while irrigating the field.



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 Rajasthan, Western UP, Punjab, Haryana & North MP states.

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.

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).....27 - 28

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 in B Zone only and parts of Gujarat.

Pearl Millet

Hybrid Pearl Millet

NPH - 5654



Characteristics

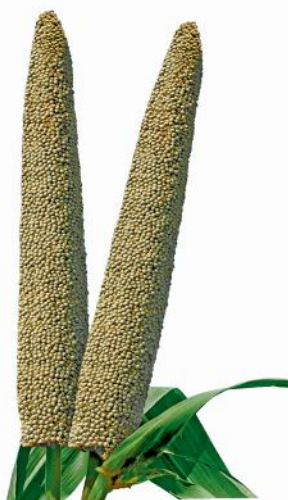
Duration.....80-85 days (Kharif)
Plant Height (cm).....220-230 (Kharif)
Ear head length (cm).....28-30
No.of Tillers/Plant.....2-3

Special Features

- Well exerted, compact non bristled ear heads
- Shiny ash gray bold grains
- Highly tolerant to downy mildew disease
- Recommended for Kharif & Early summer seasons.

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

Hybrid Pearl Millet

Shabari (NPH - 4506)



Characteristics

Duration.....70 - 75 days (Kharif)
Plant Height (cm).....220 - 230 (Kharif)
No. of Tillers/ Plant.....3 - 4
Earhead length (cm).....25-27

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

Pearl Millet

Hybrid Pearl Millet NPH - 2494



Characteristics

Duration.....75 - 80 days (Kharif)
Plant Height (cm).....225 - 230 (Kharif)
No. of Tillers/ Plant.....2 - 3
Earhead length (cm).....28 - 30

Special features

- Non bristled Compact, well exerted big earheads.
- Stay 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 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 of India

Hybrid Pearl Millet NPH - 5286



Characteristics

Duration.....80 - 85 days (Kharif)
Plant Height (cm).....220 - 225 (Kharif)
No. of Tillers/ Plant.....3 - 4
Earhead length (cm).....25 - 27

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 of India

Pearl Millet

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).....25 - 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

Cultivation Practices For Pearl Millet

Soil.....Light to medium
Seed rate.....1.5 to 2.0 kg per acre for hybrid
3 kg per acre for variety
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



Forage Pearl Millet

Multi Cut Forage Pearl Millet Hybrid

Nutrex

Characteristics

Plant height.....March end sowing - 310 cm
(110 days)

July sowing - 180 cm

(175 days)

Day to 50% Flowering.....March end sowing
(110-130 days)

July (70 - 75 days)

No. of Productive Tillers.....>7



Special features

- More yield cut
- High yield per cut
- High Protein (14 - 16%)
- More digestibility
- Increase productivity of quality Milk
- Multi-cut forage crop (4-6 cuttings)
- High yield as compare to others
- No increase of pest & diseases.

Cultivation Practices For Multi Cut Forage Pearl Millet Hybrid

Soil.....Heavy soil with proper drainage

Seed rate.....3 kg /acre

Sowing Method.....Row to row distance - 30 cm

Plant to Plant distance - 15 cm

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

Fertilizers dose (Kg/ha) N : P : K
75 : 50 : 40

Irrigation : To get the maximum tillers offer cutting, provide irrigations within 2 days after cutting, provide irrigations within 2 days after each cutting.

Cutting/Harvest :

- When crop attains plant height of 1 to 1.2 m cut the crop for better yield and quality.
- To get proper tillering, keep 6-8 inch distance from the base at the line of cutting.
- Apply nitrogenous fertilizer / urea after each cutting.
- Provide irrigation prior to cutting to get the juicy fodder quality.



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, Bacterial stalk rot, Maydis leaf blight and common rust disease
- Recommended for kharif, rabi and early summer cultivation

Hybrid Maize NMH-666



Characteristics

Duration.....	120 -125 days (Kharif)
	150 -155 days (Rabi Bihar)
	130 - 135 days (Rabi Rest of India)
Plant Height (cm).....	230 - 240 (Kharif)
	250 - 260 (Rabi)
Cob Length (cm).....	20 - 22
Shelling.....	84 - 85%

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

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).....200 - 210 (Kharif)
240 - 250 (Rabi)
Cob Length (cm).....22 - 24
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)
- Long cylindrical cobs
- Very juicy, sweet grains and easy thresh ability
- Tolerant to major leaf diseases

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 Nirbhay (NW-1)



Characteristics

Duration.....115 - 120 days
Plant Height (cm).....90 - 100
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 Vijay (NW-816)



Characteristics

Duration.....115 - 120 days
Plant Height (cm).....90 - 95
Spike Length (cm).....10 - 12

Special features

- Midlate maturity
- Medium bold, Shiny grains
- Excellent Chapati quality and taste
- Highly tolerant to rust disease
- Recommended for North India

Wheat Ajay (NW-72)



Characteristics

Duration.....105 - 110 days
Plant Height (cm).....90 - 100
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)



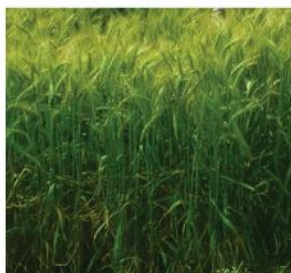
Characteristics

Duration.....110 - 115 days
Plant Height (cm).....90 - 100
Spike Length (cm).....10 - 12

Special features

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

Wheat NW-1158



Characteristics

Duration.....115-120 days
Plant height (cm).....80-90
Spike length (cm).....11-12
No. of tillers/plant.....15-20

Special features

- Medium maturity
- Medium bold shiny quality grains
- Excellent Chapati quality
- Highly tolerant to rust disease
- Recommended for timely sowing
- High yielding

Wheat NW-896



Characteristics

Duration.....125-130 days
Plant height (cm).....90-100
Spike length (cm).....10-12
No. of Tiller/Plant.....18-20

Special features

- Mid late maturity
- Medium bold shiny quality grains
- Dark green foliage with high tillering ability
- Highly tolerant to rust disease
- Recommended for North Indian conditions

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

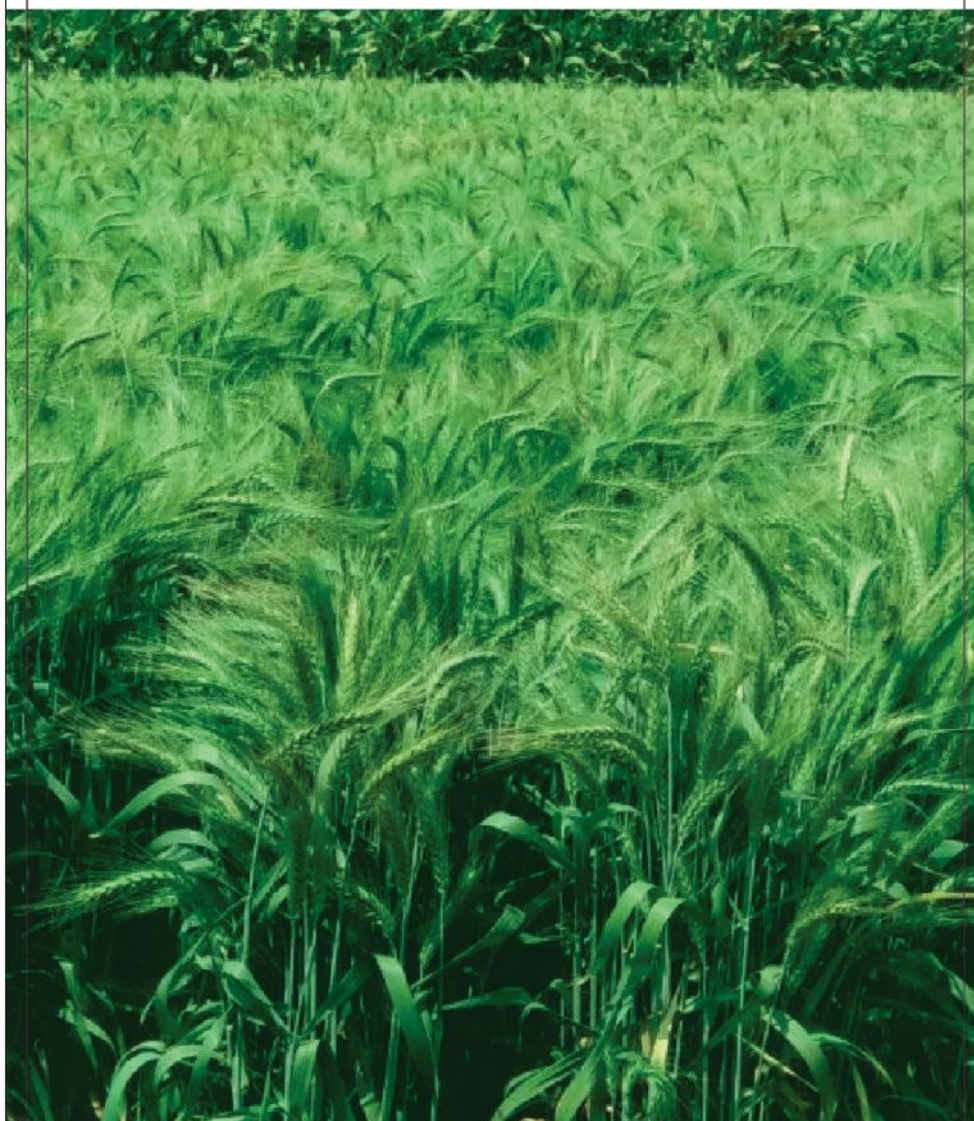
Irrigation required depends on duration of variety and soil type (4-6 irrigation)

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.



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 productive 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.....	130-135 days
Plant height (cm).....	110-115
No. of productive tiller/plant.....	20-22
Panicle length (cm).....	28-30

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 NPH - 307



Characteristics

Duration.....115-120 days
Plant Height (cm).....90-100
No. of productive tillers/plant....16-18
Panicle length (cm).....28-30

Special features

- Early maturity
- Long slender non scented grains.
- High spikelet setting percentage with more no. of spikelets per panicle.
- Excellent cooking quality & taste
- High yielding & non lodging culm attitude
- Highly tolerant to Bacterial Leaf Blight disease

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

Hybrid Paddy NPH - 343



Characteristics

Duration.....105-110 days
Plant Height (cm).....90-100
No. of productive tillers/plant.....16-18
Panicle length (cm).....28-30

Special Features

- Early maturity
- Long slender non scented grains.
- Non lodging culm attitude
- High spikelet setting percentage with more no. of spikelets per panicle.
- Excellent cooking quality & taste
- Suitable for upland cultivation

Hybrid Paddy Sahyadri - 4 (Hansa)



Characteristics

Duration.....115 - 120 days
Plant Height (cm).....90 - 100
No. of productive tiller/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 Sairam (NR - 9)



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 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 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 NR - 1011



Characteristics

Duration.....115 - 120 days (Kharif)
125-130 days (Rabi)
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.....115 - 120 days (Kharif)
120 - 125 days (Rabi)
Plant Height (cm).....100 - 110
No. of productive tillers/ plant.....16 - 18
Panicle Length (cm).....24 - 26

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 NR - 1023 (Swati)



Characteristics

Duration.....130-135 days
Plant Height (cm).....100-110
No. of productive tillers/ plant.....16-18
Panicle Length (cm).....28-30

Special features

- Medium Maturity with high yielding ability
- Long slender non scented grain
- Non lodging culm attitude
- Excellent cooking quality & taste
- High milling percentage & good head rice recovery percentage

Paddy NR - 1033



Characteristics

Duration.....140-145 days
Plant Height (cm).....110-120
No. of productive tillers/plant....18-20
Panicle length (cm).....22-24

Special Features

- Late maturity
- Short slender, super fine & non scented grains
- Compact panicle with high spikelet setting percentage with more no. of spikelets per panicle
- High milling percentage with good head rice recovery percentage (HRR)
- Good cooking quality & taste
- Highly tolerant to Bacterial Leaf Blight disease

Paddy NR - 348



Characteristics

Duration.....130 - 135 days (Kharif)
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 (Kharif)
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

Paddy NB - 37 (Tejas)



Characteristics

Duration.....105 - 110 days (Kharif)
Plant Height (cm).....100 - 110
No. of productive tillers/ plant.....18 - 20
Panicle Length (cm).....28- 30

Special features

- Very Early maturity
- Aromatic Extra long slender basmati quality grains.
- High spikelet setting percentage with more no. of spikelets per panicle.
- Excellent cooking quality & taste

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.

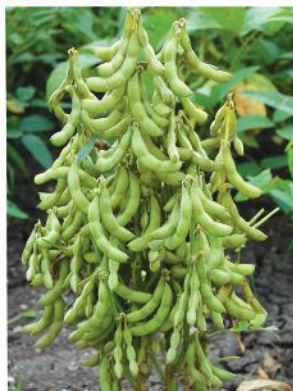
• Apply 25 kg **Nirmal Bio Power Gold** granule per ha at the time of transplanting

• 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 pre-flowering, flowering & grain filling stage



Soybean NSO-84



Characteristics

Duration.....85-90 days
Plant height (cm).....55-60
No. of seed/pod.....3-4
Seed colour.....Yellowish
with black hilum

Special features

- Early maturity
- Lanceolate leaf shape
- Glabrous plant and pods
- Tolerant to major diseases & pests
- High yielding

Soybean NSO-15 (Anjali)



Characteristics

Duration.....80-85 days
Plant height (cm).....55-60
No. of seed/pod.....3-4
Seed colour.....Yellowish
with brown hilum

Special features

- Early maturity
- Pointed ovate leaf shape
- Glabrous plant and pods
- Highly tolerant to pod shattering and rust disease
- Wider adaptability with high yielding ability

Cultivation Practices For Soybean

Soil.....Medium to heavy well drained
Seed rate.....25 to 30 kg/acre
Sowing period.....2nd fortnight of June to 2nd fortnight of July
Spacing.....45 x 5 cm OR 30 x 7 cm
Fertilizers (Kg/ha) N : P : K
30 : 75 : 30

Plant protection

Stem borer : Spray - Methyl Demeton 30 EC @ 0.03%
Anthracnose : Spray - Zineb @ 2.5 gm/lit. of water
Powdery mildew : Spray - Wettable Sulphar @ 2 gm/lit. of water
Rust : Spray - Dithane M-45 @ 2 gm/lit. of water or Tilt 1ml/lit. of water

Special recommendation

- Apply 10 kg Nirmal Bio Power gold granules per acre with chemical fertilizer at the time of top dressing
- 3 foliar spray of Berrylon @ 1ml/lit. of water at the time of preflowering, flowering and grain filling stage.

Hybrid Mustard NIMH-105



Characteristics

Duration.....130 - 140 days
Plant Type.....Tall, erect
Plant Height (cm).....200 - 210
Grain Type.....Brown &
bold round seed

Special features

- Long main shoot length
- Long silique with open silique angle
- High silique density
- Middlate tall & erect plant type
- Tolerant to white rust & Sclerotinia rot disease
- High yielding

Hybrid Mustard NIMH-170



Characteristics

Duration.....110-120 days
Plant type.....Mid-Tall, semi compact
Plant height (cm).....180-190
Grain type.....Greyish bold round seed

Special features

- Medium maturity.
- Profuce basal branching with long main shoot length
- Long silique with open silique angle
- High silique density
- 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 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 NML-259



Characteristics

Duration.....120-130 days
Plant type.....Mid-Tall, semi spreading
Plant height.....190-200 (cm)
Grain type.....Greyish black
with high silique density

Special features

- Midlate maturity and open silique type
- Long shoot with high density of silique
- Long silique length with bold seed size
- Tolerance to PM, white rust & sclerotia 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 /Castor

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 - 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

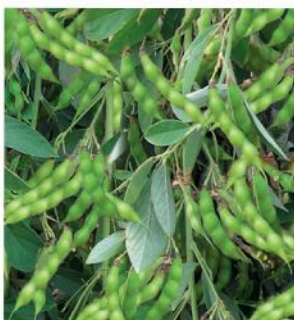
Leaf hopper : Spray- Dimethoate 30 EC @ 2 ml per litre of water

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 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 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 - 669



Characteristics

Duration.....170 - 180 days
Plant Height (cm).....180 - 190
Grain Colour.....Red
No. of Seeds/ Pod.....4 - 5

Special features

- Mid late maturity
- Spreading plant type and cluster bearing ability
- Excellent dal & cooking quality
- Highly tolerant to wilt and SMD disease
- High yielding variety

Pigeonpea NTL - 761



Characteristics

Duration.....	120-130 days
Plant height (cm).....	160-170
Grain colour.....	Red
No. of grains/pod.....	4-5

Special features

- Early maturity
- Semi erect plant type & suitable for high density planting
- Excellent dal & cooking quality

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

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 BDN-711



Characteristics

Duration.....	150 - 155 days
Plant Height (cm).....	150 - 160
Grain Colour.....	White
No. of Seeds/ Pod.....	4 - 5

Special features

- Semi Spreading plant type with cluster bearing ability
- Tolerant to drought
- Tolerant to SMD Disease
- High yielding

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 Chloropyriphos @ 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 Carbendazim 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

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)**

Black Gram Vikas (NUL - 242)



Characteristics

Duration.....70-75 days
Growth habit.....Semi determinate
Grain colour.....Black
No. of grains/pod.....6-8

Special features

- Early semi determinate and pigmented plant type
- Medium long pods with more number of pods per plant
- Non shattering and synchronous maturity
- Highly tolerant to YMV virus

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 Naval (NVL-1)



Characteristics

Duration.....60 - 65 days
Growth habit.....Determinate
Plant height (cm).....60 - 75
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-825



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
- Long pods with more number of grains per pod
- Highly tolerant to Mungbean yellow mosaic disease
- Non shattering and synchronous maturity
- Suitable for kharif and summer season cultivation

Green Gram NVL - 516



Characteristics

Duration.....60 - 65 days
Growth habit.....Determinate
Plant height (cm).....50 - 60
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

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.



VEGETABLE CROPS



Okra



Hybrid Okra NOH-2579 (Sophia)



Characteristics

Days to first harvest.....48-52
Fruit colour.....Very dark green
Fruit length (cm).....10-12

Special features

- Very dark green and long fruit
- Close internode distance
- Resistant to ELCV & YVMV diseases
- Suitable for export market

Hybrid Okra NOH-1758 (Lisa)



Characteristics

Days to first harvest.....48-50
Fruit colour.....Very dark green
Fruit length (cm).....12-14

Special features

- Very dark green and long fruit
- Close internode distance
- High yielding hybrid
- Resistant to ELCV & YVMV diseases

Hybrid Okra NOH-1082 (Meera)



Characteristics

Days to first harvest.....50-55
Fruit colour.....Dark green
Fruit length (cm).....10-12

Special features

- Close internode distance
- Dark green tender, long, straight, pentagonal fruits
- Highly tolerant to YVMV & ELCV diseases
- Recommended for round the year cultivation
- Early fruit setting ability
- Suitable for khariff, rabi season sowing.

Hybrid Okra NOH-1684 (Kajri)



Characteristics

Days to first harvest.....48-52
Fruit colour.....Dark green
Fruit length (cm).....8-10

Special features

- Excellent plant vigour with 2-3 side branches
- Very dark green, straight, tender quality fruits
- Highly tolerant to PM and YVMV diseases
- High yielding hybrid with export quality
- Not Suitable for Feb-March, April Sowing

Hybrid Okra NOH-1648 (Nidhi)



Characteristics

Days to first harvest.....50-55
Fruit colour.....Dark green
Fruit length (cm).....10-12

Special features

- Very good plant vigour & branching
- Green, tender, straight, pentagonal fruits with less mucilage
- Excellent taste and keeping quality
- Highly tolerant to YVMV disease
- High yielding hybrid with export quality
- Not suitable for Feb-March April Sowing

Hybrid Okra NOH-1336 (Gopi)



Characteristics

Days to first harvest.....50-55
Fruit colour.....Dark green
Fruit length (cm).....10-12

Special features

- Vigorous plant type with good fruiting side branches
- Very dark green coloured, straight, long quality fruits
- Excellent taste and keeping quality.
- Highly tolerant to YVMV, PM and ELCV diseases
- Recommended for Kharif, Rabi

Hybrid Okra NOH-15+



Characteristics

Days to first harvest.....50-52
Fruit colour.....Shiny green
Fruit length (cm).....12-14

Special features

- Vigorous plant type with relatively early fruiting ability
- Shiny green, straight, tender, long good quality fruits
- Tolerant to YVMV & PM diseases
- High yielding hybrid

Okra variety (OP) NOL-303+ (Julie)



Characteristics

Days to first harvest.....48-50
Fruit colour.....Dark green
Fruit length (cm).....10-12

Special features

- Very good plant vigour & side fruiting branches
- Dark green attractive tender fruits
- Tolerant to YVMV disease

Okra variety (OP) NOL-101 (Nisha)



Characteristics

Days to first harvest (Days).....50-52
Fruit colour.....Shiny green
Fruit length (cm).....12-14

Special features

- Very good plant type and branching ability
- Shiny green attractive tender fruits
- Tolerant to YVMV disease

Cultivation practices for Okra

Soil.....Well drained and fertile soil is desirable.
but it can grow on different types of soil

Seed rate/ha.....Hybrid- 7-7.5 kg.,
OP variety- 10-12 kg

Spacing (cm).....60 x 30

Manures & Fertilizer....At the time of land preparation apply 25-30 ton FYM/ha. At the time of sowing, apply 90 kg N, 80 kg P, & 80 kg K. After 30 days apply 90 kg N/ha.

Irrigation.....In winter and summer irrigation should be provided at 6-7 days interval according to soil condition. In rainy season proper water drainage should be given.

Plant Protection

Aphids, jassids, thrips, white flies- Imidacloprid @ 0.33 ml/lit. of water

Leaf miner- Dichlorovos @ 1ml/lit. **Fruit & Shoot borer**- Lambda-cyhalothrin 0.8 ml/lit OR Chloropyriphos @ 2ml/lit or Cartap hydrochloride @ 1gm/lit. **Powdery mildew**- Dinocap @ 1gm/lit. OR Difenconazole @ 0.5 ml/lit. **Yellow vein Mosaic Virus (YVMV)** control vector *i.e.* white fly should be controlled through spraying of Difenthiuron @ 1gm/lit. Uproot affected plants in early stage.

Special Recommendation

- Apply 25 kg **Nirmal Bio Power Gold** granule per ha at the time of sowing near root zone
- Apply **Nirmal Rizamica** @ 250 gm/ ha with organic fertilizer
- 3 foliar spray of **Nirmal Bio force** @ 2ml/lit at pre-flowering, flowering & fruiting stage.



Brinjal



Hybrid Brinjal NBH-627 (Sanjay)



Characteristics

Growth habit.....Semi spreading
Fruit colour.....Green, purple and
white variegated streaks
Fruit shape.....Round to Oblong
Fruit wt. (g).....80 - 90

Special features

- Semi spreading growth habit, spines on stem, leaf and calyx
- Green, purple and white variegated, glossy attractive fruits with green spiny calyx
- Good keeping quality & colour retention.
- Very good organoleptic taste

Hybrid Brinjal NBH-1956



Characteristics

Growth habit.....Semi erect
Fruit colour.....Green + White +
Purple striped
Fruit shape.....Round to Oblong
Fruit wt. (g).....80 - 90

Special features

- Semi erect plant type
- Attractive fruits with long pedicel
- Thorn on leaf & calyx
- Excellent keeping quality and taste
- High yielding hybrid
- Excellent colour retention in high temperature

Hybrid Brinjal NBH-1421



Characteristics

Growth habit.....Semi spreading
Fruit colour.....Green, purple and
white variegated strips
Fruit shape.....Oblong
Fruit wt. (g).....70 - 80

Special features

- Semi spreading plant type and spines on stem, leaf and calyx
- Attractive shiny fruits with good organoleptic taste
- Good keeping quality and colour retention
- Cluster bearing habit leads to high yielding ability

Hybrid Brinjal NBH-1230



Characteristics

Growth habit.....Semi spreading
Fruit colour.....Green, purple and
white variegated streaks
Fruit shape.....Round to Oblong
Fruit wt. (g).....90 - 100

Special features

- Semi spreading plants with vigorous plant growth habit
- Non spiny stem, leaf and calyx.
- Glossy attractive fruits with good calyx cover
- Round to oblong medium sized fruits with good colour retention
- Prolific fruit bearing ability
- High yielding hybrid

Hybrid Brinjal NBH-1430



Characteristics

Growth habit.....Semi spreading
Fruit colour.....Purple with white streaks
Fruit shape.....Oval
Fruit wt. (g).....80-90

Special features

- Vigorous and thorny natured semi spreading plants
- Attractive oval shape, purple with white variegated shiny fruits
- Glossy, crystal streaked fruits with green spiny calyx
- Good keeping quality and organoleptic taste
- Cluster bearing habit leads to high yield potential

Hybrid Brinjal NBH-1300



Characteristics

Growth habit.....Semi spreading
Fruit colour.....Purple with white streaks
Fruit shape.....Round to oblong
Fruit wt. (g).....70-80

Special features

- Semi spreading plant growth, non spiny stem, leaf and calyx
- Attractive round to oblong purple and white variegated glossy fruits
- Cluster bearing ability
- Very good keeping quality & taste
- Relatively early fruiting with good yielding ability

Hybrid Brinjal NBH-1210



Characteristics

Growth habit.....Mid tall, semi-erect
Fruit colour.....Purple with white
variegated streaks
Fruit shape.....Medium long
Fruit wt. (g).....110-120

Special features

- Mid-tall semi erect vigorous plant type
- Attractive oblong to medium long shaped, purple and white variegated, glossy fruits
- Very good keeping quality and good organoleptic taste
- Prolific fruit bearing and more fruiting period

Hybrid Brinjal NBH-1214



Characteristics

Growth habit.....Mid tall & semi spreading
Fruit colour.....Green with white streaks
Fruit shape.....Oblong
Fruit wt.(g).....70-80

Special features

- Mid tall & semi spreading plants and spines on stem, leaf and calyx
- Crystal Green with white variegated glossy fruits
- Very attractive oblong shaped, uniform fruits
- Good shipping and keeping quality.
- Cluster bearing habit and long pedicel with excellent calyx covering
- Widely accepted due to shape and organoleptic taste

Hybrid Brinjal NBH-1518



Characteristics

Growth habit.....Semi erect
Fruit colour.....Green with white strips
Fruit shape.....Oblong big
Fruit wt. (g).....120 - 130

Special features

- Vigorous growth, semi erect and spines on stem, leaf & calyx
- Big oblong, glossy, green with white variegated attractive fruits
- Excellent taste & keeping quality
- Thorny Bharta type fruits with relatively less seed content
- Moderate fruit weight with good yield

Hybrid Brinjal NBH-743



Characteristics

Growth habit.....Semi spreading
Fruit colour.....Green + white strip
Fruit shape.....Round to Oblong
Fruit wt (gm).....120 - 130

Special features

- Mid tall vigorous & semi spreading plants and spines on stem, leaf and calyx
- Light green with white variegated attractive fruits
- Big round to oblong, glossy thorny less seeded fruits
- Excellent organoleptic taste & keeping quality
- Long pedicel with excellent calyx covering

Hybrid Brinjal NBH-1325



Characteristics

Growth habit.....Semi spreading
Fruit colour.....Greenish white
Fruit shape.....Round to Oblong
Fruit wt. (g).....60-70

Special features

- Semi spreading, non spiny plant, leaves and fruit calyx
- Uniform sized fruits with good keeping quality & taste
- Cluster bearing ability and high yield potential

Hybrid Brinjal NBH-1322



Characteristics

Growth habit.....Strong, semi erect, vigorous
Fruit colour.....Green + White streaks
Fruit shape.....Big oblong
Fruit wt. (g).....250-300

Special features

- Very strong, vigorous and semi-erect plants
- Big oblong fruit shape with non spiny plant, leaves and fruit calyx
- Green bharta type fruits with white shades on fruits
- Uniform attractive fruits with less seed content
- Good organoleptic taste and good shelf life
- Highly tolerant to bacterial wilt disease

Hybrid Brinjal NBH-1698



Characteristics

Growth habit.....Erect strong plant
Fruit colour.....Green with white streaks
Fruit shape.....Round to oblong
Fruit wt. (g).....110-120

Special features

- Very strong, semi erect plants with vigorous growth habit
- Medium big round fruit with non spiny plant, leaves and fruit calyx
- Green with white shaded fruits having long pedicel
- Uniform attractive fruits with good calyx cover & less seed content
- Continued fruiting over long period
- Good organoleptic taste with good shelf life

Hybrid Brinjal NBH-1305



Characteristics

Growth habit.....Mid-tall & semi spreading
Fruit colour.....Green + White streaks
Fruit shape.....Medium long
Fruit wt. (g).....110-120

Special features

- Mid-tall & semi spreading growth habit
- Green with white shaded fruits
- Uniform, cylindrical, attractive medium long fruits
- Prolific bearing and continued fruiting over a long period
- Highly tolerant to bacterial wilt disease

Hybrid Brinjal NBH-1156



Characteristics

Growth habit.....Mid-tall & semi spreading
Fruit colour.....Pinkish violet
Fruit shape.....Round to oblong
Fruit wt. (g).....70 - 80

Special features

- Mid tall and semi spreading non spiny growth habit
- Small, round to oblong shaped attractive glossy fruits
- Pinkish violet with green calyx fruits
- Uniform attractive fruits with good keeping quality & taste
- Continue fruiting over a long period with good reflushing ability

Hybrid Brinjal NBH-1641



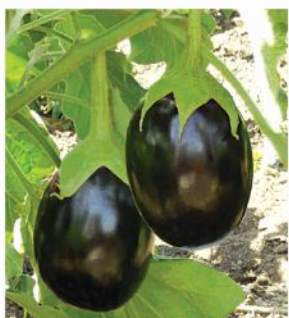
Characteristics

Growth habit.....Mid-tall & semi-spreading
Fruit colour.....Pinkish violet
Fruit shape.....Round to oblong
Fruit wt. (g).....120 - 130

Special features

- Semi spreading, non spiny plants
- Attractive glossy, medium big, round to oblong fruits
- Pinkish violet coloured fruits with green calyx
- Uniform fruits with long pedicel and good calyx cover
- Good colour retention and keeping quality

Hybrid Brinjal NBH-972



Characteristics

Growth habit.....Mid-tall & semi spreading
Fruit colour.....Shiny purple
Fruit shape.....Round to oblong
Fruit wt. (g).....150-180

Special features

- Mid tall, semi spreading plant growth habit
- Attractive shiny purple fruits with green calyx
- Round to oblong medium big shape fruits
- Very good colour retention with excellent shelf life
- High yielding potential due to good reflushing ability
- Tolerant to little leaf and phomopsis blight diseases

Hybrid Brinjal NBH-542



Characteristics

Growth habit.....Semi spreading
Fruit colour.....Blackish purple
Fruit shape.....Pear shape, oblong
Fruit wt. (g).....100-110

Special features

- Semi spreading plant growth habit with non spiny nature
- Attractive pear shaped medium big black purple glossy fruits
- Excellent colour retention and keeping quality
- High yielding hybrid

Hybrid Brinjal NBH-1465



Characteristics

Growth habit.....Mid-tall, semi erect
Fruit colour.....Shiny black
Fruit shape.....Oval round
Fruit wt. (g).....300-350

Special features

- Mid-tall, sturdy, vigorous, semi erect plant habit
- Very big oval round shaped fruits, with very thick flesh
- Attractive shiny black coloured glossy fruits
- Very good colour retention and keeping quality

Hybrid Brinjal NBH-1001



Characteristics

Growth habit.....Semi spreading
Fruit colour.....Shiny purple
Fruit shape.....Oblong
Fruit wt. (g).....300-350

Special features

- Semi spreading growth habit with high vigour
- Big oblong shaped attractive shiny purple fruits with non thorny calyx
- Attractive glossy uniform fruits with green calyx
- Excellent colour retention with good keeping quality and taste

Hybrid Brinjal NBH-1167



Characteristics

Growth habit.....Mid-tall, Semi erect
Fruit colour.....Black
Fruit shape.....Long
Fruit wt. (g).....70 - 80
Fruit length (cm).....14 - 16

Special features

- Mid tall, semi erect plant habit
- Attractive medium long black coloured with green calyx, glossy fruits
- Cluster bearing and high yield potential

Hybrid Brinjal NBH-1772



Characteristics

Growth habit.....	Mid-tall, erect
Fruit colour.....	Black
Fruit shape.....	Long
Fruit wt. (g).....	90 - 100
Fruit length (cm).....	22 - 25

Special features

- Mid tall, erect plant growth habit
- Attractive black coloured long fruits with purple calyx
- Cluster bearing and good yield potential
- Very good keeping quality, taste and shelf life

Hybrid Brinjal NBH-1113



Characteristics

Growth habit.....	Semi spreading
Fruit colour.....	Pinkish
Fruit shape.....	Long
Fruit wt. (g).....	60 - 75
Fruit length (cm).....	12 - 15

Special features

- Semi spreading plant growth habit
- Attractive pinkish medium long cylindrical fruits with purple calyx
- Good colour retention
- Excellent keeping quality & taste
- High yielding potential due to cluster bearing ability

Hybrid Brinjal NBH-961



Characteristics

Growth habit.....	Tall, semi erect
Fruit colour.....	Shiny green
Fruit shape.....	Long
Fruit wt. (g).....	100 - 110
Fruit length (cm).....	25 - 30

Special features

- Tall, semi erect plant growth habit
- Attractive shiny green long cylindrical fruits with green calyx
- Good keeping quality and excellent shelf life
- High yielding potential due to cluster bearing ability

Hybrid Brinjal NBH-1404



Characteristics

Growth habit.....	Semi spreading
Fruit colour.....	White
Fruit shape.....	Round to oblong
Fruit wt. (g).....	60 - 70

Special features

- Semi spreading, non spiny plant, leaves and fruit calyx
- White fruits with round to oblong in shape
- Cluster bearing ability and prolific yielding ability

Cultivation practices for Brinjal

Soil.... Well drained and fertile soil is desirable, but it can grow in different types of soil.

Seed rate/ha.....200-250 gm

Spacing (cm).....90 x 90 or 75 x 60 or 90 x 60

Manures & Fertilizer.....Apply 20-25 ton/ha FYM at the time of land preparation. Before transplanting, apply 100 kg N, 80 kg P & 80 kg K, then after 30-35 days apply 100 kg N/ha.

Irrigation Regular irrigation should be given to get high fruit yield. Frequency of irrigation may be varied according to soil type and season.

Plant Protection Shoot & Fruit borer : Prune infected shoots & spray Cypermethrin @ 1 ml/lit. of water or Cartap hydrochloride @ 1.0 gm/lit. of water.

Aphids & sucking pests : Imidacloprid @ 0.5 ml/lit. of water.

Mites : Sulphur @ 2 gm/lit.

Root knot nematode : Soil application of Phorate @ 4 - 5 kg/acre before transplanting.

Damping off : Drench nursery bed with Copper oxychloride @ 2 gm/lit. of water. **Fruit rot :** Mancozeb @ 1-2 gm/lit. of water.

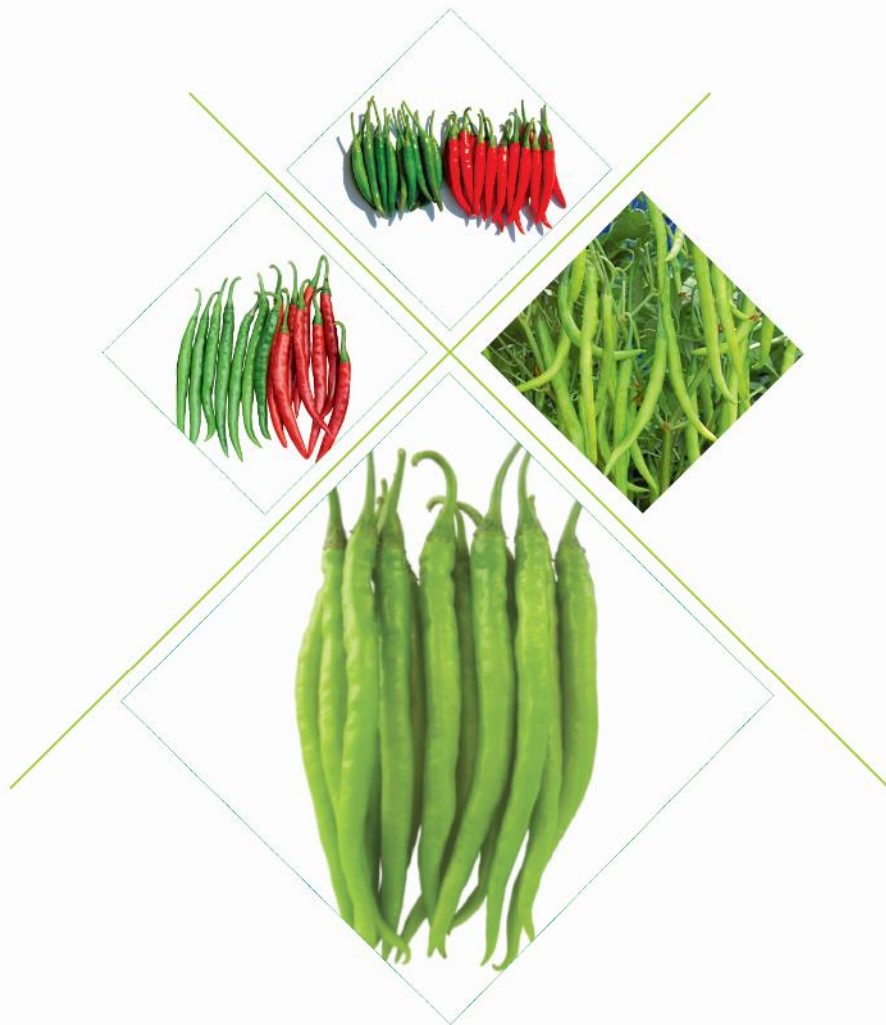
Little leaf of brinjal : Thiamethoxam @ 7 gm/ 15 lit.

Special Recommendation

- Apply 25 kg **Nirmal Bio Power Gold** granule per ha after transplanting near root zone
- Apply **Nirmal Rizamica** @ 250 gm/ ha through drip or drenching method
- 3 foliar spray of **Nirmal Bio force** @ 2ml/lit at pre-flowering, flowering & fruiting stage.



Chilli



Hybrid Chilli NCH-12 (Maina)



Characteristics

Plant type.....Semi spreading
Fruit colour.....Light green
Fruit length (cm).....10 - 12

Special features

- Semi spreading plant type with profuse branching ability
- Attractive parrot green, highly pungent fruits
- Semi wrinkled fruit surface with excellent aroma
- Suitable for green chilli purpose
- Suitable for the rainy and spring season cultivation
- Outstanding hybrid with excellent yield

Hybrid Chilli NCH-931



Characteristics

Plant type.....Semi Spreading
Fruit colour.....Shiny green
Fruit length (cm).....14 - 16

Special features

- Very sturdy, semi spreading plant type with strong leaf canopy
- Shiny green, semi wrinkled fruit surface with mild pungency
- Good tolerant to chilli mosaic virus and phytophthora blight diseases
- Suitable for green chilli market purpose

Hybrid Chilli NCH - 913



Characteristics

Plant type.....Semi spreading
Fruit colour.....Parrot green
Fruit length (cm).....12 - 14

Special features

- Semi spreading plant habit
- Semi wrinkled, parrot green fruits with excellent aroma and high pungency
- Suitable for fresh green chilli purpose
- Recommended for rainy and early summer season cultivation

Hybrid Chilli NCH-1124



Characteristics

Plant type.....Tall, Erect
Fruit colour.....Light green
Fruit length (cm).....13 - 15

Special features

- Very strong vigorous plant type and excellent reflusing ability
- Light green thin long attractive pungent fruits
- Highly tolerant to chilli leaf curl virus and powdery mildew diseases
- Suitable for rainy and rabi season cultivation
- Suitable for fresh green chilli market

Hybrid Chilli NCH-1773



Characteristics

Plant type.....Semi Spreading
Fruit colour.....Parrot green
Fruit length (cm).....14 - 16

Special features

- Mid-tall semi spreading growth habit
- Attractive parrot green, medium long, semi wrinkled fruits with good pungency
- Hybrid is suitable for fresh green produce
- Recommended for rainy and summer season cultivation

Hybrid Chilli NCH-250+



Characteristics

Plant type.....Semi Spreading
Fruit colour.....Parrot green
Fruit length (cm).....18 - 20

Special features

- Mid-tall, semi spreading, strong vigorous plant type
- Light green big size fruits with mild pungency
- Semi wrinkled attractive shiny fruits
- Suitable for fresh green chilli market
- Relatively early and good fruit setting
- Recommended for rainy and spring season cultivation

Hybrid Chilli NCH-3617



Characteristics

Plant type.....Semi spreading plant type
Fruit colour.....Light green
Fruit length (cm).....12 - 14

Special features

- Attractive light green coloured fruits
- Medium pungent with excellent aroma
- Suitable for both fresh & dry chilli purpose

Hybrid Chilli NCH-158



Characteristics

Plant type.....Dwarf
Fruit colour.....Parrot green
Fruit length (cm).....5 - 6

Special features

- Dwarf, sturdy growth habit with high percent fruit setting
- Attractive light green smooth fruits
- Very short, compact and highly pungent fruits
- Suitable for green chilli purpose

Hybrid Chilli NCH-1012



Characteristics

Plant type.....Semi Erect
Fruit colour.....Shiny dark green
Fruit length (cm).....6 - 8

Special features

- Semi erect plant type with profuse branching ability and cluster bearing habit
- Shiny dark green fruits with good seed content
- Short, very compact, semi wrinkled fruit surface and highly pungent fruits
- Tolerant to chilli mosaic virus and anthracnose diseases
- Useful for both green as well as dry chilli purpose

Hybrid Chilli NCH-1041

Characteristics

Plant type.....Mid-tall Sturdy
Fruit colour.....Medium green
Fruit length (cm).....5 - 6



Special features

- Mid-tall sturdy plant type with good canopy cover
- Short, very compact, medium green highly pungent fruits
- Suitable for fresh as well as dry chilli produce
- Highly tolerant to CMV and Powdery mildew diseases
- High yield ability due to good reflushing ability

Hybrid Chilli NCH-3590

Characteristics

Plant type.....Semi spreading
Fruit colour.....Shiny green
Fruit length (cm).....6 - 8



Special Features

- Semi spreading, sturdy plant type
- Profuse branching and cluster bearing ability
- Shiny green, semi wrinkled fruit surface with high pungency
- Deep red coloured fruits with good red colour retention
- Suitable for both green and dry chilli purpose
- Highly tolerance to CMV & anthracnose diseases

Hybrid Chilli NCH-1901

Characteristics

Plant type.....Tall, erect
Fruit colour.....Medium shiny green
Fruit length (cm).....5 - 6



Special features

- Tall, erect sturdy plant type
- Attractive shiny green fruit colour
- Very compact, deep red coloured fruits with good red colour retention and high pungency
- Suitable for both green and dry red chilli purpose
- Highly tolerance to CMV & anthracnose diseases

Hybrid Chilli NCH-5522



Characteristics

Plant type.....Tall, Erect
Fruit colour.....Shiny green
Avg. Fruit length.....5-7 (cm)

Special features

- Tall erect plant type with profuse branching and cluster bearing habit
- Shiny dark green fruits with good seed content
- Short, very compact, semi wrinkled highly pungent fruits
- Tolerant to CMV & Anthracnose diseases
- Suitable for both green as well as dry chilli purpose

Hybrid Chilli NCH-648 (Angarika)



Characteristics

Plant type.....Semi spreading
Fruit colour.....Dark green
Fruit length (cm).....16 - 18

Special features

- Semi spreading, vigorous plant growth habit with more leaf canopy
- Dark green fruits which turns in deep red colour after drying
- Very long, highly wrinkled, straight and pungent fruits
- Highly tolerant to powdery mildew and anthracnose diseases
- Suitable for red dry chilli purpose due to its very good red colour retention

Hybrid Chilli NCH-1593



Characteristics

Plant type.....Semi spreading
Fruit colour.....Parrot green
Fruit length (cm).....7 - 8

Special Features

- Midtall, semi spreading plant growth habit
- Parrot green, medium long, medium thick fruits
- Medium pungent fruits
- Cluster bearing and high yielding hybrid
- Suitable for green and red chilli purpose
- Highly tolerance to anthracnose disease

Hybrid Chilli NCH-1635 (Indira)



Characteristics

Plant type.....Mid-tall, Semi spreading
Fruit colour.....Shiny green
Fruit length (cm).....10 - 12

Special features

- Mid-tall and semi spreading plant type with good leaf cover
- Attractive shiny green fruit colour turns to deep red on maturity
- Medium thick, smooth fruit surface and good pungency
- Highly tolerant to leaf curl and anthracnose diseases
- Suitable for green as well as dry chilli purpose

Hybrid Chilli NCH-1544 (Nirmal Deluxe)



Characteristics

Plant type.....Semi spreading
Fruit colour.....Dark green
Fruit length (cm).....16 - 18

Special features

- Mid-tall, semi spreading plants with concentrated fruit bearing ability
- Attractive dark green fruit colour turning deep red on maturity
- Extra long, thick, wrinkled, straight and pungent fruits
- Highly tolerant to anthracnose and phytophthora blight diseases
- Suitable for dry chilli purpose due to good colour retention

Hybrid Chilli NCH-587



Characteristics

Plant type.....Tall, Erect
Fruit colour.....Medium shiny green
Fruit length (cm).....12 - 14

Special features

- Tall, erect sturdy plant type with prolific yielding ability
- Shiny green fruits with semi wrinkled fruit surface
- Deep red coloured fruits with good colour retention
- Highly tolerant to Chilli leaf curl virus disease
- Suitable for both green and dry chilli purpose
- Govt. Notified hybrid through AICRP (VC)

Hybrid Chilli NCH-1648



Characteristics

Plant type.....Mid-tall & Semi spreading
Fruit colour.....Shiny green
Fruit length (cm).....12 - 14

Special features

- Mid-tall, semi-spreading plant type and produces uniform fruits
- Attractive, medium shiny green smooth fruit with very thick wall
- High quality fruits with desirable glossy appearance and medium pungency
- Suitable for green chilli purpose

Cultivation practices for Chilli

SoilWell drained light to medium heavy fertile soil.

Seed rate/ha.....250-300 gm

Spacing (cm).....90 x 60 or 75 x 60

Manures & Fertilizer Apply 20-25 ton/ha FYM at the time of land preparation. Before transplanting, apply 100 kg N, 100 kg P & 100 kg K, then after 30-35 days apply 100 kg N/ha.

Irrigation Don't allow crop to water stress condition as it leads to flower drop so irrigation should be provided regularly according to crop need.

Plant Protection

Leaf miner : Dichlorovos @ 1ml/lit. or Chloropyrphos @ 2 ml/lit or Quinolphos 2 ml/lit. **Aphids, jassids** :-Thiamethoxam 0.66 gm/lit.

White fly :- Difenthiuron @ 12.5 gm/15 lit.

Thrips :- Thiamethoxam 0.66 gm/lit or Fipronil @ 2 ml/lit.

Damping off :- Drench nursery bed with Copper oxychloride @ 2 gm/lit. of water.

Anthrachnose :- Mancozeb @ 2 gm/lit or Copper oxychloride @ 2 gm/lit or Azoxystrobin @ 2 gm/lit.

Phytophthora blight :- Blitox @ 3 gm/lit.

Chili masaic :- Control vector by spraying Imidacloprid @ 6 ml/15 lit or Thiamethoxam @ 7gm/ 15 lit.

Special Recommendation

- Apply 25 kg **Nirmal Bio Power Gold** granule per ha after transplanting near root zone.
- Apply **Nirmal Rizamica** @ 250 gm/ ha through drip or drenching method
- 3 foliar spray of **Nirmal Bio force** @ 2ml/lit at pre-flowering, flowering & fruiting stage.



Sweet pepper/ Capsicum

Hybrid Sweet pepper

NCCH-31



Characteristics

Plant type.....Mid tall, Sturdy,
Semi erect
Fruit colour.....Parrot green
Fruit length (cm).....18 - 20

Special features

- Strong , semi erect plant type with very high yield potential
- Parrot green coloured, thick long fruits.
- Attractive fruits with low pungency and good shelf life
- Highly suitable for fresh green fruit purpose

Hybrid Sweet pepper

NCCH-399



Characteristics

Plant type.....Tall, Medium Spreading
Fruit colour.....Shiny green
Fruit length (cm).....20 - 22

Special features

- Tall, medium spreading vigorous plant type with profuse branching habit
- Attractive shiny green, medium wrinkled, thick long fruits
- Highly tolerant to leaf curl and powdery mildew diseases
- Excellent shelf life and suitable for long distance transport
- Medium pungent fruits & satiable for fresh green fruits purpose

Hybrid Capsicum

NCCH-7 (Shabnam)



Characteristics

Plant type.....Mid-tall, Semi spreading
Fruit colour.....Shiny green
Fruit shape.....Square blocky
Fruit wt. (g).....120 - 150

Special Features

- Mid-tall, semi spreading plant type with profuse branching ability
- Dark shiny green uniform square blocky, medium sized attractive fruits
- High yielding hybrid due to more number of fruits per plant
- Excellent keeping quality of self life and suitable for long distant shipping

Sweet pepper/ Capsicum

Hybrid Capsicum NCCH-705



Characteristics

Plant type.....	Tall, Semi erect
Fruit colour.....	Shiny green
Fruit shape.....	Square blocky
Fruit wt. (g).....	150 - 200

Special Features

- Tall, vigorous and semi erect plant type
- Big and attractive shiny green, uniform square blocky fruits with very thick wall
- Very close internode distance and more number of fruits per plant
- Suitable for both polyhouse and open field cultivation
- Excellent selflife & suitable for long distant marketing
- Notified through AICRP (VC) trail by Govt. of India.

Cultivation practices for Sweetpepper & Capsicum

Soil.....	Well drained light to medium heavy fertile soil.
Seed rate/ha.....	250-300 gm
Spacing (cm).....	90 x 60 or 75 x 60

Manures & Fertilizer :

Apply 20-25 ton/ha FYM at the time of land preparation.

Before transplanting, apply 100 kg N, 100 kg P & 100 kg K, then after 30-35 days apply 100 kg N/ha.

Irrigation

Irrigation should be provided according to soil type.

Generally capsicum should be irrigated 8-10 days interval or according to necessity.

Plant Protection

Leaf miner : Dichlorovos @ 1 ml/lit or Chloropyrifos @ 2 ml/lit or Quinolphos 2 ml/lit. **Aphids, jassids :-** Trident @ 5-7 gm/lit or Thiamethoxam 0.66 gm/lit.

White fly :- Difenthiuron @ 12.5 gm/15 lit. **Thrips :-** Trident @ 5-7 gm/lit or Thiamethoxam 0.66 gm/lit or Fipronil @ 2 ml/lit. **Damping off :-** Drench nursery bed with Copper oxychloride @ 2 gm/lit. of water. **Anthraco nose :-** Mancozeb @ 2 gm/lit or Copper oxychloride @ 2 gm/lit or Azoxystrobin @ 2 gm/lit. **Leaf spot :-** Carosendrim @ 1 gm/lit. **Phytophthora blight :-** Blitox @ 3 gm/lit

Chili masaic :- Control vector by spraying Imidacloprid @ 6 ml/15 lit or Thiamethoxam @ 7 gm/ 15 lit.

Special Recommendation

- Apply 25 kg **Nirmal Bio Power Gold** granule per ha after after transplanting near root zone
- Apply **Nirmal Rizamica** @ 250 gm/ ha through drip or drenching method
- 3 foliar spray of Nirmal Bio force @ 2ml/lit at pre-flowering, flowering & fruiting stage.



Tomato



Hybrid Tomato NTH - 2530



Characteristics

Growth habit.....Determinate
Fruit shape.....Flat round
Fruit weight (g).....80 - 85
Fruit firmness.....Medium

Special features

- Determinate growth habit with strong branching ability
- Flat round fruit shape and deep red colour at maturity with sour taste
- Good firmness and suitable for storage and long distance transport
- Highly tolerant to TyLCV, leaf blight & bacterial wilt diseases
- Recommended for rainy, winter and spring season cultivation

Hybrid Tomato NTH-3622



Characteristics

Growth habit.....Semi determinate
Fruit shape.....Flat round
Fruit weight (g).....70 - 80
Fruit firmness.....Firm

Special features

- Semi determinate plant growth habit with good foliage coverage
- Medium sized ,flat round shaped fruits and excellent sour taste
- Very good fruit hardness and shelf life so suitable for long transport
- Highly tolerant to TyLCV, early and late blight diseases
- This hybrid performs well in all climatic conditions

Hybrid Tomato NTH-3072



Characteristics

Growth habit.....Determinate
Fruit shape.....Flat Round
Fruit weight (g).....75 - 80
Fruit firmness.....Firm

Special features

- Determinate plant growth habit with earliness
- Cluster fruits bearing habit and continuous fruit setting ability
- Flat round shaped attractive uniform sized fruits with green shoulder
- Excellent sour taste with good firmness and suitable for storage and transport
- Recommended for rainy, winter and spring season cultivation
- **Govt. Notified hybrid through AICRP (VC) trails.**

Hybrid Tomato NTH-5283



Characteristics

Growth habit.....Semi indeterminate
Fruit shape.....Round
Avg. fruit wt (g).....70-80
Fruit firmness.....Firm

Special features

- Semi indeterminate plant type with profuse branching
- Round shape dark red coloured fruits with green shoulder
- Very closer internode with more fruits per cluster
- Firm fruit and good for long transportation
- Highly tolerant to TLCV & early blight disease

Hybrid Tomato NTH-3104



Characteristics

Growth habit.....Semi indeterminate
Fruit shape.....Oval
Fruit weight (g).....80 - 90
Fruit firmness.....Very firm

Special features

- Semi-indeterminate growth habit with continuous fruit setting ability
- Deep red colour and very good fruit firmness due to thick peel
- Excellent keeping quality and suitable for long distance transportation
- Good tolerance to TyLCV, early and late blight diseases
- Recommended for rainy and winter season cultivation

Hybrid Tomato NTH-2383



Characteristics

Growth habit.....Semi indeterminate
Fruit shape.....Oval
Fruit weight (g).....100 - 110
Fruit firmness.....Very firm

Special features

- Semi-indeterminate vigorous growth habit with excellent reflushing ability
- Attractive deep red colour fruits with profuse fruit bearing ability
- Very good uniform fruits over the harvests
- Very firm fruits with excellent shelf life and good transport ability
- Highly tolerant to TyLCV, early and late blight diseases
- Recommended for Rainy and Winter season cultivation

Hybrid Tomato NTH-4798



Characteristics

Growth habit.....Semi Determinate
Fruit shape.....Oblong
Fruit weight (g).....100 - 110

Special features

- Semi interminate plant growth habit
- Deep red colour with good fruit bearing ability
- Good fruit firmness with good keeping quality
- High yielding
- Recommended for Rainy and winter season cultivation
- Highly tolerance to TyLCV and bacterial wilt disease

Hybrid Tomato NTH-3494



Characteristics

Growth habit.....Semi indeterminate
Fruit shape.....Oblong
Fruit weight (g).....100 - 110
Fruit firmness.....Very firm

Special features

- Semi-indeterminate plant growth habit with good leaf cover
- Big oblong, uniform sized fruits, very good firmness
- Very good shelf life and suitable for long distance transport
- Strong tolerance to TyLCV with wider adaptability
- Recommended for winter and summer cultivation

Cultivation practices for Tomato

Soil.....Well drained and fertile soil is desirable.

Seed rate/ha.....150-200 gm

Spacing (cm).....90 x 60 or 75 x 60

Manures & Fertilizer

Apply 25-30 ton/ha FYM at the time of land preparation.

Apply 100 kg N, 100 kg P & 100 kg K before transplanting & after 30-35 days apply 100 kg N/ha.

Irrigation

Irrigate the crop at an interval of 3-4 days during summer and 10-15 days during winter to maintain the soil moderately wet. During winter, the plants are not irrigated at the time of ripening of fruit.

Plant Protection

Leaf miner : Dichlorovos @ 1 ml/lit or Chloropyriphos @ 2 ml/lit or Quinolphos 2 ml/lit. **Aphids, jassids :** Thiamethoxam 0.66 gm/lit.

White fly :- Difenthiuron @ 12.5 gm/15 lit.

Thrips :- Thiamethoxam 0.66 gm/lit or Fipronil @ 2 ml/lit.

Damping off and root rot:- Drench nursery bed with Copper oxychloride @ 2 gm/lit. of water.

Late blight :- Mancozeb @ 2 gm/lit or Copper oxychloride @ 2 gm/lit.

Early blight :- Difenconazole @ 0.5 ml/lit or Mancozeb and Metalaxyl-M @ 2 gm/lit or Clorothalonil @ 2 gm/lit or Azoxystrobin @ 2gm/lit.

Fusarium wilt :- Biosanjivani @ 5+5 gm/lit or Bavistin @ 2 ml/lit.

TyLCV :- control the vector white fly:- Difenthiuron @ 1gm/lit.

Special Recommendation

- Apply 25 kg **Nirmal Bio Power Gold** granule per ha after transplanting near root zone
- Apply **Nirmal Rizamica** @ 250 gm/ ha through drip or drenching method
- 3 foliar spray of **Nirmal Bioforce** @ 2ml/lit at pre-flowering, flowering & fruiting stage.



Ridge gourd



Hybrid Ridge gourd NRGH - 22 (Rajani)



Characteristics

Fruit length (cm).....	35 - 40
Fruit weight (g).....	130 - 150
Fruit shape.....	Straight

Special features

- Strong & vigorous vine growth with high fruit setting
- Long shiny green coloured fruits
- Uniform sized straight attractive fruits
- Hybrid ready for first harvest from 50-55 days after sowing
- Excellent keeping quality and taste
- Tolerant to DM, PM and Mosaic virus diseases

Hybrid Ridge gourd NRGH - 370



Characteristics

Fruit length (cm).....	25 - 30
Fruit weight (g).....	110 - 120
Fruit shape.....	Straight

Special features

- Shiny green, medium long, uniform straight, attractive tender fruits
- Hybrid ready for first harvest from 45 - 50 days after sowing
- Wider adaptability and good fruit setting in high temperature
- Tolerant to PM, DM and highly tolerant to CMV disease

Hybrid Ridge gourd NRGH - 726



Characteristics

Fruit length (cm).....	30 - 35
Fruit weight (g).....	110 - 120
Fruit shape.....	Straight

Special features

- Dark green, straight, long attractive tender fruits
- Hybrid ready for first harvest from 45-50 days after sowing
- Excellent keeping quality and taste
- Tolerant to PM, DM and CMV diseases
- Wider adaptability & good fruit setting in high temperature

Hybrid Ridge gourd NRGH - 744



Characteristics

Fruit length (cm).....	30 - 35
Fruit weight (g).....	120 - 130
Fruit shape.....	Straight

Special features

- Dark green coloured medium long fruits
- Very tender, straight and uniform sized quality fruits
- Fruits ready to first harvest from 45-50 days after sowing
- Tolerant to PM , DM and CMV diseases
- Not Suitable for Feb, March, April sowing

Ridge gourd NRG - 9



Characteristics

Fruit length (cm).....	30 - 35
Fruit weight (g).....	130 - 140
Fruit shape.....	Straight long

Special features

- Straight, long, shiny green, tender fruits
- Prolific fruit bearing and fruits ready for first harvest from 45-50 days after sowing
- Firm fruit surface with good keeping quality
- Tolerant to DM, PM and CMV diseases

Cultivation practices for Ridge gourd

Soil.....Medium heavy well drained fertile soil.

Seed rate/ha.....1.5-2.0 kg

Spacing (cm).....150 x 60 or 120 x 60

Manures & Fertilizer

- Apply 15-20 ton/ha. FYM at the time of land preparation
- After 10 days of sowing, apply 100 kg N, 80 kg P & 80 kg K, then after 35 days apply 100 kg N/ha. **Irrigation** During rainy season irrigation may be required during initial growth period. In summer irrigation should be given regularly at 5-7 days interval or according to crop need.

Plant Protection :

Leaf miner : Dichlorovos @ 1 ml/lit or Chloropyriphos @ 2 ml/lit or Quinolphos 2 ml/lit. **Aphids, jassids** : Thiamethoxam 0.66 gm/lit. **White fly** : Difenthiuron @ 12.5 gm/15 lit. **Thrips** : Thiamethoxam 0.66 gm/lit or Fipronil @ 2 ml/lit.

Downy mildew : Mancozeb and Metalaxyl-M @ 2.5 gm/lit or Mancozeb 2 gm/lit or Tebuconazole @ 1 gm/lit. **Fusarium wilt** : Biosanjivani @ 5+5 gm/lit or Bavistin @ 2 ml/lit. **Powdery mildew** : Tebuconazole @ 1 gm/lit or Difenconazole @ 0.5 ml/lit.

Special Recommendation

- Apply 25 kg Nirmal Bio Power Gold granule per ha at the time of sowing near root zone
- Apply Nirmal Rizamica @ 250 gm/ ha through drip or drenching method.
- 3 foliar spray of Nirmal Bioforce @ 2ml/lit at pre-flowering, flowering & fruiting stage.

Bottle gourd



Hybrid Bottle gourd **NBBH-48 (Vikram)**



Characteristics

Fruit length (cm).....25 - 30
Fruit weight (g).....800 - 900
Fruit colour.....Shiny light green
Fruit shape.....Cylindrical

Special features

- Vigorous and strong vine growth with good branching habit
- Shiny light green, cylindrical uniform export quality fruits
- Hybrid ready for first harvest from 55-60 days after sowing
- Uniform straight, very tender, attractive fruits
- Excellent keeping quality and suitable for shipping
- Highly tolerant to fusarium wilt, powdery mildew and CMV diseases

Hybrid Bottle gourd **NBBH-168 (Virat)**



Characteristics

Fruit length (cm).....30 - 40
Fruit weight (g).....700 - 800
Fruit colour.....Shiny parrot green
Fruit shape.....Cylindrical

Special features

- Shiny Parrot green, uniform straight attractive fruits
- Good branching habit and prolific fruit bearing ability
- Thin tender attractive long fruits
- Fruits ready for first harvest from 55-60 days after sowing
- Good keeping quality and suitable for long distance shipping
- Tolerant to fusarium wilt, PM and CMV diseases

Hybrid Bottle gourd **NBBH-200 (Ramdev)**



Characteristics

Fruit length (cm).....25 - 30
Fruit weight (g).....800 - 900
Fruit colourShiny parrot green
Fruit shape.....Cylindrical

Special features

- Shiny parrot green, straight, cylindrical, attractive quality fruits
- Continuous fruiting ability
- Hybrid ready for first harvest from 55-60 days after sowing
- Good keeping and shipping quality
- Tolerant to fusarium wilt, PM, DM and CMV diseases

Bottle gourd

Bottle gourd Variety (OP) NBBL-12 (Raja)



Characteristics

Fruit length (cm).....	20 - 25
Fruit weight (g).....	600 - 700
Fruit colour.....	Shiny light green
Fruit shape.....	Cylindrical

Special features

- Shiny light green tender fruits
- Cylindrical uniform attractive fruits
- Fruits are ready for first harvest from 55-60 days after sowing
- Tolerant to fusarium wilt and CMV diseases

Cultivation practices for Bottle gourd

Soil.....Medium to heavy fertile soil having good drainage.

Seed rate/ha.....1.50-2.00 kg

Spacing (cm).....180 x 90 or 180 x 60

Manures & Fertilizer.....Apply 15-20 ton/ha. FYM at the time of land preparation. After 10 days of sowing, apply 100 kg N, 80 kg P & 80 kg K, then after 45 days apply 100 kg N/ha

Irrigation Crop should be irrigated at 8 days interval or according to soil type and necessity.

Plant Protection

Leaf miner: Dichlorvos @ 1 ml/lit or Chloropyriphos @ 2 ml/lit or Quinolphos 2 ml/lit. **Aphids, jassids :-** Thiamethoxam 0.66 gm/lit

White fly :- Difenthiuron @ 12.5 gm/15 lit. **Thrips :-** Thiamethoxam 0.66 gm/lit or Fipronil @ 2 ml/lit. **Downy mildew :-** Mancozeb and Metalaxyl-M @ 2.5 gm/lit or Mancozeb @ 2 gm/lit or Tebuconazole @ 1 gm/lit. **Fusarium wilt :-** Biosanjivani @ 5+5 gm/lit or Bavistin @ 2 ml/lit. **Powdery mildew :-** Tebuconazole @ 1 gm/lit or Difenoconazole @ 0.5 ml/lit.

Special Recommendation • Apply 25 kg **Nirmal Bio Power Gold** granule per ha at the time of sowing near root zone • Apply **Nirmal Rizamica** @ 250 gm/ha through drip or drenching method • 3 foliar spray of **Nirmal Bioforce** @ 2ml/lit at pre-flowering, flowering & fruiting stage.



Bitter gourd



Hybrid Bitter gourd NBGH-167 (Savitri)



Characteristics

Fruit length (cm).....	15 - 20
Fruit weight (g).....	80 - 100
Fruit colour.....	Dark green
Fruit shape.....	Spindle

Special features

- Dark shiny green, spindle shaped, sharp prickled medium long fruits
- Hybrid ready for first picking from 55-60 days after sowing
- Uniform sized attractive fruits and excellent keeping quality
- Very high yielding hybrid due to profuse fruit bearing
- Tolerant to PM, DM and CMV diseases
- **Notified hybrid (Govt. of India).**

Hybrid Bitter gourd NBGH - 1190



Characteristics

Fruit Length (cm).....	15 - 20
Fruit Weight (gm).....	110 - 120
Fruit colour.....	Dark green
Fruit shape.....	Spindle

Special Features

- Strong and vigorous plant growth with prolific fruit bearing
- Dark green, spindle shape, long, sharp prickled attractive glossy fruits.
- Hybrid ready for first harvest within 50-55 days after sowing
- Highly tolerant to DM, BGNDV & CMV diseases.
- High yielding hybrid due to excellent virus tolerance and wider adaptability.

Hybrid Bitter gourd NBGH - 951



Characteristics

Fruit length (cm).....	15 - 20
Fruit weight (g).....	100 - 110
Fruit colour.....	Very dark green
Fruit shape.....	Straight Long

Special features

- Strong and vigorous plant growth with prolific fruit bearing
- Very dark green, straight long, very sharp prickled attractive fruits
- Hybrid ready for first harvest within 55-60 days after sowing
- Tolerant to PM, DM and CMV diseases
- High yielding hybrid with wider adaptability

Hybrid Bitter gourd NBGH-1067 (Dolly)



Characteristics

Fruit length (cm).....	20 - 25
Fruit weight (g).....	120 - 130
Fruit colour.....	Shiny green
Fruit shape.....	Thick long

Special features

- Shiny green, medium sharp prickled, thick long attractive fruits
- Wider adaptability with prolific fruit bearing ability
- Hybrid ready for first harvest within 55-60 days after sowing
- Excellent keeping quality and suitable for long distance market
- Tolerant to DM, PM and CMV diseases

Hybrid Bitter gourd NBGH-470 (Aparva)



Characteristics

Fruit length (cm).....	25 - 30
Fruit weight (g).....	120 - 130
Fruit colour.....	Shiny green
Fruit shape.....	Long

Special features

- Dark shiny green, medium thick long sharp prickled fruits
- Uniform sized, tender attractive fruits
- Fruits ready for first harvest within 55-60 days after sowing

Hybrid Bitter gourd NBGH - 676



Characteristics

Fruit length (cm).....	30 - 35
Fruit weight (g).....	130 - 140
Fruit colour.....	Dark green
Fruit shape.....	Extra long

Special features

- Extra long, sharp prickled, dark green coloured attractive fruits
- Fruits ready for first harvest from 50-55 days after sowing
- Prolific fruiting habit with wider adaptability
- Tolerant to PM, DM and CMV diseases

Hybrid Bitter gourd

NBGH - 815



Characteristics

Fruit length (cm).....	8 - 10
Fruit weight (g).....	50 - 60
Fruit colour.....	Dark green
Fruit shape.....	Short Spindle (Chuva type)

Special features

- Dark green, very short, spindle shape, chuva type and sharp prickled fruits
- Profuse fruit bearing habit and wider acceptance
- This hybrid ready for first harvest from 55-60 days after sowing
- Excellent shelf life and suitable for long distance market
- Highly tolerant to PM, DM and CMV diseases

Hybrid Bitter gourd

NBGH-517 (Everest)



Characteristics

Fruit length (cm).....	20 - 25
Fruit weight (g).....	100 - 120
Fruit colour.....	Shiny White
Fruit shape.....	Straight Long

Special features

- Shiny white with slight green shaded, sharp prickled, long fruits
- Profuse bearing and attractive tender fruits
- Hybrid ready for first harvest within 55-60 days after sowing
- Tolerant to CMV and PM diseases

Bitter gourd

NBG-162 (Raksha)



Characteristics

Fruit length (cm).....	10 - 15
Fruit weight (g).....	70 - 80
Fruit colour.....	Dark green
Fruit shape.....	Spindle

Special features

- Dark green, spindle shaped, sharp prickled fruits
- Fruits ready for first harvest within 55-60 days after sowing
- High yield with attractive fruits

Bitter gourd NBG-583



Characteristics

Fruit length (cm).....	6 - 8
Fruit weight (g).....	55 - 60
Fruit colour.....	Dark green
Fruit shape.....	Spindle
Fruit prickled.....	Sharp

Special features

- Prolific fruit bearing and continuous fruiting habit
- Dark green, very short, spindle shaped, sharp prickled attractive glossy fruits.
- Fruits ready to first harvest in 40-45 days after sowing.
- Highly tolerant to DM, BGMV & CMV discases.
- High yield potential and wider adaptability.

Cultivation practices for Bitter gourd

Soil.....Medium heavy well drained fertile soil.

Seed rate/ha.....1.5-2.0 kg

Spacing (cm).....150 x 60 or 120 x 60

Manures & Fertilizer

Apply 15-20 ton/ha. FYM at the time of land preparation. After 10 days of sowing, apply 100 kg N, 80 kg P & 80 kg K, then after 35 days apply 100 kg N/ha

Irrigation During rainy season irrigation may be required during initial growth period. In summer irrigation should be given regularly at 5-7 days interval or according to crop need.

Plant Protection

Leaf miner: Dichlorovos @ 1 ml/lit or Chloropyriphos @ 2 ml/lit or Quinolphos 2 ml/lit. **Aphids, jassids :-** Thiamethoxam 0.66 gm/lit. **White fly :-** Difenthiuron @ 12.5 gm/15 lit. **Thrips :-** Thiamethoxam 0.66 gm/lit or Fipronil @ 2 ml/lit.

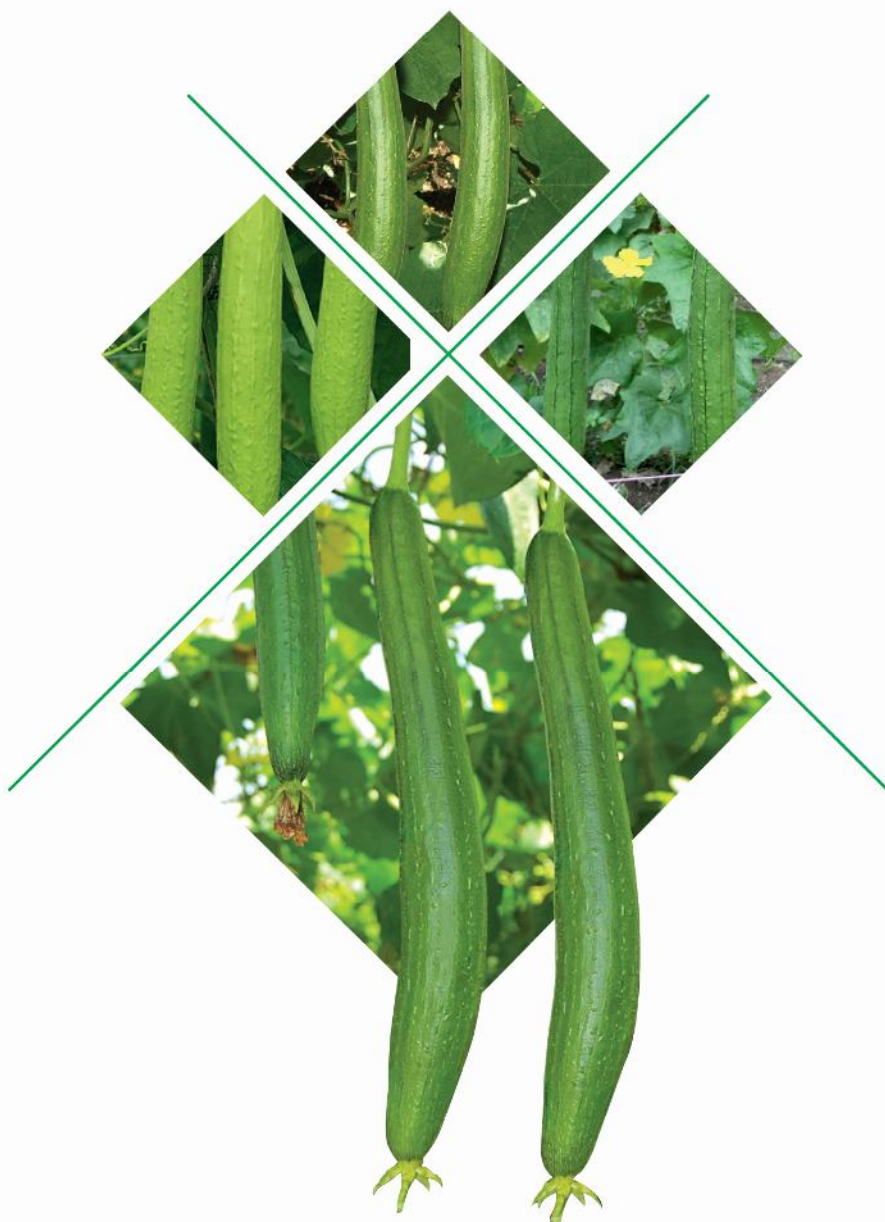
Downy mildew :- Mancozeb and Metalaxyl-M @ 2.5 gm/lit or Mancozeb 2 gm/lit or Tebuconazole @ 1 gm/lit. **Fusarium wilt :-** Biosanjivani @ 5+5 gm/lit or Bavistin @ 2 ml/lit. **Powdery mildew :-** Tebuconazole @ 1 gm/lit or Difenconazole @ 0.5 ml/lit.

Special Recommendation

- Apply 25 kg **Nirmal Bio Power Gold** granule per ha at the time of sowing near root zone
- Apply **Nirmal Rizamica** @ 250 gm/ ha through drip or drenching method
- 3 foliar spray of **Nirmal Bioforce** @ 2ml/lit at pre-flowering, flowering & fruiting stage.



Sponge gourd



Hybrid Sponge Gourd **NSGH-88**



Characteristics

Fruit length (cm).....20 - 25
Fruit weight (g).....100 - 120
Fruit colourShiny green

Special features

- Shiny green, medium long, very tender, non spongy, attractive fruits
- Fruits ready for first harvest from 45-50 days after sowing
- Good keeping quality and suitable for distant market
- Tolerant to PM, DM & CMV diseases

Hybrid Sponge Gourd **NSGH-341**



Characteristics

Fruit length (cm).....25 - 30
Fruit weight (g).....130 - 150
Fruit colour.....Dark green

Special features

- Uniform straight, dark green, long tender fruits
- Hybrid ready for first harvest from 45-50 days after sowing
- Continuous fruiting habit due to reflushing ability
- Tolerant to PM, DM and CMV diseases

Hybrid Sponge Gourd **NSGH-393**



Characteristics

Fruit length (cm).....25 - 30
Fruit weight (g).....140 - 150
Fruit colour.....Shiny green

Special features

- Long, shiny green, straight attractive tender fruits
- Prolific and continuous fruiting habit
- Hybrid ready for first harvest from 40-45 days after sowing
- Highly tolerant to PM, DM and CMV diseases

Hybrid Sponge Gourd **NSGH-21 (Champa)**



Characteristics

Fruit length (cm).....20 - 25
Fruit weight (g).....120 - 130
Fruit colour.....Dark green

Special features

- Long straight, dark green, uniform tender, non spongy attractive fruits
- Hybrid ready for first harvest from 45-50 days after sowing
- Tolerant to DM and CMV diseases

Hybrid Sponge Gourd **NSGH-309**



Characteristics

Fruit length (cm).....15 - 20
Fruit weight (g).....110 - 120
Fruit colour.....Pale green

Special features

- Pale green, black seeded, straight tender attractive fruits
- Hybrid ready for first harvest from 45-50 days after sowing
- Tolerant to PM and CMV diseases

Hybrid Sponge Gourd **NSGH-389**



Characteristics

Fruit length (cm).....20 - 25
Fruit weight (g).....120 - 130
Fruit colour.....Pale green

Special features

- Pale green, white seeded, straight uniform sized tender fruits
- Fruit ready for first harvest within 45-50 days after sowing
- Excellent taste and keeping quality
- Tolerant to PM and CMV diseases

Sponge Gourd NSG-28



Characteristics

Fruit length (cm).....	20 - 25
Fruit weight (g).....	100 - 120
Fruit colour.....	Shiny green

Special features

- Shiny green, medium long quality fruits
- First picking can be done from 40-45 days after sowing
- Profuse fruit bearing, continuous fruiting habit
- Excellent taste and keeping quality
- Tolerant to DM and CMV diseases

Sponge Gourd NSG-99 (Heena)



Characteristics

Fruit length (cm).....	15 - 20
Fruit weight (g).....	90 - 100
Fruit colour.....	Pale green

Special features

- Pale green, black seeded medium long cylindrical fruits
- First harvesting can be done from 45-50 days after sowing
- Highly tolerant to PM, DM and CMV diseases

Cultivation practices for Sponge gourd

Soil.....Medium heavy well drained fertile soil.

Seed rate/ha.....1.5 - 2.0 kg

Spacing (cm).....150 x 60 or 120 x 60

Manures & Fertilizer.....15-20 ton/ha. FYM at the time of land preparation. After 10 days of sowing apply 100 kg N, 80 kg P & 80 kg K and after 35 days apply 100 kg N/ha. **Irrigation** During rainy season irrigation may be required during initial growth period. In summer irrigation should be given regularly at 5-7 days interval or according to crop need.

Plant Protection

Leaf miner: Dichlorovos @ 1 ml/lit or Chloropyriphos @ 2 ml/lit or Quinolphos 2 ml/lit. **Aphids, jassids :-** Thiamethoxam 0.66 gm/lit **White fly :-** Difenthiuron @ 12.5 gm/15 lit. **Thrips :-** Thiamethoxam 0.66 gm/lit or Fipronil @ 2 ml/lit. **Downy mildew :-** Mancozeb and Metalaxyl-M @ 2.5 gm/lit or Mancozeb 2 gm/lit or Tebuconazole @ 1 gm/lit. **Fusarium wilt :-** Biosanjivani @ 5+5 gm/lit or Bavistin @ 2 ml/lit. **Powdery mildew :-** Tebuconazole @ 1 gm/lit or Difenconazole @ 0.5 ml/lit.

Special Recommendation

- Apply 25 kg Nirmal Bio Power Gold granule per ha at the time of sowing near root zone
- Apply Nirmal Rizamica @ 250 gm/ ha through drip or drenching method
- 3 foliar spray of Nirmal Bioforce @ 2ml/lit at pre-flowering, flowering & fruiting stage.

Cucumber/Longmelon



Cucumber/Longmelon

Hybrid Cucumber NCH-388



Characteristics

Fruit colour.....Dark Green
Fruit length (cm).....18 - 20
Fruit weight (g).....100 - 120

Special features

- Dark green, cylindrical, uniform sized, attractive tender fruits
- Very crispy taste and excellent keeping quality
- Fruits ready for first harvest from 40-45 days after sowing
- Tolerant to fusarium wilt, PM, DM and CMV diseases

Hybrid Long melon NCH-888



Characteristics

Fruit colourGreen
Fruit shape.....Cylindrical
Avg. Fruit Length (cm).....18 - 20
Avg. Fruit Weight (gm).....140 - 150

Special features

- Vigorous growth habit with prolific fruit bearing
- Green coloured, long attractive tender fruits
- Mid early hybrid, ready to first harvest from 45-50 days
- Good keeping quality and suitable for long distance transportation
- Highly tolerant to PM, DM & CMV diseases

Hybrid Cucumber NCH-883



Characteristics

Fruit colour.....Dark green
Fruit shape.....Cylindrical
Avg. Fruit Length (cm).....16 - 18
Avg. Fruit Weight (gm).....130 - 140

Special features

- Uniform cylindrical, dark green fruits
- Very attractive, crispy tender fruits
- Tolerant to fusarium wilt, PM and CMV diseases

Cucumber/ Long melon

Hybrid Cucumber

NCH-527



Characteristics

Fruit colour.....Greenish white
Fruit length (cm).....15 - 18
Fruit weight (g).....100 - 120

Special features

- Uniform cylindrical, greenish white fruits
- Very attractive, crispy tender fruits
- Gynoeious base hybrid with prolific fruit bearing
- Tolerant to fusarium wilt, PM and CMV diseases
- Not recommended for winter cultivation

Hybrid Cucumber

NCH-311



Characteristics

Fruit colour.....Light Green
Fruit length (cm).....18 - 20
Fruit weight (g).....100 - 120

Special features

- Light green with white striped, uniform cylindrical quality fruits
- Very tender, crispy & very attractive fruits
- Hybrid ready for first harvest from 50-52 days after sowing
- Tolerant to fusarium wilt, PM and DM diseases
- Not recommended for spring season cultivation

Hybrid Long melon

NCH-125



Characteristics

Fruit colour.....Light green with dark green spots
Fruit length (cm).....25 - 30
Fruit wt (g).....140 - 150

Special features

- Uniform sized fruits having light green colour with dark green spots
- Very long tender attractive fruits
- Profuse fruit bearing & high yielding hybrid
- Very crispy and excellent taste
- Non bitter taste in all season
- Highly tolerant to DM & CMV diseases

Cucumber/ Long melon

Long melon NCS-61 (Nagini)



Characteristics

Fruit colour.....Light green
Fruit length (cm).....35 - 40
Fruit weight (g).....200 - 250

Special features

- Light green, very tender, long, uniform sized, attractive fruits
- Fruits ready for first harvest from 50-55 days after sowing
- Highly tolerant to fusarium wilt, powdery mildew and CMV diseases
- Recommended for spring season cultivation

Cultivation practices for Cucumber & Long melon

Soil.....Medium heavy well drained fertile soil.

Seed rate/ha.....1.0 - 1.5 kg

Spacing (cm).....150 x 60 or 120 x 90

Manures & Fertilizer.....Apply 15-20 ton/ha. FYM at the time of land preparation Apply 100 kg N, 80 kg P & 80 kg K after 10 days of sowing and after 30 days apply 100 kg N/ha.

Irrigation

During rainy season irrigation may be required during initial growth period. In summer irrigation should be given regularly at 5-7 days interval or according to crop need.

Plant Protection Leaf miner :

Dichlorovos @ 1 ml/lit or Chloropyriphos @ 2 ml/lit or Quinolphos 2 ml/lit.

Aphids, jassids :- Thiamethoxam 0.66 gm/lit.

White fly :- Difenthiuron @ 12.5 gm/15 lit.

Thrips :- Thiamethoxam 0.66 gm/lit or Fipronil @ 2 ml/lit.

Downy mildew :- Mancozeb and Metalaxyl-M @ 2.5 gm/lit or Mancozeb @ 2 gm/lit or Tebuconazole @ 1 gm/lit.

Fusarium wilt :- Biosanjivani @ 5+5 gm/lit or Bavistin @ 2 ml/lit.

Powdery mildew :- Tebuconazole or Difenconazole @ 0.5 ml/lit.

Angular leaf spot :- Streptomycin sulfate @ 6 gm/15 lit.

Special Recommendation

- Apply 25 kg **Nirmal Bio Power Gold** granule per ha at the time of sowing near root zone
- Apply **Nirmal Rizamica** @ 250 gm/ha through drip or drenching method
- 3 foliar spray of **Nirmal Bioforce** @ 2ml/lit at pre-flowering, flowering & fruiting stage.



Tinda NRL-3 (Gabaru)



Characteristics

Fruit colour.....Shiny light green
Fruit shape.....Round
Fruit wt. (gm).....80 - 100

Special features

- Shiny green, hairy, tender round, delicious and attractive fruits
- Excellent taste & keeping quality
- Fruit ready for harvest from 50 - 55 days after sowing
- Highly tolerant to wilt disease
- Very high yielding

Hybrid Tinda NTDH-6



Characteristics

Fruit colour.....Shiny light green
Fruit shape.....Round
Fruit weight (g).....90-100

Special features

- Vigorous plant type with prolific fruit bearing.
- Round shiny green attractive fruits
- Uniform sized fruits over the harvest
- Highly tolerant to gummy stem blight, fusarium wilt, powdery mildew and CMV diseases

Cultivation practices for Round gourd (Tinda)

Soil.....Medium heavy well drained fertile soil.

Seed rate/ha.....1.50-2.00 kg

Spacing (cm).....150 x 60 or 120 x 90

Manures & Fertilizer.....Apply 15-20 ton/ha. FYM at the time of land preparation. After 10 days of sowing, apply 80 kg N, 60 kg P & 60 kg K, then after 30 days apply 80 kg N/ha.

Irrigation.....Roundgourd should be irrigated at 5-6 days interval in summer and according to necessity.

Plant Protection

Leaf miner : Dichlorvos @ 1 ml/lit or Quinolphos 2 ml/lit.

Aphids, jassids :- Imidacloprid @ 7 ml/ 15 lit.

White fly :- Difenthiuron @ 12.5 gm/15 lit.

Thrips :- Monocrotophos @ 2 ml/lit or Fipronil @ 2 ml/lit.

Downy mildew :- Mancozeb and Metalaxyl-M @ 2.5 gm/lit or Mancozeb @ 2 gm/lit or Tebuconazole @ 1 gm/lit.

Fusarium wilt :- Biosanjivani @ 5+5 gm/lit or Bavistin @ 2 ml/lit.

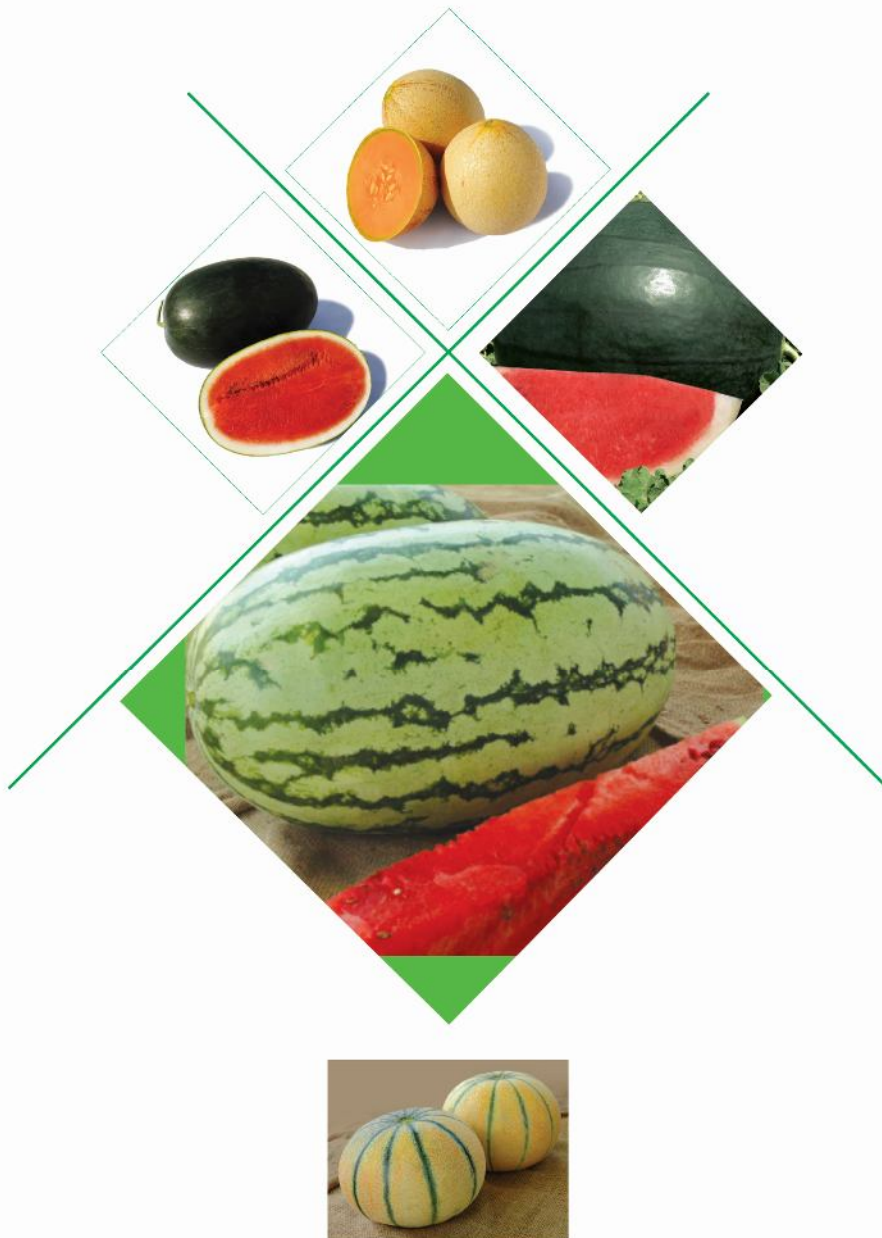
Powdery mildew :- Tebuconazole @ 0.5 ml/lit.

Alternaria leaf blight:- Mancozeb and Metalaxyl-M or DM-45 @ 2.5 ml/lit.

Special Recommendation

- Apply 25 kg Nirmal Bio Power Gold granule per ha at the time of sowing near root zone
- Apply Nirmal Rizamica @ 250 gm/ ha through drip or drenching method
- 3 foliar spray of Nirmal Bioforce @ 2ml/lit at pre-flowering, flowering & fruiting stage.

Watermelon /Muskmelon



Hybrid Watermelon NWMH-945 (Ice box)



Characteristics

Fruit colour.....Black
Fruit shape.....Oblong
Fruit wt. (kg).....3 - 4

Special features

- Early maturity and fruits ready to harvest within 70-75 days after sowing
- Oblong shaped shiny black skinned fruits
- Very dark red, compact, crispy flesh with high TSS and less seed content
- Excellent shelf life and suitable for long distance shipping
- Highly tolerant to fusarium wilt, bud necrosis virus and alternaria blight diseases

Hybrid Watermelon NWMH-1161



Characteristics

Fruit colour.....Black
Fruit shape.....Oblong
Fruit wt. (kg).....4.0 - 4.5

Special features

- Black coloured shiny skinned oblong shape fruits having 4.0 to 4.5 kg average fruit weight.
- Very early maturity, fruits ready to harvest within 70-75 days after sowing.
- Very dark red coloured, compact, crispy flesh with high TSS and less seed content.
- Suitable for long distance shipping.
- Highly tolerant to fusarium wilt, bud necrosis virus and alternaria blight diseases

Hybrid Watermelon NWMH - 455



Characteristics

Fruit colour.....Light green
with Dark green strips
Fruit shape.....Oblong
Fruit wt. (kg).....8 - 10

Special features

- Light green with dark green stripped, big uniform, oblong shaped fruits
- Very compact crispy, dark red coloured sweet flesh
- Fruits ready for harvest within 90-95 days after sowing
- Long shelf life and good for long distance transportation
- Highly tolerant to bud necrosis virus and fusarium wilt diseases

Hybrid Watermelon NWMH-354



Characteristics

Fruit colour.....Black
Fruit shape.....Round
Fruit wt. (kg).....6 - 8

Special features

- Medium big, pure black coloured round shaped attractive fruits
- Dark red coloured crispy, compact flesh with high sugar content
- Fruits ready for harvest from 90-95 days after sowing
- Good rind thickness and excellent shipping ability
- Highly tolerant to bud necrosis & fusarium wilt diseases

Hybrid Watermelon NWMH-148+



Characteristics

Fruit colour.....Light green with dark green strips
Fruit shape.....Oblong
Fruit wt. (kg).....10 - 12

Special features

- Supreme medium maturity hybrid with strong vine
- Light green skin cover with thin dark green strips
- Oblong shape big sized fruits with dark red coloured, compact flesh and high sugar content
- Fruits ready for harvest from 90-95 days after sowing
- Wider adaptability with excellent shipping ability
- Highly tolerant to fusarium wilt and alternaria blight diseases

Cultivation practices for Watermelon

Soil.....Light to medium heavy, well drained fertile soil.

Seed rate/ha.....1.0-1.5 kg

Spacing (cm).....180 x 60 or 150 x 60

Manures & Fertilizer.....Apply 25-30 ton/ha. FYM at the time of land preparation Apply 100 kg N, 100 kg P & 100 kg K after 15 days of sowing and after 30 days apply 50 kg N/ha. **Irrigation:** In general irrigation once in 5-6 days is necessary depending upon soil, temperature and location. Sudden wetting and drying of soil should be strictly avoided because it results in to fruit cracking.

Plant Protection : Leaf miner : Dichlorovos @ 1 ml/lit or Chloropyriphos @ 2 ml/lit or Quinolphos 2 ml/lit. **Aphids, jassids :-** Thiamethoxam 0.66 gm/lit.

White fly :- Difenthiuron @ 12.5 gm/15 lit. **Thrips :-** Thiamethoxam 0.66 gm/lit or Fipronil @ 2 ml/lit. **Downy mildew :-** Mancozeb and Metalaxyl-M 2.5 gm/lit or Tebuconazole @ 1 gm/lit. **Fusarium wilt :-** Biosanjivani @ 5+5 gm/lit or Bavistin @ 2 ml/lit. **Powdery mildew :-** Tebuconazole or Difenconazole @ 0.5 ml/lit. **Alternaria :-** Mancozeb and Metalaxyl-M @ 2.5 gm/lit or DM-45 @ 2 ml/lit. **Gummy stem blight:-** Bavistin or Dithane M-45 @ 2 ml/lit.

Special Recommendation

- Apply 25 kg **Nirmal Bio Power Gold** granule per ha at the time of sowing near root zone
- Apply **Nirmal Rizamica** @ 250 gm/ ha through drip or drenching method
- 3 foliar spray of **Nirmal Bioforce** @ 2ml/lit at pre-flowering, flowering & fruiting stage.

Hybrid Muskmelon NMMH-24



Characteristics

Fruit colour.....Yellow with green strips
Fruit shape.....Flat round
Fruit wt. (g).....900 - 1000
Flesh colour.....Orange

Special features

- Vigorous and strong vine growth
- Flat round, yellow with green striped attractive fruits
- Less seed cavity with very firm dark orange flesh
- Fruits matures within 70-75 days after sowing
- Very high TSS with musky flavor
- Highly tolerant to fusarium wilt, PM and viral diseases

Hybrid Muskmelon NMMH-225



Characteristics

Fruit colour.....Golden yellow with dense netting
Fruit shape.....Round
Fruit wt. (g).....800 - 900

Special features

- Round with golden yellow coloured dense netted fruits
- Dark orange colour firm flesh with small seed cavity
- Very sweet taste with wonderful aroma
- Early maturing, high yielding hybrid matures within 65-70 days after sowing
- Good for storage and long transport
- Excellent disease tolerance & wider adaptability

Hybrid Muskmelon NMMH-203



Characteristics

Fruit colour.....Creamy yellow with netting
Fruit shape.....Round to oblong
Fruit wt. (g).....1000 - 1100
Flesh colour.....Orange

Special features

- Round to oblong shaped, creamy yellow fruits with dense netting
- Small seed cavity, orange colour, firm flesh with excellent aroma and more sweetness
- Uniform sized delicious attractive fruits, matures in 65 - 70 days after sowing
- Excellent keeping quality & suitable for long distance transportation
- Highly tolerant to gummy stem blight, fusarium wilt, PM and CMV diseases

Hybrid Muskmelon NMMH-247



Characteristics

Fruit colour.....Creamy yellow
Fruit shape.....Oval
Fruit wt. (g).....1000 - 1100
Flesh colour.....Dark orange

Special features

- Vigorous plant type and prolific fruit bearing
- Oval shaped uniform sized, creamy yellow fruits with strong & dense white colour netting
- Dark orange coloured, firm flesh with excellent sweetness and strong musky flavour
- Fruits ready to harvest within 70 - 72 days after sowing
- Excellent shelf life & highly suitable for long distance transportation
- Highly tolerant to fusarium wilt, PM, DM and CMV diseases

Cultivation practices for Muskmelon

Soil.....Light to medium heavy, well drained fertile soil.

Seed rate/ha.....0.750- 1.0 kg

Spacing (cm).....180 x 60 or 150 x 6

Manures & Fertilizer.....Apply 25-30 ton/ha. FYM at the time of land preparation. After 10 days of sowing, apply 100 kg N, 100 kg P & 100 kg K, then after 30 days apply 50 kg N/ha

Irrigation.....Generally irrigation once in 5-6 days is necessary depending upon soil.

Plant Protection

Leaf miner : Dichlorovos @ 1 ml/lit or Chloropyriphos @ 2 ml/lit or Quinolphos 2 ml/lit. **Aphids, jassids :-** Thiamethoxam 0.66 gm/lit. **White fly :-** Difenthiuron @ 12.5 gm/15 lit.

Thrips :- Thiamethoxam 0.66 gm/lit or Fipronil @ 2 ml/lit.

Downy mildew :- Mancozeb and Metalaxyl-M @ 2.5 gm/lit or Tebuconazole @ 1 gm/lit **Fusarium wilt :-** Biosanjivani @ 5+5 gm/lit or Bavistin @ 2 ml/lit.

Powdery mildew :- Tebuconazole or Difenconazole @ 0.5 ml/lit

Alternaria leaf blight :- Mancozeb and Metalaxyl-M @ 2.5 gm/lit or DM-45 @ 2 ml/lit. **Gummy stem blight :-** Bavistin or DM-45 @ 2 ml/lit

Special Recommendation • Apply 25 kg **Nirmal Bio Power Gold** granule per ha at the time of sowing near root zone • Apply **Nirmal Rizamica** @ 250 gm/ ha through drip or drenching method • 3 foliar spray of **Nirmal Bioforce** @ 2ml/lit at pre-flowering, flowering & fruiting stage.



Cluster bean NCB-12 (Nandini)



Characteristics

Growth habit.....Tall, erect
Pod length (cm).....6 - 7
Pod pubescence.....Present

Special features

- Tall and predominantly single stem plant type
- Pubescent (local type), medium long quality pods
- Excellent organoleptic taste
- Tolerant to powdery mildew disease

Note :- avoid sowing during 15th April to 15th August in heavy fertile soil due to more plant vigour

Clusterbean NCB-115



Characteristics

Growth habit.....Medium tall
Pod length (cm).....12 - 14
Pod pubescence.....Absent

Special features

- Medium tall and predominantly single stem plant type
- Non pubescent, very long, attractive smooth stringless quality pods
- Pods ready for first picking 45-50 days after sowing
- Excellent organoleptic taste
- Tolerant to powdery mildew disease

Cultivation practices for Clusterbean

Soil.....Medium heavy well drained fertile soil.

Seed rate/ha.....8-10 kg

Spacing (cm).....60 x 15 or 45 x 15

Manures & Fertilizer.....Apply 25 tones of well composted organic manure should be applied at the time of land preparation. Application of 25 kg N, 60 kg P & 60 kg K fertilizer at the time of sowing & 25 kg N should be applied 25 days after sowing.

Irrigation.....Depending on the atmospheric conditions two or three protective irrigations should be given.

Plant Protection

Leaf miner: Dichlorovos @ 1 ml/lit **Aphids, jassids :-** Imidacloprid @ 0.5/lit.

White fly :- Difenthiuron @ 12.5 gm/15 lit. **Thrips :-** Thiamethoxam 0.66 gm/lit

or Fipronil @ 2 ml/lit. **Downy mildew :-** Mancozeb and Metalaxyl-M @ 2.5

gm/lit or Mancozeb @ 2 gm/lit or Tebuconazole @ 1 gm/lit.

Fusarium wilt :- Biosanjivani @ 5+5 gm/lit or Bavistin @ 2 ml/lit

Powdery mildew :- Tebuconazole @ 1 gm/lit. **Alternaria leaf blight:-**

Mancozeb and Metalaxyl-M or DM-45 @ 2.5 ml/lit.

Special Recommendation

- Apply 25 kg **Nirmal Bio Power Gold** granule per ha at the time of sowing near root zone
- Apply **Nirmal Rizamica** @ 250 gm/ ha with organic fertilizer
- 3 foliar spray of **Nirmal Bioforce** @ 2ml/lit at pre-flowering, flowering & fruiting stage.

**French bean
NFL-75 (Arka Sharad)**



Characteristics

Growth habit.....Determinate
Plant height (cm).....50 - 60
Pod length (cm).....14 - 16
Pods colour.....Light green
Seed colour.....White

Special Features

- Light green long, tender quality pods
- Stringless round pods
- Excellent taste & quality
- Highly tolerant to disease & pests

**Pea
Pea NP-20**



Characteristics

Growth habit.....Semi determinate
Pod length (cm).....8 - 10
Numbers of seeds/pod.....8 - 10

Special features

- Semi determinate growth habit and profuse pods bearing
- Round, firm and attractive light green colour quality pods
- Very sweet grains due to high TSS
- Highly tolerant to powdery mildew and wilt diseases
- Suitable for vegetable purpose

Cultivation practices for Pea

Soil.....Well drained and fertile soil is desirable. but it can grow in different types of soil.

Seed rate/ha.....70-80 kg

Spacing (cm).....45 x 15

Manures & Fertilizer.....Apply 15-20 ton FYM/ha. Should be applied thoroughly at the time of land preparation. At time of sowing, 30 kg N, 30 kg P & 30 kg K/ha, should be applied. After 30 days of sowing apply 30 kg N/ha.

Irrigation.....It should be irrigated at intervals of 8-10 days.

Plant Protection**Leaf miner:** Dichlorovos @ 1 ml/lit.

Aphids, jassids :- Imidacloprid @ 0.5/lit.

White fly :- Difenthiuron @ 12.5 gm/15 lit.

Thrips :- Thiamethoxam 0.66 gm/lit or Fipronil @ 2 ml/lit.

Downy mildew :- Mancozeb and Metalaxyl-M @ 2.5 gm/lit or Mancozeb 2 gm/lit or Tebuconazole @ 1 gm/lit

Fusarium wilt :- Biosanjivani @ 5+5 gm/lit or Bavistin @ 2 ml/lit

Powdery mildew :- Tebuconazole @ 1 gm/lit.

Special Recommendation

- Apply 25 kg **Nirmal Bio Power Gold** granule per ha at the time of sowing near root zone
- Apply **Nirmal Rizamica** @ 250 gm/ ha with organic fertilizer
- 3 foliar spray of **Nirmal Bioforce** @ 2ml/lit at pre-flowering, flowering & fruiting stage.

Cow pea NCP-506



Characteristics

Growth habit.....Semi indeterminate
Pod length (cm).....24 - 26
Seed colour.....White
Days to maturity.....90 to 100 days

Special Features

- Semi indeterminate growth habit
- Very long (24-26 cm) green pods
- White with brown eye bold seed
- Very high yielding variety
- Suitable for dual purpose
- High tolerant to YMV & PM diseases

Cultivation practices for Cowpea

Soil.....Well drained and fertile soil is desirable.
but it can grow in different types of soil.

Seed rate/ha.....15-20 kg

Spacing (cm).....45 x 10

Manures & Fertilizer.....Apply 15-20 ton FYM/ha. Should be applied thoroughly at the time of land preparation. Apply N-25 kg/ha & P-25 kg/ha

Irrigation.....Give irrigation immediately after sowing and on 3rd day, there after once a week.

Plant Protection

Aphids :- Dimethoate 30 EC 1 ml/lit. Or methyl demeton 25 EC 1 ml/lit.

Pod borer :- Quinalphos 25 EC 2 ml/lit.

Powdery mildew:- Suphur 25 kg/ha. Or Spary wettable sulphur 29/lit.

Special Recommendation

- Apply 25 kg **Nirmal Bio Power Gold** granule per ha at the time of sowing near root zone
- Apply **Nirmal Rizamica** @ 250 gm/ ha with organic fertilizer
- 3 foliar spray of **Nirmal Bioforce** @ 2ml/lit at pre-flowering, flowering & fruiting stage.

Radish NRD-45



Characteristics

Growth habit.....Semi spreading
Leaf blade.....Serrated
Root length (cm).....35 - 40

Special features

- Uniform straight, snow white coloured roots with mild pungency
- Root contains watery flesh with less self core
- Roots ready for first harvest within 45-50 days after transplanting
- Recommended for winter season cultivation

Radish NRD-48



Characteristics

Growth habit.....Erect
Day to 1st. harvest.....40 - 45
Leaf blade.....Palmate
Root length (cm).....25 - 30

Special features

- Uniform straight root with mild pungent taste
- Snow white coloured roots with watery fleshiness
- Good keeping quality.
- Recommended for kharif season cultivation
- Roots ready for first harvest within 45 - 50 days after transplanting.

Cultivation practices for Radish

Soil.....Medium heavy well drained fertile soil.

Seed rate/ha.....9-10 kg

Spacing (cm).....30 x 10 or 20 x 5

Manures & Fertilizer

Apply FYM 20-25 ton/ha at the time of land preparation • Apply 25 kg N, 100 kg P and 50 kg K/ha at the time of sowing and 25 kg N/ha after 30 days.

Irrigation

Radish crop should be irrigated immediately after sowing, on third day and then once in 5-7 days.

Plant Protection

Sucking pest: Imidacloprid 0.5 ml/lit or Thiamethoxam @ 7 gm/15 lit. **White fly** :- Difenthiuron @ 12.5 gm/15 lit or **Thrips** :- Fipronil @ 2 ml/lit **Damping off** :- Drench with Copper oxychloride @ 2 gm/lit of water
White rust :- Mancozeb @ 2 gm /lit or Azoxystrobin @ 2 gm/lit.

Special Recommendation

- 3 foliar spray of Nirmal Bioforce @ 2ml/lit at pre-flowering, flowering & fruiting stage.

Coriander NCR-9 (Apsara)



Characteristics

Plant growth habit.....Semi erect
Leaf colour.....Shiny light green
No. of basal leaves/plant.....10-15

Special features

- Long vegetative phase
- Very good aroma & leaves quality
- Medium broad shiny green leaves
- More No. of basal leaves with multi-cut ability
- Suitable for vegetable purpose

Spinach / Pumpkin

Spinach NSP-5



Characteristics

Leaves shape.....Ovate
Leaves length (cm).....12-14
Leaves breadth (cm).....7-8
Days to 1st cut.....40 (days after sowing)
Days to 2nd cut.....15 (days after 1st cut)
Days to 3rd cut.....15 (days after 2nd cut)

Special features

- Broad ovate shaped leaves
- Green tender quality leaves
- Excellent organoleptic taste with good aroma
- Multicut habit

Pumpkin NPL-36



Characteristics

Plant type.....Vigorous
Fruit colour.....Dark green + strips
Fruit shape.....Round
Flesh colour.....Yellow
Avg. Fruit Weight (kg).....5 - 6

Special features

- Fruit are round in shape
- Fruit skin is dark colour at immature stage
- Fruits are yellowish orange in colour after full maturity
- Excellent taste

Bio-Organic Inputs



Bio-Power Gold (A Mycorrhizal Bio fertilizer)



Composition: Product contains propagules of consortium of three *Glomus* spp. of Mycorrhizae developed by Root Organ Culture (ROC) technique.

Carrier : Clay Mineral granules

Benefits of Bio Power Gold (Mycorrhizal Biofertilizer)

- It increases root proliferation thereby, increase in nutrient & water uptake.
- It improves the soil health and mobilizes nutrients in general & especially phosphorus to plant.
- It increases crop yield and improves keeping quality of the produce .
- It imparts biotic and abiotic stress tolerance to the crop plants.
- Significant reduction in chemical fertilizer doses.

Direction for use :-

- Use Bio Power Gold for soil application.
- It is recommended to be used alone near root zone or it can be mixed with FYM @ 25 kg /hectare

Recommended crops :

Cotton, Banana, Sugarcane, Paddy, Wheat, Maize, Grapes, Apple, Citrus, Oil Seeds & Pulses, Soybean, Onion, Potato, Chilli and Vegetables crops.

Caution : Store in cool and dry place.

Nirmal's Rizamica

A Mycorrhizal Bio fertilizer based on innovative "ROC" technique



Composition: 1. Product contains consortium of three *Glomus* spp of Mycorrhizae as a propagules developed by Root Organ Culture (ROC) technique.

2. **Total viable propagule**

(including free spores): 2000 propagule/g

3. **Form/Base :** Fine powder (Water soluble)

4. **pH :** 6 to 7.5

5. **Infectivity Potential :** As per FCO (1985)

Benefits of Rizamica :

1. Improve plant root growth and development
2. Increase the uptake and mobilization of phosphate & micro nutrients in all crops
3. Effective in overcoming the stress condition like drought, disease incidence etc.
4. Enhances yield & quality
5. Mycorrhizal filaments produces humic compounds and it enhances the water holding capacity of soil & makes more air permeability in the soil.

Direction of Use :

1. Use **Rizamica** through drip irrigation system/drenching or soil application.

Dosage : 250 g /hectare (100 g/acre) through drip irrigation. Mix 100g **Rizamica** in 200 to 500 litre of water & apply for 1 acre area. It is also recommended for soil drenching with or without organic manure.

Recommended Crops :

Grapes, Banana, Apple, Citrus, Sugarcane, Cotton, Oil Seeds and Pulses, Soybean, Chilli, Vegetable crops, Paddy, Wheat, Maize, Onion, Potato.

Caution : Store in cool and dry place.

Bio Stimulant

Nirmal Bio Power

Product based on cell free microbial extract



Bio-power is developed from desirable & beneficial multi bacterial extract, with Cyanobacterial extract using advanced bio-tech process. It contains bio amino acid, proteins etc. **Mode of action:** Bio Power acts on dividing cells of roots, increases secondary and tertiary roots and also increases root hairs, so that nutrients and water from the soil are absorbed efficiently and easily.

Benefits of Bio power :

- It increases feeding roots thereby increases availability of nutrients to the plants for better growth and development
- Improves crop stand in different soils
- Increase the yield and improves the quality of produce
- It imparts tolerance for abiotic and biotic stresses in different crops.
- Improve shelf life & improve transportability of produce.

Direction for use:

Add 2ml of liquid Bio Power in 1 Lit. of water, drench soil near root zone of plant. Bio power can be applied through drip irrigation system. Apply 2 Liter per acre (5 L/ Ha.) in 2 split i.e. at pre-flowering & fruit development stage.

Recommended crops:

Vegetables, Fruit crops, Cereals, Pulses, Sugarcane, Onion, Cotton and Paddy etc.

Bio Stimulant

Bio-Force

(Botanical extracts including sea weed extracts)



Bio-Force is developed from natural extracts of sea weed and Blue green algae (Algal extract) using advance biotech method & process patent technology.

Benefits of Bio-Force:

- Increases total chlorophyll content, number of leaves and leaf area, which results in increase in better Photosynthesis
- Significantly increases the fruit set, fruit size and thereby increase in yield
- Improves the shelf life of fresh fruits, vegetables and flowers
- Improves the quality of produce
- It imparts tolerance for biotic and abiotic stresses in different crops

Direction for use:

Spray Bio-Force @ 2ml / Litre of water. Three foliar spray are recommended at Pre-flowering, flowering and Post flowering stages.

Recommended crops:

Bio-Force is recommended for all types of crops like Cotton, fruits crops, Cereals, Pulses & Vegetables.



Bio Stimulant

Berrylon (Fruit & Veg.)

Botanical extracts including sea weed extracts



Berrylon (Fruit & Veg.) is developed from natural extract (concentrate) of the blue green algae & sea weed extract using advanced bio-tech processes. Berrylon is useful for yield maximization and quality improvement of various crops.

Benefits of Berrylon:

- It increases the number of leaves and leaf area and total chlorophyll contents significantly which helps for better photosynthesis.
- Early flowering and fruiting therefore early harvest.
- Significantly increases the fruit set, fruit size and yield.
- It improves shelf life of the produce.
- It imparts biotic & abiotic stress tolerance to crops.

Direction for use:

Spray Berrylon @ 1 ml/L of water at following three stages of crop

- 1 Flowering,
- 2 Fruit setting,
- 3 Fruit development stage.

Recommended crops:

Grape, Mango, Banana, Pomegranate, Citrus fruits, Chiku, Papaya, Guava etc. Vegetables like tomato, chilli, brinjal, capsicum, cucurbits, beans, leafy vegetables etc.

Bio Sanjivani

Antagonistic Microbes

Bio Sanjivani is wettable powder Formulations. Compounds for healthy crops growth. It contains each packet of *Trichoderma viride* (Bhuparis Tricho), *Pseudomonas fluorescens* (Bhuparis Pseudomonas). It is effective against different plant pathogenic fungi and bacteria.

Benefits: • Effectively controls wilt complexes caused due to pathogenic fungal, bacterial and nematodal pathogens. • It is highly effective to control diseases viz, root rot, stem rot, fusarium wilt, damping off, Sheath blight etc. *Pseudomonas* Protect crops from bacterial diseases and also secretes vital compounds for healthy crops growth. • It Control seed borne or Soil borne diseases.



Direction for use:

Seed treatments - Mix 5 gm Bhuparis Tricho and 5 gm Bhuparis Pseudomonas in 25 ml of water & coat for 1 kg of seed. Dry seeds before sowing. **Soil drenching** - Mix 500 gm culture from each packet of Bio Sanjivani in 200 lit. of water along with 500 gm jaggery and drench the solution near root zone. **Seedling dip method** - Mix 500gm Bhuparis Tricho and 500gm Bhuparis Pseudomonas in 20-25 Liter of water to prepare solution and dip the roots of seedling required for one acre for 5-10 minutes just before transplanting.

Recommended crops:

Patato, Tomato, Capsicum, Brinjal, Chilli seedlings, Pigeon pea, Cotton, Sugarcane, Rice, Groundnut, Pomegranate, Papaya, Banana, Guava etc.

Bhuparis Tricho

(*Trichoderma viride* 1% WP)

Antagonistic Fungi



Bhuparis Tricho is a formulation of antagonistic fungus *Trichoderma viride*. It Control the fungal pathogens by Nutrient Competition, hyper parasitization, It is effective on the fungal diseases viz, wilts, stem rot, root rot, damping off etc., caused by species of *Fusarium*, *Rhizoctonia*, *Pythium*, *Phytophthora*, *Sclerotium* etc.

Benefits:

- Effectively suppresses wilt, root rot, damping off diseases of cereals, pulses, vegetables and fruit crops.

- It also improves soil condition.

Direction for use:

Seed treatments - Mix 10 to 15 grams of Bhuparis Tricho in 25 ml of water and apply it for 1 kg of seed just before sowing.

Soil Application - Mix 2-3 kg of Bhuparis Tricho in 5 to 10 ltr. of water and mix the solution in 100 kg FYM and keep it for overnight. Use the mixture next day for 1 acre of field by applying it in the root zone of the plants.

Drenching method - (For Pomegranate, Oranges, Vegetables, Cotton etc). Mix 2 kg of Bhuparis Tricho in 200 ltr. of water. Drench the solution by ring method in the rootzone of Horticulture crops, Cotton, Vegetables etc.

Bhuparis Pseudomonas

(*Pseudomonas fluorescens* 0.5% WP)

Antagonistic Bacteria



Bhuparis Pseudomonas is a powder formulation of *Pseudomonas fluorescens* bacteria. Bhuparis Pseudomonas is effective against wide variety of seed and soil borne diseases like bacterial leaf blight of rice, damping off disease, seedling rot of black gram, leaf spot of groundnut etc. It secretes compounds such as Pyco-cyanin and Phenazine, which inhibit the growth of disease causing pathogens.

Benefits:

- Protects wide range of plants from disease causing, fungal, bacterial Pathogens.

- It promotes plant growth by producing growth promoting factors.

Method of application:

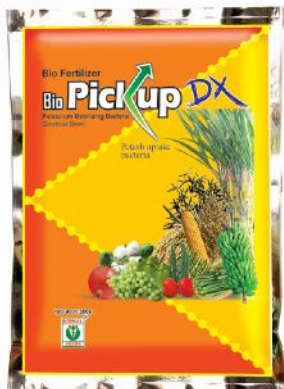
Seed treatments - Mix 10 gram of Bhuparis Pseudomonas in 25 ml of water to make a slurry. Use it for seed treatment. Dry the treated seed under shade and then use for sowing.

Soil application - Mix 2 kg of Bhuparis Pseudomonas in 5 lit. of water and mix the solution in 100 kg of FYM. Broadcast it over one acre of field near root zone of the plants.

Drenching method - (For Pomegranate, Oranges, Vegetables, Cotton etc). Mix 1 kg of Bhuparis Pseudomonas in 200 lit. of water. Drench the solution by ring method in the root zone of the plants. Use about 10-15 lit. of the solution for every plant.

Bio Pick Up Dx

(Potash mobilizing bacteria)



Bio Pick Up Dx is dextrose base formulation of potash mobilizing bacteria. Most of the Potash exists in soil in unavailable form. Potash mobilizing bacteria secrete different organic acids and enzymes that help to solubilize fixed potash into exchangeable form and make it available to plants.

Advantages:

- Bio Pickup DX is effectively mobilizes unavailable potassium ions and makes it available for plants.

- It can save 15-20% dose of potassic fertilizers.
- It imparts biotic and abiotic stress tolerance.

- It improves shelf life of the produce.

- It helps to increase yield to the extent of 15 to 20% in various crops.

- Being a dextrose base it can also be applied through drip.

Method of Application:

Soil application :- Add Bio Pickup Dx 0.5-2 kg in 5 Liter of water and sprinkle this suspension on heaps of 100 Kg of compost and leave for incubation over night. Mix well before use. In plantation crops apply this mixture at the root zones by dibbling. In field crops the mixture is to be broadcast evenly in the moist field and mixed with soil just before sowing.

Drip Application:- Mix Bio Pickup Dx 0.5-2 kg in 200-500 Liter of water and apply suspension through drip system for one acre area. **Seedling root dip method.** (For seedlings required to be planted in one acre) Mix Bio Pickup Dx. 500g in 10-15 Liter of water and dip the roots of seedlings in this suspension for 15-20 minutes before transplanting.

Recommended crops: Cereals, Pulses, Oil seeds, Fiber crops, Vegetables Fruits, Flowers and Plantation crops.

Sniper-WP

ENTOMOPATHOGENIC NEMATODE

(*Heterorhabditis indica*)

EPN



Contains : 75,000 - 1,00,000 IJs/g

Recommended Pests :

Sniper effectively controls White grubs, Army worms, Cut worms, Root grubs, Termites, Larvae of Fall armyworms, Spodoptera, Grubs of weevils etc.

Recommended crops :

Sniper can be used for the crops like Sugarcane, Groundnut, Potato, Arecanut, Cardamom, Vegetables, Maize, Paddy, Sorghum & Horticultural crops etc.

Benefits of Sniper :

- Sniper is eco-friendly biological pesticide.
- It is safe for human being, environment and natural enemies.
- It is target specific and residue free
- Highly effective for control of above said pests
- It is cost effective and farmers friendly

Direction for use :

Soil application: 5 kg/ ha (2 kg/ acre)

Foliar spray: 5 g Sniper + 0.5 ml SS100 / Liter of water

Bhuparis AZP

(*Azospirillum spp*)

Bio fertilizer

Bhuparis AZP (*Azospirillum spp*) is nitrogen fixing bacteria live in rhizospheric zone of plants.

Benefits of Bhuparis AZP:

- The effective strains used in Bhuparis AZP fixes atmospheric nitrogen and make it available for plants.
- 15-20% reduction in use of chemical fertilizers is possible.
- Increase the yield up to 15-25%.

Method of Application:

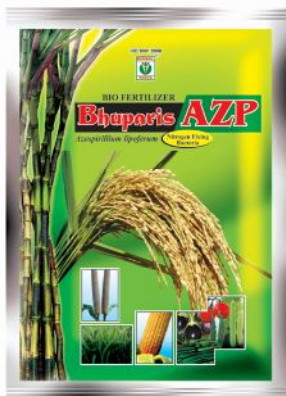
Soil Application - Mix 5 kg Bhuparis AZP in 50 lit. of water and add this solution in 100 kg of FYM and then broadcast the mixture near root zone area for 1 acre.

Seedling treatment - Mix 1 kg Bhuparis AZP in 10 lit. of water with 50 gm jaggery and dip the roots of seedlings for 5-10 minutes before transplanting.

Seed Treatment - Mix 500 gm Bhuparis AZP in sufficient quantity of water with 50 gm jaggery, so as to make thick slurry. Mix this slurry with 10 kg Seeds & dry in shade & sow immediately.

Recommended crops:

Bhuparis AZP are useful for the cereals and commercial crops viz. Wheat, Paddy, Bajra, Jowar, Maize, Mustard, Cotton, Cumin, Banana, Sugarcane, Tobacco, Castor, Vegetables and horticultural crops.



Free living nitrogen
fixing bacteria.

Bhuparis RB

(*Rhizobium spp*)

Bio fertilizer

Rhizobium spp live in association with the roots of leguminous plants in the form of root nodules and fixes atmospheric nitrogen.

Benefits of Bhuparis RB:

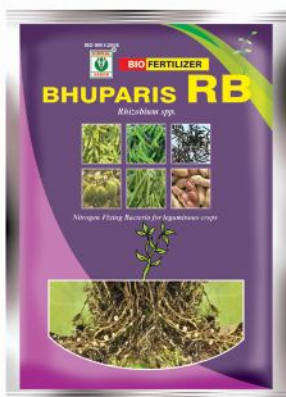
- The effective strains used in Bhuparis RB which fix atmospheric nitrogen and make it available for plants.
- Within one year 50 to 100 kg nitrogen is fixed per hectare.
- 20-25% reduction in use of chemical fertilizers is possible.
- Increase the yield up to 10-35%.

Method of Application:

Seed Treatment - Mix 500 gm Bhuparis RB in sufficient quantity of water with 50 gm jaggery / sticker, so as to make thick slurry. Mix this slurry with seeds required for 1 acre area, dry seeds in shade & sow immediately.

Recommended crops:

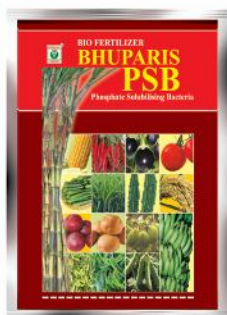
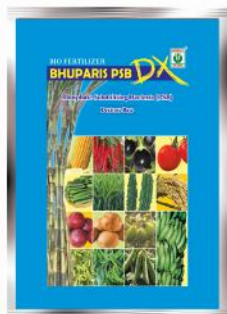
Bhuparis RB is available for each crop viz; Chick pea, Pea, Ground nut, Soybean, Green gram, Black Gram, Cow pea, Pigeon pea, Guar. Bhuparis RB is available in lignite base carrier formulations.



Nitrogen fixing bacteria.

Bhuparis PSB Dx

(Phosphate solubilising bacteria)



Bhuparis PSB is available in lignite & Dextrose base carriers

Bio fertilizer

Majority of applied phosphorous is converted into insoluble form, which is not available to the plants. The Phosphate Solubilising Bacteria secretes organic acids, which dissolve unavailable phosphorus into soluble form and make it available to the plants.

Advantages :

1. Use of Phosphatic fertilizers can be saved upto 20-30%.
2. It helps to increase yield to the extent of 15 to 20% in various crops.
3. It increases the nutrient uptake efficiency of plants.

Method of Application

Soil application :- Add Bhuparis PSB Dx.0.5-2 kg in 5 Liter of water and sprinkle this suspension on heaps of 100 Kg of compost and leave for incubation overnight. Mix well before use. In plantation crops apply this mixture at the root zones by dibbling. In field crops the mixture is to be broadcast evenly in the moist field and mixed with soil just before sowing.

Drip Application:- Mix Bhuparis PSB Dx 0.5-2 kg in 200-500 Liter of water and apply suspension through drip system for one acre area.

Seeding root dip method.

(For seedlings required to be planted in one acre) Mix Bhuparis PSB Dx.500 gm in 10-15 Liter of water and dip the roots of seedlings in this suspension for 15-20 minutes before transplanting.

Recommended crops: Cereals, Pulses, Oil seeds, Fiber crops, Vegetables Fruits, Flowers and Plantation crops.

Bhuparis AB

(Azotobacter spp)

Bio fertilizer

Bhuparis AB is developed from efficient strain of Azotobacter spp. It fixes atmospheric nitrogen and make it available to plants.

Advantage :

- Within one year 25 to 40 Kg nitrogen is fixed per hectare, so that 20 - 25% reduction in use of Nitrogenous fertilizers is possible
- 15 -20% increase in crop yield.

Method of Application

Soil application :

Add Bhuparis AB-0.5-2 Kg in 5 Liter of water and sprinkle this suspension on heaps of 100 Kg of compost and leave for incubation overnight. Mix well before use. In plantation crops apply this mixture at the root zones by dibbling. In field crops the mixture is to be broadcast evenly in the moist field and mixed with soil just before sowing.

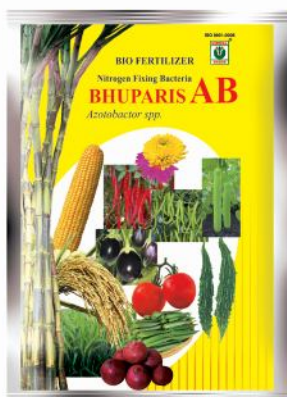
Seeding root dip method :

(For vegetable & transplanted crops for one acre) Mix Bhuparis AB-500 g in 10-15 Liter of water and dip the roots of seedlings in this suspension for 15-20 minutes before transplanting.

Recommended crops:

Bhuparis AB is recommended for Cotton, Banana, Maize, Jawar, Bajra, Wheat, Mustard, Sunflower, Sugarcane, Vegetable and Fruit crops.

Bhuparis AB is available in lignite base



Nitrogen fixing bacteria.

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Research & Development (R & D) Division



Cold Storage (Pachora)



Bio Organic Inputs Manufacturing Unit Guwahati (Assam)



**Seed Processing & Packing Plant of
Nirmal Seeds Pvt. Ltd. in Chikhali, Dist. Buldhana (MH)**





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(An ISO 9001:2015 Certified Company)

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