

IMPROVED CROP VARIETIES RECOMMENDED FOR PUNJAB

Crop variety	Distinguishing characters	Av. yield (q/acre)	Where recommended
	2	3	4
Wheat			
Irrigated conditions i)			
<i>Timely sown</i>			
HD 2967	It is double dwarf variety with an average plant height of 101 cm. It has profuse tillering. The ears are medium dense and tapering in shape with white glumes. Its grains are amber, medium bold, hard and lustrous. It is resistant to yellow and brown rusts but susceptible to karnal bunt and loose smut diseases. It takes about 157 days to matures.	21.4	Whole of Punjab
PBW 621	It is a double dwarf variety with an average plant height of 100 cm. It has profuse tillering. The ears are medium dense and tapering in shape with white smooth glumes. Its grains are amber, hard, medium, bold and lustrous. It is resistant to yellow and brown rusts and susceptible to karnal bunt and loose smut diseases. It takes about 158 days to matures.	21.1	Whole of Punjab
PBW 550	Double dwarf variety with plant height of 86 cm. The ears are medium dense, tapering in shape and fully bearded with white smooth glumes. Its grains are bold, amber, hard and lustrous, it is resistant to yellow and brown rusts. It matures in about 146 days. For securing good yield, seed rate of 45 Kg per acre for this variety is recommended. Sowing of this starts from 2nd week of November.	20.8	Whole of Punjab
DBW17	Profuse tillering variety with plant height of 87 cm. Its ears are medium dense and tapering with white smooth glumes. Grains are amber hard, medium bold and lustrous. It is susceptible to new races of yellow rust and moderately resistant to brown rust. It matures in 155 days.	20.0	Whole of Punjab
PBW502	Profuse tillering variety with plant height of 95cm. Ears are dense and tapering. Grains are bold, amber, hard and lustrous. It is susceptible to new races of yellow rust and resistant to brown rust and less susceptible to Karnal bunt. It matures in 150 days.	19.5	Whole of Punjab
PBW343	Variety with plant height of 100 cm., resists lodging due to stiff stem. The ears are dense, fully bearded with smooth glume. It is susceptible to Karnal bunt and loose smut. It matures in 155 days. It is susceptible to new races of yellow rust.	19.0	Whole of Punjab
WH542	Variety with plant height of 90 cm. It tillers profusely. The ears are dense, fully bearded with white glumes. It has medium bold, hard amber grains. It matures in 155 days. It is susceptible to new races of yellow rust.	18.5	Whole of Punjab
TL 2908 (Triticale)	Variety with plant height of 113 cm. Ears are long, drooping with red glumes and awns. Grains are amber, medium hard and bold. It is highly resistant to all major wheat diseases. It matures in 153 days.	16.4	Whole of Punjab
<i>//) Late sown</i>			
PBW_590	It is double dwarf variety with an average plant height of 80 cm. Its ears are medium dense and tapering in shape with white smooth glumes. Its grains are amber, hard, medium bold and lustrous. It is resistant to yellow and brown rusts and susceptible to karnal bunt and loose smut diseases. It matures in about 128 days.	16.4	Whole of Punjab
PBW509	Early maturing variety with bold grains and dark green foliage. Its plant height is 85cm. Ears are medium	15.8	Whole of Punjab except submontaneous regions

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	dense. Grains are bold, amber, hard and lustrous. It is resistant to yellow and brown rusts but susceptible to karnal bunt. It matures in 130 days.		
PBW373	Variety with plant height of 90 cm. Tillers profusely, has dense, fully bearded ears with white smooth glumes. Resistant to brown rusts, susceptible to Kamal bunt, new races of yellow rust and loose smut. Matures in 140 days.	16.5	Whole of Punjab
TL 1210 (Triticale)	The ears are long, drooping, fully awned with white glumes. The grains are medium bold, light red and medium hard. It is highly resistant to all the important wheat diseases. It matures in 135 days.	18.0	Whole of Punjab
Rainfed			
PBW527	Variety with an average plant height of 100 cm. It tillers profusely. The ears are medium dense and tapering in shape with white glumes. Its grains are amber, medium bold, hard and lustrous. It is resistant to yellow and brown rusts and susceptible to Kamal bunt and loose smut diseases. Matures in 160 days.	13.7	Whole of Punjab
PBW175	Variety with an average height of 110 cm. The ears are white in colour and fully awned. The grains are very bold and hard. It is resistant to rust and Kamal bunt. It matures in 165 days.	12.5	Whole of Punjab
Durum Wheat			
WHD943	It is double dwarf variety of durum wheat with an average plant height of 93 cm. It tillers profusely. Its grains are amber, hard, bold, uniform and lustrous with low incidence of yellow berry. It possesses desirable quality characteristics and suitability for pasta making. It is resistant to yellow and brown rusts and less susceptible to leaf blight. It takes about 154 days to mature.	19.8	Whole of Punjab
PDW291	Variety with profuse tillering and an average plant height of 83 cm. Its leaves are dark and ears are dense, fully awned tapering with white smooth glumes. Its grains are amber, hard, bold, uniform and lustrous with low incidence of yellow berry. It possesses suitability for pasta making. It is resistant to yellow and brown rusts, loose smut and flag smut and less susceptible to powdery mildew, leaf blight and head scab diseases. It possesses field resistance to Kamal bunt. It has high degree of lodging resistance and matures in 155 days.	19.4	Whole of Punjab
PDIV233	Variety with plant height of 98 cm. The ears are medium dense, fully bearded with white awns. Grains are bold, uniform and lustrous, it is superior in carotene content, sedimentation value and has low yellow berry, hence, suitable for export. Resistant to yellow and brown rusts, loose smut and Kamal bunt. It matures in 150 days.	18.2	Whole of Punjab
Barley PL807	Six rowed variety having medium broad & upright leaves. It is highly resistant to lodging. Ears are dense, erect and parallel with medium awns. Its grains are medium and light yellow in colour, fairly resistant to yellow rust, brown rust, loose rust, leaf blight & stripe disease. Matures in 137 days.	17.2	Whole of Punjab
DWRUB52	Four rowed, profuse tillering variety with plant height of 101 cm. It has dense, erect and arrow shaped medium awned ears. It is resistant to yellow rust, brown rust, loose smut, covered smut and leaf blight diseases. It matures in 140 days. It is suitable for the flouring industry.	17.3	Whole of Punjab
VJM 201	Two rowed variety having upright and narrow leaves with an average plant height of 118 cm. It tillers profusely and has less	14.8	Whole of Punjab

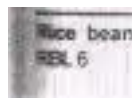
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	lodging due to hard stem. The ears are dense, tapering with medium white awns. Its grains are bold and white with thin husk. It is fairly resistant to brown rust, loose smut, covered smut and stripe diseases. It is suitable for brewing industry. It matures in 135 days.		
PL419	Six rowed variety with broad upright leaves. Plant height is 80 cm, resists lodging. Resistant to yellow rust and smuts. It has thin husked bold seeds. It matures in 130 days.	14.0	Rainfed conditions, particularly In Kandi area
PL 172	Six rowed semi-dwarf, stiff stemmed variety. It has purple leaf sheath, thin husked uniform bold grain and is suitable for malting. It matures in 126 days.	17.1	In irrigated areas olthe State with moderate fertility
PL426 Rice	Six rowed semi dwarf, stiff straw variety, resists lodging. It is suitable for malting. It matures in 124 days.	14.0	Throughout the State in irrigated conditions.
PR120	Semi-dwarf variety with long slender and translucent grains with good cooking quality. It resists the attack of most of the pathotypes of bacterial blight pathogen. It matures in about 132 days.	28.5	Whole of Punjab
PR118	Semi-dwarf lodging tolerant variety with medium slender grains. Matures in 158 days. Resistant to four out of seven races of bacterial blight pathogen.	29.0	Whole of Punjab
PR116	Semi-dwarf, stiff strawed, lodging tolerant variety. Long slender grains, matures in 144 days. Resistant to four out of seven races of bacterial blight pathogen.	28.0	Whole of Punjab
PR115	Short statured variety with dark green leaves. Has long erect flag leaf. Matures in 125 days. Resistant to most of the races of bacterial blight pathogen.	25.0	Whole of Punjab
PR 114	Short statured and stiff strawed variety with narrow dark green leaves. Long slender grains, matures In 145 days. Resistant to four out of seven races of bacterial blight pathogen. Semi-dwarf stiff strawed variety having dark green erect leaves. Grains are bold, heavy and less chalky. It is resistant to bacterial blight and matures in 142 days.	27.5	Whole of Punjab
PR113	Short statured , erect-teat variety. Grains are long, slender and clear with very good cooking quality. It is resistant to most prevalent races of bacterial blight pathogen. It matures in 138 days.	28.0	Whole of Punjab
PR 111	Short statured , erect-teat variety. Grains are long, slender and clear with very good cooking quality. It is resistant to most prevalent races of bacterial blight pathogen. It matures in 138 days.	27.0	Whole of Punjab
8asmatl Rice Punjab <i>Basmati</i> 2	Weak photo period sensitive variety and is about 125 em tall. Its grains are extra long slender with excellent cooking and eating qualities. Its grains have strong aroma and almost double upon cooking and are non-sticky and soft to eat. It matures in about 140 days.	12.6	<i>Besmeti</i> areas of Punjab
Pusa <i>Basmati</i> 1121	It is a photoperiod insensitive variety which is about 120 em tall. It possesses extra long slender grains with good cooking quality. It has longest cooked rice length among all the aromatic rice varieties recommended for Punjab. It matures in about 137 days.	13.7	<i>Basmat</i> ; areas of Punjab
Super <i>Basmati</i>	It is weakly photo period sensitive variety, about 113 em tall. It has extra fong slender aromatic grains. Matures in 145 days.	14.0	<i>Basmati</i> areas of Punjab
<i>Basmati</i> 386	Photo period sensitive variety. Plant height is 180 cm. Grains are aromatic, extra long and slender. It matures in 155 days, ,	9.0	<i>Basmati</i> areas of Punjab
Pus <i>Basmati</i> 1	Se'mi.dwarffvariety with very good cooking quality. Its rice has , milp aroma as compared to 8asmati 386. It is about 100 cm. tall.and is photoperiod insensitive. It matures in about 140 days.	16.0	<i>Basmati</i> areas of Punjab

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, <i>Basmati 370</i>	Basmati variety with aromatic grains having excellent cooking quality. It is about 165 cm tall, photoperiod sensitive and lodges under high fertility conditions. It matures in about 150 days.	12.0	<i>Basmati</i> areas of Punjab
Aromatic rice			
Punjab Mehak 1	It is semi-dwarf photoperiod insensitive aromatic rice variety and is about 100 cm tall. Its grains are extra long slender with good cooking quality. It is resistant to most of the races or bacterial blight pathogen. It matures in about 125 days and is suitable for multiple cropping system.	17.0	Whole of Punjab
Maize			
Winter			
i. Buland	High yielding, cold tolerant, single cross hybrid. Matures in 178 days.	31	Throughout the State in irrigated areas during rabi season
Partap 1	It has same characters as that of Partap except that it has better cold tolerance, disease resistance and grain yield. Suitable for baby corn. Matures in 180 days.	25.0	
<i>Kharif (Spring/Summer)</i>			
Long duration			
PMH1	Tall, single cross hybrid having zig-zag, sturdy and purple stem. Ears are long with yellow orange flint grains. It matures in 95 days. It has medium tall plants, medium thick stem and resistant to lodging, bold, yellow-orange, semi-flint to flint grains and matures in 95 days.	21.0	Whole of Punjab under irrigated conditions.
Parbhat		17.5	Throughout the State under irrigated conditions.
ii) Medium duration			
Kesri	It is an early maturing Composite and has attractive orange-flint grains. The ears have good tip filling. It matures in 85 days.	16.0	Throughout the State under irrigated conditions.
iii) Short duration			
PM- 2	Short duration (83 days) drought tolerant hybrid having medium plant and ear height. Ears medium long with orange flint grains.	16.5	For rainfed conditions. under irrigated conditions.
JH 3459	It is drought and lodging tolerant short duration (84 days) single cross hybrid and has orange flint grains.	18.0	
Parkash	It is drought tolerant early maturing (82 days) single cross hybrid and has yellow-orange flint grains. Suitable as baby corn under irrigated condition.	17.5 (16.0) 15.0	Under irrigated conditions Under rainfed situations. For rainfed situation
Megha	It is drought tolerant and matures in 82 days. It has yellow- orange flint grains.	12.0	For rainfed areas.
Punjab Sathi 1	It is a short duration (70 days), heat tolerant variety. It has orange flint small grains.	9.0	Throughout the State for summer season (sowing from March 15 to April 30)
Special Purpose			
Pearl Popcorn	It is a composite variety of popcorn. It has medium plant height and ear placement. Ears are thin, cylindrical with small round flint grains. Matures in 88 days. Popping quality is very good. This variety is highly suitable for use as sweet corn on commercial basis because of its developing and immature grains in green ears possess high sugar content. It matures in 95-100 days. Its average yield per acre is 50 q green ears.	12.0	Throughout the State under irrigated conditions
Punjab Sweet Corn 1		13.0	Throughout the State under irrigated conditions
Bajra			
PHB2168	The hybrid is about 2 meters tall, have long compact ears of 26 cm. It matures in 83 days. It is resistant to downy mildew.	16.4	Whole of Punjab

Figures in brackets; are for rainfed condition

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PCB 164	Dual purpose composite variety having medium thick stalks and flexible stem with average plant height of 207 cm. It matures in 80 days. This variety has long cylindrical dense ears having 27-28 cm length and 8-10 cm girth. The grains are medium bold and light slate in colour. It is highly resistant to downy mildew.	15.0	Whole of Punjab
PHB 47	This hybrid is about 2 meters tall. It has long bristled ears. It matures in 85 days. It is resistant to downy mildew.	13.0	Whole of Punjab
Summer Moong SML 832	It has medium stature and determinate habit. Seeds are medium sized and very shining. Matures in 61 days.	4.6	For summer planting
SML 668	It has short stature and determinate habit. Seeds are bold and shining. Matures in 60 days.	4.5	For summer planting.
<i>Kharif</i> Moo'ng PAU911	Plants are erect and medium statured. Fairly resistant to MYMV and other diseases. Matures in 75 days. Grains are shining and medium bold.	4.9	Whole of Punjab State except the south western districts.
ML818	Plants are erect, determinate and 70 cm tall. Possesses good degree of resistance to various diseases. Matures in 80 days.	4.9	Whole of Punjab state.
ML613	Plants are erect and determinate, has resistance to various diseases. Grains are shining and green. Matures in 85 days.	4.3	Throughout the State.
ML267	Plants are erect and determinate, has fair degree of resistance to insect pests and MYMV. Matures in 85 days.	4.2'	-do-
PBM1	Plants are erect and determinate, has moderate degree of resistance to various diseases. It matures in 75 days.	4.2	Recommended for Bathinda Mansa, Faridkot, Mukatsar, Ferozepur and Sangrur districts.
Summer Mash Mash 1008	It has erect, compact and determinate plant type. It is short statured (25cm) variety. It matures in about 72 days.	4.5	For summer planting in whole of Punjab state.
Mash 414	It has compact determinate plant type. Maturity is synchronous. Grains are medium sized, blackish in colour. It matures in 72 days.	4.2	For summer planting in entire State except the south western districts.
Mash 218	Erect. compact determinate plants with short stature. Grains are medium sized. bold and dull black. It matures in 75 days.	4.0	For summer planting in entire State except the south western districts.
<i>Kharif</i> Mash Mash 114	Plants are short, erect and compact. It is short duration variety and matures in about 83 days. Grains are bold and black. Fairly resistant to YMV bacterial leaf spot and cercospora leaf spot diseases.	3.6	Whole of Punjab State
Mash 338	Plants are short, erect and compact. It is early maturing and take- about 90 days to mature. Grains are medium sized, black. Tolerant to MYMV, leaf spot diseases, jassid and white fly.	3.5	Whole of Punjab state
Mash 1-1	Plants are tall, spreading and indeterminate. Grains are medium sized and black. Resistant to fungal and viral diseases. It matures in about 115 days.	3.5	Recommended for humid tracts of the state.
Arhar PAU 881	Indeterminate growth habit. It matures in 132 days. Its grains are medium sized yellow-brownish in colour.	5.6	Whole of Punjab state
AI, 201	Indeterminate growth habit. Plants are erect, about 2.5 m tall. It matures in 140 days.	6.2	Whole of Punjab state
AL 15	Determinate growth habit. It is 1.5 to 1.8 m tall. It matures in 135 days.	5.5	Whole of Punjab state



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~11'SI 744
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St 295
Gram (desi)
psG5

GPF2
PBG1
POG4
Gram (Kabull)
BG 1053
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Lentil
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PG3

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	Vigorous growing with spreading and intertwining habit. It matures in 125 days. Seeds are light green. Highly resistant to yellow mosaic virus and stored grains insect pests.	6.0	Recommended for irrigated conditions.
	It has shining, light yellow grains with grey hilum. Grains have 21.0% oil and 42.3% protein, It is resistant to yellow mosaic and soybean mosaic. It matures in 139 days. It has uniformly bold creamy grains. Grains have 21.9% oil and 37.2% protein. It is resistant to yellow mosaic and matures in 144 days.	7.3	For irrigated conditions throughout the state.
	It has uniformly bold cream coloured grains with black hilum. Grains have 23.2% oil and 35% protein. It is resistant to yellow mosaic. It matures in 140 days.	6,1	For irrigated conditions throughout the state.
	Variety with thick stem, green foliage and bold seeds. Fairly resistant to Ascochyta blight and wilt complex. Matures in 165 days.	6.0	For irrigated conditions throughout the state.
	Plants are semi-erect with lush green leaves and long fruiting branches. It has medium sized seeds. Matures in 170 days.	6.8	For humid areas of state
	The plants are tall with erect growth habit. It has high degree of resistance to Ascochyta blight and will complex, matures in about 160 days.	7.6	For irrigated conditions throughout the State except
	Plants are semi-erect with dark green, broad leaves. Branches start mostly from the base. It has medium, brown colour seeds. Matures in 160 days.	6.4	SUB-montane districts Sub-montane tract of Punjab in Hoshiarpur Gurdaspur, Nawanshahar, Ropar and Amritsar districts. For limited moisture conditions in Punjab state except submontane tract. For limited moisture conditions in south-western districts of the State
	Plants are semi-erect with dark green leaves. Matures in 160 days.	7.8	For irrigated conditions throughout the state except sub-montane districts.
	It is early in flowering and matures in 155 days. Its seeds are bold (26.8 g/100 seed weight) and creamy white in colour.	8.0	Throughout Punjab except in blight affected areas of Gurdaspur, Hoshiarpur, Nawanshahar, Ropar and Amritsar.
	Its growth habit is spreading type and early in flowering. 1 ~O-seed weight is 21.3 g. Takes 160 days to mature. Seeds creamy white, cooking quality good.	6.0	Whole of Punjab State
	Its plants are short, erect with profuse branching and bear high number of pods. It is fairly resistance to rust and possesses good tolerance to pod borer. Its seeds are medium bold. It matures in 146 days.	4.8	Whole of Punjab state
	Plants are short, erect, dark green with profuse branching. It matures in 145 days. It is moderately resistant to rust and blight diseases and tolerant to pod borer. Seeds are medium bold.	5.0	Whole of Punjab state
	Plants are short, It matures in 150 days. Seeds medium sized, olive with dark spotting.	4.5	Whole of Punjab state
	Has very attractive light green bold seeds, slightly wrinkled and possess high swelling capacity. It matures in 135 days. Has a dwarf plant type, early in flowering. Grains possess high swelling capacity on cooking. It matures in 135 days.	8.0	Whole of Punjab state
		7.0	Whole of Punjab state

Cotton			
American cotton	(<i>Narma</i>)		
MRC7017BGII	It has inbuilt resistance against American, spotted and pink bollworms and tobacco caterpillar, resistant to cotton leaf curl virus and tolerant to parawilt, with 29.7 mm fibre length and 33.6% ginning outturn.	10.4	Whole of Punjab
MRC7031 BGII	It has inbuilt resistance against American, spotted and pink bollworms, and tolerant to parawilt, its fibre length is 29.4 mm and gins 33.4%.	9.8	Whole of Punjab
RCH 308 Bt	Spotted and American bollworm resistant hybrid with an average boll weight of 3.7 g; 28.4 mm 2.5% span length and 35.2% ginning out turn.	8.0	Whole of Punjab
RCH314Bt	Spotted and American bollworm resistant hybrid with an average boll weight of 3.9 g; 28.2 mm 2.5% span length and 35.2% ginning out turn.	8.2	Whole of Punjab
RCH 317 Bt	Spotted and American bollworm resistant hybrid with an average boll weight of 3.7g; 28.6 mm 2.5% span length; and 33.9% ginning outturn	10.5	Whole of Punjab
MRC6301 Bt	Spotted and American bollworm resistant hybrid with an average boll weight of 4.3g; 28.3 mm 2.5% span length; and 34.7% ginning outturn	10.0	Whole of Punjab
MRC6304 Bt	Resistant to spotted and American bollworms with an average boll weight of 3.9g; 29.0 mm 2.5% span length and 35.2% ginning outturn	10.1	Whole of Punjab
LHH 144	It is an intra-hirsutum, leaf curl virus resistant hybrid, with green semi okra lobed leaves, with an average boll weight of 5.5 g, long fibre (28.8 mm) suitable for spinning at 40 counts and 33.0% ginning outturn.	7.6	Whole of the state
LH 2076	High yielding cotton leaf curl resistant variety, with an average plant height of 153 cm; 2.5% span length of 27.1 mm and a ginning out turn of 33.4%.	7.8	
F 1861	It is a cotton-leaf-curl virus resistant variety. Height 135 cm. 2.5% span length is 26.3 mm, and 33.5% ginning outturn.	6.5	Whole of the state
LH 1556	Plant height is 140 cm. Round bolls with good fluffy opening. Matures in 165 days. It has long fibre with 2.5% span length of 27.7 mm and suitable for spinning at 40's counts and gins 34.0%.	8.5	Whole of the state
Desi Cotton			
PAU626H	Early maturing, high yielding genetic male sterility based hybrid of desi cotton with 2.5% span length of 20.1 mm and a ginning out turn of 40.0%.	9.8	Whole of the state
FDK 124	Early maturing high yields variety. It matures in 160 days. Its ginning outturn is 36.4% and fibre length is 21 mm.	9.8	Throughout the state
LD 694	It has dark-red pigmented plants, narrow lobed leaves, pink flower. It matures in 170 days and ginning outturn is 40.9%.	7.0	Whole of the state
LD 327	Its plants are redish brown with narrow lobed deep cut leaves and pink flowers and the average height is 180 cm. It is tolerant to <i>Fusarium</i> wilt. Its ginning out-turn is 41.9 percent.	11.5	Throughout the state
Oilseeds			
Torla			
TL 17	It is early maturity variety, takes 90 days to mature. Oil content is 42%.	5.2	
PBT37	It takes 91 days to mature. Seeds are dark brown in colour and bold in size. Oil content is 41.7%.	5.4	Throughout the state under irrigated conditions.
TL15	It takes about 88 days to mature. Oil content is 41%.	4.5	Throughout the state under irrigated conditions.

Raya RLC 1	A variety with low erucic acid «2%) thus healthy for human consumption. It matures in 152 days having oil content 37.8%.	6. 6	Timely isown irrigated conditions in south-western region.
PBR210	A variety tolerant to white rust. Matures in 150 days having oil content 38.0%.	6.0	Timely sown irrigated conditions in south-western region
PBR97	It matures in 136 days having oil content 39.8%	5. 2	Suitable for rain-fed conditions throughout the state. Recommended for southwestern districts under timely sown irrigated conditions
PBR91	It matures in 145 days. Its oil content is 37.6%	8. 1	Suitable for irrigated and rainfed conditions.
RLM619	Bold seeded, it matures in 143 days. Oil content is 43.0%.	8. 0	
Gobhi Sarson Canola varieties GSC6	Early maturing variety (145 days). Bold seeds, oil content 39.1 %.	6.0	Timely sown irrigated conditions.
GSC5	Early maturing variety (147 days) with brownish black seeds and 38.7% oil.	5.4	Timely sown irrigated conditions.
Hyola PAC-401	It is a hybrid and matures in 150 days. Oil content is 42%.	6.7	Timely sown irrigated conditions.
Other varieties/hybrid			
PGSH 51	It is tall growing hybrid. Oil content is 44.5%. Matures In 162 days.	7.9	Timely sown irrigated and high fertility conditions
GSL2	Atrazine resistant variety suitable for atrazine based weed management. It matures in 160 days. Oil content 44.5%.	6.8	Timely sown irrigated conditions.
GSL 1	It has profuse branching and longer pods. Oil content 44.5%. It matures in 160 days.	6.7	General cultivation throughout the State.
African sarson PC5	Tall growing variety with waxy leaves. It is free from white rust, resistant to alternaria blight and tolerant to mustard aphid. Oil content is 37.3%.	8.0	Irrigated conditions in south western districts.
Taramra TMLC2	It has long main shoot, more pods on main shoot and more seeds per pod. It matures in 150 days. Oil content is 36.6%	2. 9	Bathinda, Sangrur, Ferozepur and Kandi areas of Hoshiarpur, Ropar and Gurdaspur districts.
Linseed LC 2063	High yielding variety with tolerance to prevailing diseases. It matures In 158 days. Oil content is 38.4%.	4. 9	Whole of Punjab
LC 2023	Tall with blue flowers and brown seeds. It is resistant to diseases. It matures in 158 and 163 days under rainfed and irrigated conditions respectively. Its oil content is 37.4%.	4. 5	Throughtout the state
Sunflower PSH569	It is medium tall hybrid with an average plant height of 166 cm. It matures in about 102 days. Seeds are bold having oil content upto 40.2%.	8. 2	Whole of Punjab for spring season under irrigated conditions.
PSFH 118	It is a medium tali hybrid with an average plant height of 155 cm. It matures in about 98 days. Oil content is about 40.5 percent.	7.6	-do-
SH 3322	Medium tali hybrid with plant height of 160 em. It matures in 120 days. Oil content is 43%.	8.3	-CC-

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GKSFH2002	Medium tall hybrid with plant height of 160 cm. It matures in 115 days. Oil content is 42.5%.	7.5	-do-
Jawalamukhi	It is a medium tall hybrid with an average plant height of 170 cm. It matures in 120 days. It has 42% oil content.	7.3	-do-
Groundnut SG99	Bunch type variety with 66% shelling and 52% oil. It matures in 123 days. Tolerant to bud necrosis disease.	10.0	In sandy to loamy sand soils under irrigated conditions during summer and kharif seasons.
M 522	It is a semi-spreading type variety which matures in about 120 days. It has 68% shelling outturn. Oil content is 51 %	9.0	In sandy to loamy sand soils under irrigated conditions during kharif and summer seasons. Suitable for spring and kharif seasons under irrigated conditions.
SG84	Bunch type variety, maturing in 120-130 days. Oil content is 50% with 64% shelling outturn.	10.0	For rainfed conditions.
M548	It matures in 123 days, has oil content 51% and shelling outturn 69%.	6.0	
Sesame RT346	It has long non-hairy capsules with bold seeds. It matures in 87 days. Oil content is 49%	2.7	Whole of Punjab
TC289	It has bold seeds, 51.6% oil, better oil quality, matures in 85 days.	2.1	Whole of Punjab
Punjab Til No.1 Sugarcane Early season CoJ85	Maturity in about 80 days. It has bold and white seeds. Oil content is 52%.	2.0	--do--
Co,J83	A shy tillering variety with thick, green canes. Tolerant to red rot and frost. It is an average ratooner. Prone to lodging hence requires proper earthing up and propping.	306	Whole of Punjab
CoJ 64,	The canes of this variety are medium thick, greenish yellow in colour. Its juice contains 16-17 per cent sucrose in November, tolerant to red rot and frost. Performs well under high fertility condition with frequent irrigation.	300	-do-
Mid-season CoH 119	Good germination, profuse tillering and good ratooner, very good quality <i>gur</i> , highly susceptible to red rot.	300	Whole of Punjab
CoJ88	The variety has tall thick greenish canes with prominent weather and ivory marks. Tolerant to red rot and frost. It is an average ratooner.	340	Whole of Punjab
CoS 8436	Tall medium thick and greyish green canes. Its juice contains 17-18% sucrose. Excellent plant and ratoon yields. Non-lodging. Tolerant to red rot. <i>Gur</i> is of very good quality. Also suitable for saline irrigation water and cogeneration.	337	Whole of Punjab
Late-season CoJ89	A short stature red variety with thick sturdy greenish yellow canes: Good germinator. Non lodging. Tolerant to red rot. Performs high fertility soils with frequent irrigations.	307	Whole of Punjab
Co 1148	Suitable for late planting. Can be crushed from mid February onwards. Tolerant to red rot, easy to detrash and non-lodging. Suitable for cogeneration.	326	Whole state of Punjab
Dhalncha Punjab; Dhaincha 1	Good germinator with profuse tillering, excellent ratooning capacity and medium quality <i>gur</i> . Highly susceptible to red rot.	375	Whole state of Punjab
	A bold seeded variety quick growing. It has more nodules. It matures in 150 days.	3.0	Whole of Punjab

	2	3	4
Sunnhamp PAU 1691	A quick growing variety with erect growth habit and suitable for green manuring. It matures in 136 days.	4. 8	Whole of Punjab
Narendra Sanai-1 A	A quick growing variety with erect growth habit. Suitable for green manuring. Matures in 152 days.	3. 9	Whole of Punjab
Rabi Forage Crops			
Berseem			
BL42	Quick growing variety produces more number of tillers/ unit area. Nutritional quality is superior to BL 1 and BL 10. It is tolerant to stem rot disease. Supplies green fodder up to first week of June. It has higher seed setting capacity than other varieties.	440	Whole of Punjab
BL10	Longer duration variety and supplies green fodder up to mid June. Moderately resistant to stem rot disease. Seeds are smaller in size and seed crop matures in the end of June. Medium duration variety and supplies green fodder up to end of May. Seeds are bright yellow, bold and attractive. Seed crop matures in the first week of June.	410	Whole of Punjab
BL 1		380	Whole of Punjab
Shaftal			
Shaftal 69	Plants are leafy having long stalk. Leaflets are roundish in shape and flowers are light pink in colour. It is highly resistant to stem-rot disease. Supplies green fodder up to mid May. Seeds are smaller in size and dark yellow in colour.	390	Whole of Punjab
Lucerne			
Lucerne NO.9	Quick growing variety with deep green foliage, slender stalks and purple flowers. It grows well for a period of 5-7 years. It supplies green fodder up to July.	235-300	Whole of Punjab
LL Composite 5	Tall, erect and fast growing annual variety. Highly resistant to downy mildew. Leaves are dark green in colour and have purple flowers. Supplies green fodder up to first week of July in 8 cuttings. The seeds are bold in size.	280	Whole of Punjab
Oats			
OL9	Tall, erect growing leafy variety suitable for single/two cuttings. Seeds are medium in size.	230	Whole of Punjab
Kent	Tall and erect growing variety. It can be grown for single/ two cuttings. The seeds are bold in size.	210	Whole of Punjab
Rye grass			
Punjab Rye grass No.1	Quick growing variety with soft stem and leaves. Its first cutting is ready in about 55 days after sowing and subsequent cuttings can be taken at an interval of 30-35 days. It supplies green fodder from November to May in 5-6 cuttings.	325	Whole of Punjab
Senjl			
Senji Safed 76	Quick growing variety and have white flowers. It gives only one cutting for fodder.	128	Whole of Punjab
YSL 106	Quick growing early season variety. Its flowers are yellow in colour. It can be grown in the standing crops of cotton and maize. It gives one cutting for fodder.	128	Whole of Punjab
Kharif Forage Crops			
Maize			
J 1006	Plants are tall, vigorous and broad leaved. Moderately resistant to maydis leaf blight and brown stripe downy mildew diseases. Its ear placement is medium. Ears are long, thick and cylindrical. Grains are white, bold and semi-flint to semi-dent.	165	Whole of Punjab
Sorghum			
SL44	Sweet, juicy and thin-stemmed variety. It has a high content of 240 digestible dry matter. It is more resistant to red-leaf spot disease. Suitable for cultivation in summer and <i>kharif</i> seasons under irrigated conditions.		Whole of Punjab
Punjab Sudax	It is a multicut forage sorghum hybrid. Its plants are tall with long	480	Whole of Punjab

Chari 1	broad leaves. Stems are juicy and sweet. It is resistant to red-leaf spot disease. The timely sown crop gives three cutting during the summer season.		
Bajra PHBF-1	It is hybrid meant for green fodder. It flowers in 50 days. Its Plants attain a height of 198 cm. It has succulent stem and multicut nature. It is better in tillering and has long and broad leaves. It is resistant to major diseases and pests. "The fodder ~uanty of this hybrid is better than FSC-16 in terms of dry matter intake, digestible cube protein and total digestible nutrients.	256	Whole of Punjab
PCB 164	Quick growing dual purpose composite variety having medium stalks and ~lexible stem. Average plant <i>height is</i> 207 cm. It is nutritious and <i>highly</i> resistant to downy mildew. It flowers in 50 days and plants <i>remain</i> green till maturity.	210	Whole of Punjab
FBC16	<i>Composite variety having</i> long and broad leaves. It is comparatively resistant to major diseases. It flowers 8-10 days later than other <i>varieties</i> and provides green fodder for a longer period. Its plants are about 235 cm tall. It has higher voluntary dry matter intake and contains low amount of oxalates.	230	Whole of Punjab
Teosinte TL 1	Plants are tall, leafy and profusely tillered. It is highly resistant to 225 maize borer and has minor incidence of leaf-spot disease. Leaves remain green up to maturity. Seeds are hard and slaty brown in colour.		Whole of Punjab
Napier-bajra PBN233	Hybrid It is non-hairy with smooth long and broad leaves. It sprouts earlier <i>in</i> spring and remains in vegetative growth up to onset of <i>winter</i> . Its winter dormancy period is about 15 days less than PBN 83.	1100	Whole of Punjab
PBN83	It is non-hairy, smooth leaved, fast growing and late flowering hybrid. It maintains its active growth longer in winter and sprouts earlier in spring.	960	Whole of Punjab
Guinea grass PGG518	Its plants are erect with profused tillering. Its leaves are long and broader and flowers 5-7 days later than PGG 101. The loss of nutrients is less if harvesting is delayed due to unavoidable circumstances It supplies green fodder from May to November in 5-6 cuttings.	750	Whole of Punjab
PGG 101	Plants of this variety have profuse tillering and leafy growth. It has bold seeds which help in better germination. Harvesting should be done before flowering to get nutritious fodder.	675	Whole of Punjab
Guara Guara 80	It is late maturing, quick growing, hairy and profusely branched 125 variety. It is resistant to <i>guara</i> leaf blight and stem breakage. This variety does not possess bunches on each node.		Whole of Punjab
Cowpea CL 367	It is dualpurpose variety suitable for fodder as well as pulse purpose. Its plants are erect with dark green leaves. It is resistant to yellow mosaic virus and Anthracnose diseases. It is superior in fodder quality. It bears large number of pods. The seeds are small in size and cream ish white in colour. The variety <i>is</i> suitable for human consumption as It has very good cooking quality.	108	Whole of Punjab
Cowpea ,88	This is a dual purpose variety suitable for fodder and as a pulse crop. It is highly resistant to yellow mosaic virus and Anthracnose diseases. It has large pods and bold seeds. The seed colour is chocolate brown and is more attractive for culinary purpose.	100	Whole of Punjab