



## Notification and germplasm registration

### Durum wheat

#### Variety UAS 478 (Krishidhara Surya)

Wheat is one of the major rabi crop in the Peninsular zone of India having warmer climatic conditions due to limited water availability and higher temperatures during crop season. Under these conditions, wheat is exposed to early and terminal heat stress conditions and limited water availability as major abiotic factors along with prevalence of brown and black rusts affecting wheat yields. A durum (*Triticum durum* Desf.) wheat variety UAS 478 was developed at University of Agricultural Sciences, Dharwad, Karnataka. This variety has been derived from a cross between Amrut and 44IDSN 7078 following pedigree method of selection. Amrut is an old durum cultivar from Peninsular zone with better quality traits and the other parent, 44IDSN7078 is a selection from the CIMMYT nursery with parentage, Minimus/Combuck\_2//Cham\_3/3/Canelo\_9/9/USDA595/3/D67.3/Rabi//CRA/4/ALO/5/Hui/Yav\_1/6/Ardente/7/Hui/Yav79/8/Pod\_9/10/Tarro\_1/2\*Yuan\_1//Ajaja\_13/Yazi/3/Somat\_4/Inter\_8/4/Arment//SRN\_3/Nigris\_4/3/Canelo\_9.1. This new high yielding durum wheat variety, UAS 478 has been released and notified by the Central Sub-Committee on Crop Standards, Notification and Release of Varieties for Agricultural Crops (CVRC) vide S.O. 1560(E) dated 26th March, 2024 for timely sown, restricted (limited) irrigation condition of Peninsular zone comprising states of Maharashtra, Karnataka and plains of Goa and Tamil Nadu.

The recorded mean yield of UAS 478 was 32.7q/ha in evaluation trials of AICW&BIP under timely sown restricted irrigation conditions of the Peninsular zone during 2020-21 to 2022-23. The grain yield at tested locations ranged between 22.1 q/ha at Savilivihir and 45.7q/ha at Nippani. The grain yield was significantly higher than the check varieties, UAS 446 (17.96%) and NIDW 1149 (5.07%) with high yield potential of 45.7q/ha. This variety also appeared 14 times out of 24 in 1<sup>st</sup> non-significant group as compared to checks UAS 446 (1/24) and NIDW 1149 (4/17) indicating its wider adaptability to target environments. The heading days ranged from 49 to 69 days with mean value of 60 days, whereas maturity ranged from 96 to 118 days with mean of 107 days. The plant height ranged between 68 and 89 cm with mean of 76 cm. The variety, UAS 478 produces bolder grain with 41.0g weight of 1000-grains ranging from 31 to

46g. With respect to DUS features, UAS 478 has erect growth habit, medium sized erect flag leaf, pale green coloured foliage, parallel, dense, dull white coloured spikes with amber coloured elliptical and hard grains. UAS 478 yielded 12.9% more (25.49q/ha) as compared to the check variety UAS 446 (22.57q/ha) in agronomical trials. This enhanced yield is attributed to higher number of spikes/m<sup>2</sup> area (341) and higher grain number per spike (19.9) as compared to the check variety, UAS 446. It showed 20.24% yield reduction under no irrigation condition but gave 33.86% more yield at one additional irrigation.

UAS 478 is resistant to brown (ACI-4.0) and black (ACI-19.7) rusts under artificial as well as natural conditions. Rust resistance gene postulation in UAS 478 indicated the presence of *Sr7b+2+*, *Lr23+*, *Yr2+* genes which was different than both the checks having *Sr11+2+*, *Lr13+10+/Lr23+10+*, *Yr2+* genes. UAS 478 also showed high resistance to Karnal bunt (Av score 5.9) which makes it trade friendly genotype. Besides it had better resistance to leaf blight, head scab, powdery mildew, flag smut and foot rot diseases in addition to insects shoot fly and wheat aphids as compared to check varieties. The grain appearance score of UAS 478 is 6.2 with 11.7% protein, 37.8 ppm iron and 38.1 ppm zinc contents. It also has 82.7 kg/hl test weight, 96 grain hardness index and 37.2ml sedimentation value. Presence of 7.7 ppm yellow pigment in UAS 478 makes it more suitable to pasta products. It also showed similar pasta cooking and pasta sensory traits to the existing cultivars as per requirements of Indian pasta products. It is expected that the cultivation of durum wheat variety UAS 478 will fulfil the need of the farmers so that they can have better harvest under restricted irrigation condition and fetch more market prices due to its better pasta making attributes.

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## Indian mustard

### Variety Pusa Mustard-34 (LES 60)

Pusa Mustard-34 (LES 60) is a high-yielding variety of Indian mustard (*Brassica juncea* L.) that has been developed by the Division of Genetics at ICAR-Indian Agricultural Research Institute (ICAR-IARI) in New Delhi. This variety is a single zero type; erucic acid content in its oil being less than 2%. Its release and notification for commercial cultivation in rabi under timely sown irrigated conditions of Zone-II, have been approved by the Central Sub-Committee on Crop Standards, Notification and Release of Varieties for Agricultural Crops, Govt. of India through notification No S.O. 1056 (E) dated 06.03.2023. The designated Zone-II encompasses mustard cultivating areas in Rajasthan (Northern and Western Parts), Punjab, Haryana, Delhi, Western Uttar Pradesh, plains of Jammu and Kashmir, and Himachal Pradesh.

Pusa Mustard-34 is derived from the cross between Pusa Mustard-21 and Varuna. Pusa Mustard-21 is a low erucic acid variety developed at IARI, New Delhi, while Varuna, a conventional variety with superior yield and other desirable traits but has high erucic acid content (>40%) in its oil. The oil quality depends on the proportion of different fatty acids in Brassica species. The higher proportion of erucic acid (40-50%) in conventional Indian mustard cultivars has been associated with cardiac health issues. ICAR-IARI in New Delhi has consistently made research efforts to reduce the erucic acid content to internationally acceptable levels (<2% in seed oil) in high-yielding Indian mustard genotypes.

The recorded weighted mean yield of Pusa Mustard-34 was 2609 kg/ha in the AICRP-Rapeseed-Mustard trials conducted at 15 locations across the Zone-II over three

years. The seed yield was 16.6% higher than the low erucic acid check variety, Pusa Mustard-29 and 5.5% higher than the national check variety Kranti. The potential seed yield of Pusa Mustard-34 has been recorded as high as 3033 kg/ha. It falls within the normal maturity group, taking approximately 147 days (range 144-152 days) to mature from the date of sowing. This variety has a medium stature with an average plant height of 235 cm (range 200-250 cm). It exhibits a compact and erect plant type with an average of 5.4 (4-7) primary branches and 14.1 (11-21) secondary branches. The main shoots are long (73 cm), and the leaves are light green and hairless. The seeds are brownish black, medium-sized (4.8 g/100 seeds), and contain 36% oil.

Pusa Mustard-34 demonstrated similar reactions to white rust incidence comparable to resistant checks like Bio YSR and PHR-2 however, it exhibited lower disease incidence than the susceptible check under both artificial and natural screening conditions. The incidence/severity of other prevalent diseases such as powdery mildew, downy mildew, *Sclerotinia* stem rot, and *Alternaria* blight was comparable to the designated checks. Aphid infestation on this variety was also similar to regional and national checks.

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## Sesame

### Variety Sabour Til-1

The sesame (*Sesamum indicum* L.) variety Sabour Til-1 (IC 0647427) developed by Bihar Agricultural University, Sabour, Bhagalpur, Bihar is suitable for cultivation in summer irrigated condition. It has been recommended in 91st meeting by the Central Sub-Committee on crop Standards, Notification and Release of Varieties for Agricultural Crops Govt. of India held on 21st November, 2023 for the states of Bihar, West Bengal, Andhra Pradesh and Madhya Pradesh, and released via Notification No. S.O. No. 1560 (E), dated 26th March, 2024. The variety has been tested in AICRP, Sesame in three consecutive years, 2019-20, 2020-21 and 2021-22 at 27 locations along with three checks where, GT-10 (black), TKG-22 (white) were National checks and JTS-8 was Zonal check for zone II in summer season. The variety Sabour

Til-1 showed yield superiority over national check GT-10. Average seed yield of Sabour Til-1 is 992 kg/ha, an increase of 36.13% over national check GT-10 and 30.36% increase over Zonal Check (JTS-08). This variety is having oil yield of 429.4 kg/ha which is 33.41% (332 kg/ha) higher over GT-10 (NC) and 19.03% (364.2) over zonal check (JTS-08) in Zone II. It matures on an average of 87 days and takes 40 days to 50% flowering and attains the height of approximately 100 cm. It has 5 productive branches and 65 number of capsules on an average. The variety is found moderately resistant to *Macrophomina* stem and root rot, *Alternaria* leaf spot, *Cercospora* leaf spot and phyllody. The released variety, Sabour Til-1 is a black seeded sesame variety producing medium bold seeds (1000 seed weight is 3.1g). Potential seed yield of Sabour Til-1 recorded was up to 1021 kg/ha, oil yield was 537 kg/ha, oil content 49%, and the days to maturity 84 days. Based on high demand for sesame

variety among farmers as well consumers in Bihar and owing to its yield and oil yield coupled with disease resistance, Sabour Til-1 has been released under irrigated condition of summer season for the Zone II. This variety may be good replacement of existing sesame varieties in Bihar after three and half decade. It is expected that this variety will be very useful for the sesame growers for Zone II and may ensure increase in farmers' income and nutritional security to the farmers of Zone II.

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## Chickpea

### Kabuli Variety L558

The kabuli chickpea (*Cicer arietinum* L.), often referred to as a "superfood," is highly sought after both nationally and globally due to its nutritional benefits and versatility. The primary goal of kabuli chickpea breeding was to produce high-yielding, locally adapted cultivars with acceptable grain quality to boost its cultivation and production. This focused breeding effort has resulted in the development of L558, an extra-large seeded kabuli chickpea variety. This variety was jointly developed by ICRISAT, Hyderabad and Punjab Agricultural University, Ludhiana. The variety was derived from the cross ICC19281 (an advance breeding line) x JGK1 (released cultivar) using the pedigree selection method. The initial cross was made at ICRISAT, and subsequent selections were alternately carried out at ICRISAT, Hyderabad and PAU, Ludhiana. Variety, L558 was identified during the virtual Annual Group Meet of AICRP on Chickpea held on August 16 and 17, 2021. The Central Sub-Committee on Crop Standards, Notification and Release of Varieties for Agricultural Crops, Government of India, released and notified this new variety under notification no. 145, F. No. 3-84/2022-SD IV dated 06.03.2023. It is released and notified for commercial cultivation under timely sown irrigated conditions in the

North Western Plain Zone (NWPZ) of India. This variety has been tested as GLK17301 in the All India Coordinated Research Trials for three years at 14 locations across the zone. The average yield of L558 is 1386 kg/ha. Based on the weighted mean, the new variety recorded 17.36% increase over Extra Large Seeded Kabuli zonal check variety Phule G0517.

The new variety, on an average, matures in 146 days with a range of 122-164 days depending on the location and growing conditions. L558 is characterized by its semi-upright growth pattern, light green leaves, and beige color large seeds that resemble the shape of an owl's head. The average height of the plant is 51.5 cm. This variety has excellent culinary qualities. The seeds are large and appealing, with a weight of 43.6g per 100 seeds. The seeds absorb 110.5% of their weight in water and expand by 121.7% after soaking. After cooking, they absorb 105.1% of their weight in water and expand by 109.5%. It takes 68 minutes to cook the dhal. The grains of this variety contain 17.67% protein, 0.71% tryptophan, and 2.65% total minerals.

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## Urdbean

### Variety Mash 883

Mash 883 is a new urdbean (*Vigna mungo* L. Hepper) variety developed jointly by Pulses Section, Department of Plant Breeding and Genetics and Regional Research Station, Gurdaspur, Punjab Agricultural University (PAU), Ludhiana has been recommended by the State Variety Approval Committee (SVAC) in its meeting held at PAU, Ludhiana on 07.03.2022. Subsequently, the variety Mash883 has been released and notified by the Central Sub-Committee on Crops Standards, Notification and Release of Varieties for Agricultural Crops, Govt. of India, New Delhi vide notification

No. 3-84/2022-SD.IV dated 30.11.2022 for commercial cultivation in the state of Punjab. It was developed from a cross, Mash338 x KUG479 following pedigree method of selection. Both the parents are released varieties developed by PAU. Variety Mash 883 has been tested in the state trials during *kharif* season from 2017 to 2021 along with check variety Mash114. It recorded an average grain yield of 11.20 q/ha which was 13.18 per cent higher than the check variety. The average plant height of this variety is 51.9 cm. Its distinguishing morphological characteristics include erect growth habit, lanceolate dark green leaves, green stem with purple splashes. Each pod contains 6-7 seeds. It flowers in 45 days and matures in 77 days. It bears on an average 32

Pods per plant.

Mash 883 has also been tested under the All India Coordinated Research Project on MULLaRP crops in Initial Varietal Trials (IVT) during *kharif* season of 2019. The new variety Mash 883, is resistant to yellow mosaic disease. It has medium bold blackish grains with good culinary properties. Its 100-seed weight is 3.5g with 100-grain volume of 3.75g and 1.03g/ml density. It takes 26.50 minutes cooking time for *dal* preparation. The grains of this variety contain 19.25 per cent protein with tryptophan% protein and

total minerals as 0.65 and 2.62 per cent, respectively. New variety has a greater number of nodules (28.7) per plant and leghaemoglobin content (1.8 mg/g fresh weight of nodules). It is expected that the new variety, Mash883 will help in crop diversification in the state of Punjab and adjoining areas by increasing area under *kharif* urdbean.

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### Mash1190

Mash 1190 is a new urdbean (*Vigna mungo* L. Hepper) variety developed jointly by Pulses Section, Department of Plant Breeding and Genetics and Regional Research Station, Gurdaspur, Punjab Agricultural University (PAU), Ludhiana. It was identified during All India Group Meet on *kharif* Pulses held on May 10-11, 2022 at CSKHPKV, Palampur. It was released and notified by the Central Sub-Committee on Crops Standards, Notification and Release of Varieties for Agricultural Crops, Govt. of India, New Delhi vide notification No. 3-84/2022-SD.IV dated 30.11.2022 for commercial cultivation in the states of Punjab, Haryana, Uttar Pradesh and Uttarak during spring season. It was developed from a cross between PantU31 x Mash218 following pedigree method of selection. The parents (Pant U31 and Mash 218) are released varieties developed by GBPUA&T Pantnagar and PAU, Ludhiana, respectively. This variety has been tested as SUG1190 in the trials under All India Coordinated Research Project on MULLaRP crops during spring 2019 to 2021 in the North West Plain Zone of India. On the basis of weighted mean, new variety recorded an average grain yield of 1371kg/ha with 8.55, 13.40, 13.68 and 22.30 per cent superiority over the checks viz., KPU405 (12.63 q/ha), KUG

479 (12.09 q/ha), Shekhar2 (12.06 q/ha) and PantU31 (11.21 q/ha), respectively. The average plant height of this variety is 23.9 cm. Its distinguishing morphological characteristics include erect growth habit, lanceolate dark green leaves, green stem with purple splashes. Each pod contains 6-7 seeds. It flowers in 41-46 days and matures in 70-80 days depending upon the location and environmental conditions. It bears on an average 24 pods per plant.

The new variety Mash1190, is resistant to yellow mosaic disease. The seeds are medium bold blackish with good culinary properties. Its 100-seed weight is 4.4g. This variety is free from *kokroos* after soaking in water and it takes 26.0 minutes cooking time for *dal* preparation. The grains of this variety contain 21.40 per cent protein with tryptophan% protein and total minerals as 2.41 and 2.68 per cent, respectively. It is expected that the new variety, Mash1190 will help to expand area under spring urdbean in the North West Plain Zone of India.

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### Guar

#### Variety Karan Guar 15 (RGr 20-15)

Guar (*Cyamopsis tetragonoloba* (L.) Taubert) is a vital annual legume belonging to the Fabaceae family. It is primarily grown in resource-poor conditions within arid and semi-arid regions, serving various purposes such as animal feed, fodder, green manure, and gum extraction for diverse industrial applications, establishing itself as a cash crop. Consequently, there is a pressing need to enhance guar cultivation, particularly for seed (gum) production. Ongoing efforts are focused on developing guar varieties characterized by increased grain yield, early maturity,

resilience against major biotic factors and higher gum content and viscosity.

The variety Karan Guar 15 (RGr 20-15) originated from a cross between genotypes RGC-1017 and RGC-1002 through pedigree breeding selection. The bulk seed from the promising line, derived from the F7 generation, underwent initial evaluation at the Rajasthan Agricultural Research Institute, Durgapura (Jaipur) during the rainy seasons of 2018 and 2019 to assess essential traits. Following this, its performance in an initial varietal trial (IVT) across nine environments during *kharif* 2020 prompted further assessments in advanced varietal trials (AVTs) conducted over two rainy seasons (2021 and 2022) at 8 and 10 locations,

respectively. RGr 20-15 consistently demonstrated a higher grain yield (1337 kg/ha), presenting a +13.98% advantage over the check RGC 1033 (1173 kg/ha), 23.22% over RGC 1066 (1085 kg/ha), and 47.73% over HG 2-20 (905 kg/ha) on average. Quality parameters, including carbohydrate content, endosperm, gum content, and viscosity profile, were assessed for RGr 20-15-1 and check cultivars. RGr 20-15 showed good quality traits, such as a protein content of 28.79%, carbohydrate content of 41.43%, endosperm content of 32.46%, and gum content of 29.75%, along with a high viscosity profile (3385 cp) indicating superior gum quality for the international market. RGr 20-15 exhibited a high degree of resistance to key diseases like bacterial leaf blight (BLB), root rot, and *Alternaria* blight. Additionally, it showed a lower incidence of whitefly, leafhopper, and aphid compared to check varieties. The plant's characteristics include an erect, pubescent, intermediate, branched type habit, maturing in 99-104 days (medium maturity). White flowers, tripinnate leaves with serrated margins, straight and hairy pods, and flat, round seeds ranging in color from light grey to black-brown eye are also notable features. Seeds

are bold and medium-sized, weighing 3.17-3.31 grams per 100 seeds.

The Varietal Identification Committee identified the genotype, RGr 20-15 (Karan Guar 15) at its meeting on 11th May, 2023, at ICAR-IIPR Kanpur, Uttar Pradesh. Further, the Central Sub-Committee on Crop Standards, Notification, and Release of Varieties approved its commercial cultivation under normal sown conditions in Rajasthan, Gujarat, Haryana, and Maharashtra in its 91th meeting on 21st November, 2023, via Notification No. S.O. No. 1560 (E), dated March 26th, 2024. The Rajasthan Agricultural Research Institute (SKN Agriculture University), Durgapura, Jaipur, Rajasthan, India, is the maintainer of this cultivar and the producer of the nucleus and breeder seeds for further use.

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## Moth Bean

### Variety CAZRI Moth-4

The moth bean [*Vigna aconitifolia* (Jacq.) Marechal] variety, CAZRI Moth-4 (CZMO-18-2) was developed by the Division of Plant Improvement and Pest Management, ICAR-Central Arid Zone Research Institute, Jodhpur. It was identified by the Varietal Identification Committee on May 11, 2023, in the Kharif Pulses Annual Group Meet of All India Coordinated Research Project on Kharif Pulses (Indian Council of Agricultural Research). The variety CAZRI Moth-4 was released and notified by the Central Sub-Committee on Crop Standards, Notification and Release of Varieties of Agricultural Crops, Department of Agriculture, Cooperation & Family Welfare, Government of India, New Delhi vide Notification number S.O. 1560 (E) dated March 27, 2024. This variety of mothbean is recommended for cultivation in both the North and South Zones. This variety was developed through mutation breeding (Gamma rays – 200 Gy) of CAZRI Moth -2 followed by selection, and a mutant line was tested for yield in the All-India Network Research Project on Arid Legumes from 2020 to 2022 at various locations. This variety has shown 27.4 per cent yield superiority over the best check (RMO-257), 36.7 per cent over CZM-2 and 39.6 per cent over the recent release variety check (RMO-2251) averaged over three years and 15 locations. The variety has shown a yield potential of 1121 kg per hectare under rainfed conditions. It has shown stability in yield and wider adaptability under varying rainfall conditions. In the agronomical management trial variety CZMO – 18-2 recorded 1192 kg grain yield per

hectare with 39.4 per cent over the check variety (RMO-2251) and 24.7 % yield superiority over (RMO-257).

This variety exhibits remarkable resistance to prevalent diseases and pests while boasting exceptional nutritional and agronomic attributes. Through rigorous testing conducted over three years (2020-2022) across diverse geographic locations, this variety has proven its mettle against multiple challenges, thereby addressing the longstanding dearth of improved moth bean varieties in agricultural practices. First and foremost, this variety showcases robust resistance to Yellow Mosaic Virus and leaf crinkle virus, conferring a spectrum of protection from free (0% infestation) to moderate levels (10.7% infestation). Furthermore, its high resistance to root diseases, particularly macrophomina blight, has been consistently demonstrated under natural conditions. A standout feature of this variety lies in its nutritional profile. With a remarkable protein content of 32.8% in the grain, surpassing the best check variety (RMO-257) by 6.6%, it offers a substantial nutritional advantage. This higher protein content enhances the nutritional value of food products derived from moth beans, catering to the increasing demand for protein-rich diets. Moreover, its swift cooking time of 24 minutes, three minutes faster than the leading check variety RMO-257, ensures convenience in culinary preparation, saving both time and energy for households and food processing units alike. This efficiency complements the busy lifestyles of modern consumers while enhancing the economic viability of food processing enterprises. In terms of agronomic performance, this variety exhibits adaptability to varying

environmental conditions. With a maturity range spanning 73 to 83 days, it accommodates diverse agroclimatic zones. In north locations, it matures within a shorter span of 65 to 70 days, optimizing cultivation cycles, while in southern locales, it extends its growth period beyond 80 days, catering to the unique climatic demands of each region. Notably, this variety thrives under terminal drought conditions, offering resilience against moisture stress during critical growth stages. Its ability to retain greenness up to maturity presents a dual advantage, enabling efficient utilization of extended rainy periods for enhanced yield and providing

high-quality fodder for livestock, thereby bolstering income opportunities for farmers engaged in mixed farming practices. The introduction of this pioneering variety into agricultural landscapes is poised to catalyze a paradigm shift in moth bean production.

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### Variety CAZRI Moth-5

The legume breeding team at the Division of Plant Improvement and Pest Management, ICAR-Central Arid Zone Research Institute, Jodhpur, conducted mutagenic treatments on various moth bean [*Vigna aconitifolia* (Jacq.) Marechel] cultivars to alter prone and sensitive plant type of moth bean. Among these genotypes, GMO-2 exhibited exceptional responsiveness to mutagenesis, showing the highest efficiency in response to treatments ranging from 0.5% EMS and 200 Gy (with a mutagenic frequency of 7.41%) to 400 Gy (with a mutagenic frequency of 17.24%) gamma rays. Through meticulous selection focusing on yield-related traits and disease resistance, advanced stable mutants were obtained by the M-7 generation. Among the top-performing stable mutants identified through station trials, CZMO-18-5 was selected for contribution to the AICRP Arid Legumes program. Following three years of extensive field testing for yield as part of the All-India Network Research Project on Arid Legumes from 2020 to 2022 across various locations, CZMO-18-5 was officially identified by the Varietal Identification Committee on May 11, 2023, during the Kharif Pulses Annual Group Meet of the All India Coordinated Research Project on Kharif Pulses under the Indian Council of Agricultural Research. Subsequently, CAZRI Moth-5 was released and notified for cultivation by the Central Sub-Committee on Crop Standards, Notification and Release of Varieties of Agricultural Crops, Department of Agriculture, Cooperation & Family Welfare, Government of India, New Delhi, under Notification number S.O. 1560 (E) dated March 27, 2024. It is recommended for cultivation in both the North and South Zones. This variety exhibited a notable 25.0% yield superiority over the best check (RMO-257), 34.25 over CAZRI Moth-2, and 37.0% over the recent release variety check (RMO-2251), averaged over three years and 15 locations. Under rainfed conditions, it demonstrated a yield potential of 1069 kg per hectare. It has shown stability in yield and wider adaptability under varying rainfall conditions. In the agronomical management trial variety CAZRI Moth-5 recorded 1067 kg grain yield per hectare with 34.8 per

cent over the check variety (RMO-2251) and 11.6 % yield superiority over (RMO-257).

This variety exhibits remarkable resistance to prevalent diseases and pests while boasting exceptional nutritional and agronomic attributes. Through rigorous testing conducted over three years (2020-2022) across diverse geographic locations, this variety has proven its mettle against multiple challenges, thereby addressing the longstanding dearth of improved moth bean varieties in agricultural practices. First and foremost, this variety showcases high resistance to Yellow Mosaic Virus and leaf crinkle virus, conferring a spectrum of protection from free (0% infestation) to moderate levels (7.7% infestation). Furthermore, its high resistance to root diseases, particularly macrophomina blight, has been consistently demonstrated under natural conditions. CAZRI Moth-5 boasts exceptional nutritional attributes with a grain protein content of 28.4 percent, surpassing the best check variety (RMO-257) by 2.2 percent. Additionally, its swift cooking time of 22 minutes, five minutes faster than the leading check variety RMO-257, ensures convenience in culinary preparation. In terms of agronomic performance, this variety exhibits adaptability to varying environmental conditions, with a maturity range spanning 73 to 84 days, accommodating diverse agroclimatic zones. Its ability to thrive under terminal drought conditions and retain greenness up to maturity enhances its resilience against moisture stress and provides high-quality fodder for livestock. The introduction of CAZRI Moth-5 into agricultural landscapes is poised to revolutionize moth bean production, addressing longstanding challenges and offering substantial benefits to farmers and food processing units alike.

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