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Notification and germplasm registration

Maize

Variety VL VitA

VL VitA is a single-cross maize (*Zea mays* L.) hybrid variety developed by the Indian Council of Agricultural Research -Vivekananda Parvatiya Krishi Anusandhan Sansthan, Almora. It was released and notified by the Central Sub-committee on Crop Standards, Notification and Release of Varieties for Agricultural Crops (CSC on CSN & RVAC) vide notification number S.O. 1560 (E). dated 26.03.24 for cultivation in the states of north-western hill region, namely, Jammu and Kashmir, Himachal Pradesh, Uttarakhand, as well as north-eastern hill region comprising the states of Assam, Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura of India.

VL VitA is an early maturing (95-100 days in mid-hills) and high-yielding single-cross provitamin A-rich hybrid. VL VitA (6,851 kg/ha) registered yield superiority of 40.65% over APQH 9 (4,871 kg/ha) in AICRP trials during 2020-22 in Zone I and exhibited moderate resistance to turcicum leaf blight. The hybrid is responsive to nitrogen fertilizer and high density. It recorded yield of 10,358 kg/ha at high fertilizer (N:P:K-250:80:100 kg/ha) and high density (83,000 plants/ha), which was 10.19 per cent higher than the yield under normal fertilizer dose and plant density (9,400 kg/ha). It possesses a mean provitamin A content of 7.48 µg/g. VL VitA has been developed by introgressing favourable allele of crtRB1 gene (for high provitamin A content) into the normal corn parental inbred lines using marker-assisted backcross breeding (MABB).

The distinguishing morphological characteristics of the hybrid include purple anthers, purple glume and silk; green husk with good husk cover; and yellow, flint, round and medium-bold grains (avg. 1000-grain wt. 300 g). The plant height of VL VitA ranged from 230 to 240 cm. The days to maturity of the hybrid is 95-100 days. VL VitA was developed by crossing VBL 101 (female) and VBL 102 (male). The plant height of female parent VBL 101 ranges from 185 to 190 cm in the mid hills and that of the male parent VBL 102 ranges from 175 to 185 cm. The female parent VBL 101 has a green stem, medium semi-open tassel, green glumes, yellow anthers and purple silk, cylindrical ears and yellow flint small-medium kernels. The male parent VBL 102 has a green stem, medium large open tassel, purple glumes, anthers and silk, conico-cylindrical ears and orange flint medium kernels. Seed parent of husk with good husk cover; and yellow, semi-flint, round and medium-bold grains. Days to flowering for female and male is 56-57 days and 55-56 days, respectively, in the mid-hills. The parental lines of VL VitA nick well in the mid hills during the kharif season.

On account of its early maturity, higher yield, high provitamin A content and tolerance to major diseases, VL VitA may suitably fit into the prevalent cropping systems of north-western and north-eastern hill regions. The hybrid will add to biofortified maize varietal diversity in the country as a whole and Northern Hill Zone in particular and, thereby, will offer a wider choice to the farmers. Further, its high-yielding parents will ensure the availability of biofortified maize hybrid seed to the farmers at a reasonable price and help in wider adoption of the hybrid in the hill regions of the country.

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VLQPM Hybrid 45

VLQPM Hybrid 45 is a single-cross maize (*Zea mays* L.) hybrid variety developed by the Indian Council of Agricultural Research-Vivekananda Parvatiya Krishi Anusandhan Sansthan, Almora, Uttrakhand. It was released and notified by the Central Sub-committee on Crop Standards, Notification and Release of Varieties for Agricultural Crops vide notification number S.O. 4065 (E) dated 31.08.22 for cultivation in north-western and north-eastern hill regions of India comprising the states of Jammu and Kashmir, Himachal Pradesh, Uttarakhand, Assam, Arunachal Pradesh, Manipur, Meghalaya, Mizoram, Nagaland, Sikkim and Tripura.

VLQPM Hybrid 45 is an early maturing (90-95 days in mid-hills) and high-yielding single-cross QPM hybrid maize. It is an EDV (essentially derived variety) of field corn hybrid Vivek Maize Hybrid 45 (VMH 45) and has been improved for Tryptophan and Lysine. It possesses 0.66% and 2.90%

Tryptophan and Lysine with enhancement of 50.6% (1.5 fold) and 39.1% (1.4 fold), respectively, over VMH 45. It has been developed by introgressing opaque-2 allele using marker-assisted backcross breeding (MABB). The average yield of VLQPMH 45 in AICRP trials during 2021-22 in Zone I was 6,673 kg/ha, which was at par with the original hybrid VMH 45. It also exhibited moderate resistance to turcicum leaf blight. VLQPMH 45 is responsive to nitrogen fertilizer and high density, and showed optimal performance of 7,805 kg/ha under 250:80:100 kg/ha NPK and plant density of 83,000/ha.

The distinguishing morphological characteristics of VLQPMH 45 include purple anthers, purple glume and silk; green husk with good husk cover; and yellow, flint, round and medium-bold grains (avg. 1000-grain wt. 300 g). The plant height of VLQPMH 45 ranged from 200 to 210 cm. The days to maturity of the hybrid is 90-95 days. VLQPMH 45 was developed by crossing VQL 373 (female) and VQL 390 (male). The plant height of female parent VQL 373ranges from 135 to 140 cm in the mid hills and that of the male parent VQL 390 ranges from 170 to 175 cm. The female parent VQL 373 has a green stem, medium semi-open tassel, green glumes, purple anthers and silk, cylindrical ears and yellow flint and opaque kernels. The male parent VQL 390 has a green stem, medium largeopen tassel, purple glumes, anthers and silk, conico-cylindrical ears and yellow flint and opaque kernels. Days to flowering for female and male is 55-56 days and 56-57 days, respectively, in the mid-hills. The parental lines of VLQPMH 45 nick well in the mid hills during the *kharif* .

On account of its early maturity, higher yield, high tryptophan and lysine content and tolerance to major diseases, VLQPMH 45 will suitably fit into the prevalent cropping systems of north-western and north-eastern hill regions. The hybrid will add to biofortified maize varietal diversity in the country as a whole and Northern Hill Zone in particular and, thereby, will offer a wider choice to the farmers. Further, its high-yielding parents will ensure the availability of biofortified maize hybrid seed to the farmers at a reasonable price and help in wider adoption of the hybrid in the hill regions of the country.

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VLQPM Hybrid 61

VLQPM Hybrid 61 is a single-cross maize (*Zea mays* L.) hybrid variety developed by the Indian Council of Agricultural Research-Vivekananda Parvatiya Krishi Anusandhan Sansthan, Almora. It was released and notified by the Central Sub-committee on Crop Standards, Notification and Release of Varieties for Agricultural Crops (CSC on CSN&RVAC) vide notification number vide S.O. 4065 (E) dated 31.08.22 for cultivation in Uttarakhand hills. VLQPM Hybrid 61 is an early maturing (85-90 days in mid-hills) and high-yielding single-cross QPM hybrid. It possesses 0.76% and 3.30% tryptophan and lysine, respectively, and 9.16% protein.The average yield of VLQPMH 61in state varietal trials during 2018-20 in Uttarahand hills was 4,435 kg/ha, exhibiting yield superiority of 10.9% over the QPM check Vivek QPM 9 under organic conditions. It also exhibited moderate resistance to *turcicum* and maydis leaf blight. VLQPMH 61 is responsive to nitrogen fertilizer and showed optimal performance of 8,876 kg/ha under 150:60:60 kg/ha NPK.

The distinguishing morphological characteristics of VLQPMH 61 include purple anthers, purple glume and silk; green husk with good husk cover; and yellow, semi-flint, flat and medium-bold grains (avg. 1000-grain wt. 260 g). The plant height of VLQPMH 61 ranged from 200 to 210 cm. The days to maturity of the hybrid is 95-100 days. VLQPMH 61 was developed by crossing QPM lines VBL 17 (female) and VQL 1 (male). VBL 17 and VQL 1 are QPM lines developed by introgressing opaque-2 allele using marker-assisted backcross breeding (MABB). The plant height of female parent VBL 17 ranges from 170 to 175 cm in the mid hills and that of the male parent VQL 1 ranges from 165 to 170 cm. The female parent VBL 17 has a light green stem, medium semi-open tassel, purpleglumes, creamy anthers and purple silk, conico-cylindrical ears and yellow flint kernels. The male parent VQL 1 has a green stem, largeopen tassel, purplish-green glumes, light purple anthers and purple silk, cylindrical ears and yellowsemi-dent kernels. Days to flowering for female and male is 53-54 days and 51-52 days, respectively, in the mid-hills. The parental lines of VLQPMH 61 nick well in the mid hills during the kharif season.

On account of its early maturity, higher yield, high tryptophan and lysine content and tolerance to major diseases, VLQPMH 61 will suitably fit into the prevalent cropping systems of Uttarakhand hill regions. The hybrid will add to biofortified maize varietal diversity in the country

as a whole and Uttarakhand inparticularand, thereby, will offer a wider choice to the farmers. Further, its high-yielding parents will ensure the availability of biofortified maize hybrid seed to the farmers at a reasonable price and help in wider adoption of the hybrid in the hill regions of the country.

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VLQPM Hybrid 63

VLQPM Hybrid 63 is a single-cross maize (*Zea mays* L.) hybrid variety developed by the Indian Council of Agricultural Research-Vivekananda Parvatiya Krishi Anusandhan Sansthan, Almora. It was released and notified by the Central Sub-committee on Crop Standards, Notification and Release of Varieties for Agricultural Crops vide notification number S.O. 4065 (E) dated 31.08.22 for cultivation in Uttarakhand hills. VLQPM Hybrid 63 is an early maturing (90-95 days in mid-hills) and high-yielding single-cross QPM hybrid. It possesses 0.72% and 3.20% tryptophan and lysine, respectively and 9.22% protein. The average yield of VLQPMH 63 in state varietal trials during 2018-20 in Uttarahand hills was 4,675 kg/ha, which was 16.9% higher than the QPM check Vivek QPM 9 under organic conditions. It also showed moderate resistance to *turcicum* and maydis leaf blight. VLQPMH 63 exhibited responsiveness to nitrogen fertilizer and showed optimal performance of 9,671 kg/ha under 150:60:60 kg/ha NPK.

The distinguishing morphological characteristics of VLQPMH 63 include purple anthers and glume, green silk; green husk with good husk cover; and yellow with cap, semi-flint, flat and medium-bold grains (avg. 1000-grain wt. 280 g). The plant height of VLQPMH 63 ranged from 215 to 225 cm. The days to maturity of the hybrid is 90-95 days. VLQPMH 63 was developed by crossing VQL 398 (female) and V 467 (male). VQL 398 was developed by introgressin gopaque-2 allele using marker-assisted backcross breeding (MABB), whereas V 467 is a line with high lysine and tryptophan content. The plant height of female parent VQL 398 ranges from 155 to 160 cm in the mid hills and that of the male parent V 467 ranges from 195 to 200 cm. The female parent VQL 398 has a green stem, medium semi-open tassel, purple glumes, purple anthers and green silk, conico-cylindrical ears and orangish yellow round flint kernels. The male parent V 467 has a green stem, medium semi-open tassel, purple glumes, purple anthers and light purple silk, cylindrical ears and yellow flint kernels with cap. Days to flowering for female and male is 57-58 days and 55-56 days, respectively, in the mid-hills. The parental lines of VLQPMH 63 nick well in the mid hills during the kharif season.

On account of its early maturity, higher yield, high tryptophan and lysine content and tolerance to major diseases, VLQPMH 63 will suitably fit into the prevalent cropping systems of Uttarakhand hill regions. The hybrid will add to biofortified maize varietal diversity in the country as a whole and Uttarakhand in particular and, thereby, will offer a wider choice to the farmers. Further, its high-yielding parents will ensure the availability of biofortified maize hybrid seed to the farmers at a reasonable price and help in wider adoption of the hybrid in the hill regions of the country.

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Sweet corn

VL Madhurima

VL Madhurima is a single-cross sweet corn (*Zea mays* L.) hybrid variety developed by the Indian Council of Agricultural Research-Vivekananda Parvatiya Krishi Anusandhan Sansthan, Almora. It was released and notified by the Central Sub-committee on Crop Standards, Notification and Release of Varieties for Agricultural Crops (CSC on CSN&RVAC) vide notification number S.O. 1560 (E). dated 26.03.24 for cultivation in Eastern Uttar Pradesh, Bihar, Jharkhand, West Bengal, Maharashtra, Telangana, Andhra Pradesh, Karnataka, Tamilnadu, Rajasthan, Gujarat, Madhya Pradesh and Chhattisgarh.

VL Madhurima gave a higher average dehusked green cob yield of 10,127 kg/ha in the Eastern Plains Zone (Zone III) as compared to the best check Misthi (9,268 kg/ha). In the Peninsular Zone (Zone IV), with a yield of 12,211 kg/ha, it registered 5.28 per cent yield superiority over the check Misthi. In the Central Western Zone (Zone V), its average yield was 9,201 kg/ha, which was 17.93 per cent higher than the check Misthi (7,802 kg/ha). During the three years of multilocational trials, VL Madhurima exhibited moderate resistance against turcicum leaf blight, Fusarium stalk rot, Charcoal rot and Cercospora leaf spot. Its mean TSS was 15%, which was comparable to the check. VL Madhurima also exhibited high responsiveness to nitrogen fertilizer and high density and showed optimal performance of 15,306 kg/ha under 250:80:100 kg/ha NPK and plant density of 83,000/ha. VL Madhurima has been developed by using a combination of limited backcrossing and hybrid breeding.

The distinguishing morphological characteristics of the hybrid include yellow anthers, green glume and silk, and green husk with good husk cover. Immature kernels are creamish yellow and medium bold. Mature kernels are yellow, dent, flat (indented) with medium-bold grains (avg. 1000-grain wt. 165 g). The plant height of VL Madhurima ranged from 200 to 210 cm. The average days to green cob harvest is 72-75 and seed-to-seed is 95-100 days in mid-hills. VL Madhurima was developed by crossing VSL 50 (female) and VSL 51 (male). The plant height of female parent VSL 50 ranges from 160 to 170 cm in the mid hills and that of the male parent VSL 51 ranges from 175 to 185 cm. Both female and male have green stem, green glumes, yellow anthers, green silk, cylindrical ears and dent, flat (indented) kernels. The female parent has medium open tassel and yellow kernels, whereas the male parent has a large open tassel and light orange kernels. Days to flowering for female and male is 55-57 days and 56-58 days, respectively, in the mid-hills. The parental lines of VL Madhurima nick well in the mid hills during the kharif season.

On account of its higher yield, high TSS, desirable kernel characteristics and tolerance to major diseases, VL Madhurima will suitably fit into the prevalent cropping systems of the north-eastern plains, peninsular region and central-western region of India. The hybrid will add to sweet corn varietal diversity in the country as a whole and the north-eastern plains, peninsular region and central-western region of India in particular and, thereby, will offer a wider choice to the farmers. Further, its high-yielding parents will ensure the availability of the sweet corn hybrid seed to the farmers at a reasonable price and help in wider adoption of the hybrid in the country.

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Tossa jute (*Corchorus olitorius* L.)

Variety JROV 5 (Vitapat-1)

JROV 5 is the first biofortified vegetable Jute variety of tossa jute (*C. olitorius* L.) exclusively developed as leafy vegetable edible nutritional-food crop variety by the ICAR-Central Research Institute for Jute and Allied Fibres and released and notified by the Central Sub-committee on Crop Standard, Notification & Release of Varieties vide the Gazette of India notification No. S.O. 1560(E), dated 26th March 2024. The variety has been developed by pedigree method by crossing F_4 progeny of interspecific cross S 19 x JRC 212 with tossa jute variety JRO 204 and single plant progeny selection was made from F_5 population. It is most closely resembles with its one of the parents namely, JRO 204 but differs in leaf ascorbic acid and flavonoid content. This variety is specifically adapted to olitorius jute growing belt of the country in rainfed /irrigated ecosystem of West Bengal, Bihar, Assam and Odisha for growing as vegetable crop during March to September which attains harvestable maturity of only 30 days. The stem, leaf and petiole of this variety is smooth, succulent and green in colour with average plant height 40 cm of 30 days old crop. This variety can also be grown as fibre crop which matures within 120 days of sowing. Toss jute variety JROV 5 produced 151.31 q/ha average foliage yield in three year multi-location yield evaluation trials across ten locations in major jute growing states with a potential green foliage yield of 262.2 q/ha and outperformed check varieties JRO 524 and JRO204 by 3.5% and 1%, respectively in 30 days growing crop.

The leaf vitamin C content (1.05 mg/g fresh leaf wt) of variety JROV 5 is significantly more, being 28.57% and 77.04% higher than check varieties JRO 204 and JRO 524, respectively. Iron content in the leaf of variety JROV 5 is at par with check varieties JRO 204 and JRO 524, being 0.37 µg/g of ash. Leaf flavonoid content of JROV 5 (5.73 mg/g of fresh leaf wt.) was also 5.7% more than the check variety JRO 524. Higher amount on vitamin C content in leaf coupled with higher green foliage yield make this variety more suitable as leafy vegetable/bio-fortified crop.

Tossa jute variety JROV 5 had been tested in multi-location evaluation trials of AINPJAF during 2018 to 2022. Initial Evaluation Trials (IVTs) were conducted in five locations of three jute- growing states, viz., West Bengal (Coochbehar, Barrackpore and Kalyani), Bihar (Katihar) and Assam (Nagaon). In IVT, as per average over four locations, variety JROV 5 outperformed best check variety JRO 524 by 5.8% for green foliage yield. As per average over two locations, JROV 5 outperformed check varieties JRO 204 and JRO 524 by 5.5% and 11.94%, respectively for foliage yield. AVT-I and AVT-II trials conducted 2019 and 2020 over five locations of three jute- growing states, viz., West Bengal (Coochbehar, Barrackpore and Kalyani), Bihar (Katihar) and Assam (Nagaon) and variety JROV 5 was statistically at par with both the check varieties JRO 204 and JRO 524. In adaptive trials conducted in five districts in the states of West Bengal (4) and Assam (1); variety JROV 5 outperformed the check varieties JRO 204 and JRO 524 by 4.7% and 7.1%, respectively and topped in three locations.

Since, tossa jute variety JROV 5 had been released as a 30 days leafy vegetable crop being very short duration (30-40 days) in nature, it escapes most of the diseases of jute, particularly stem rot which appears late (after 50 DAS in fibre crop). It exhibited field tolerance to seedling rot. Owing to very short duration crop (30-40 days), it also escapes the major insect-pests of jute that appear at later stages like Bihar heary caterpillar and mites. This variety has also shown filed tolerance to minor insect pests.

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Variety JROP 4 (Renuka)

JROP 4 is a high yielding red stem tossa jute (*C. olitorius* L.) variety developed at ICAR-Central Research Institute for Jute and Allied Fibres, Barrackpore, Kolkata and recommended for commercial cultivation in entire tossa jute growing belt of the country by the Central Sub-committee on Crop Standard, Notification & Release of Varieties and notified vide the Gazette of India notification No. S.O. 1560(E), dated 26th March 2024. This variety most closely resembles with its recurrent parent S 19 in stem color but differs in nature of pigmentation (light dependent), leaf size, disease/pest resistance, plant height and fibre yield. This variety has been evolved through backcross breeding method. The commercial tossa jute variety S 19 was crossed as female parent with wild species *C. trilocularis* as male parent. The F_1 was backcrossed to S 19 and single plant progeny selection was made from backcross population. The selection in BC_1 and subsequent generation was practiced to increase fibre productivity with enhanced fibre quality coupled with tolerance to pests and diseases. Variety JROP 4 is specifically adapted to tossa jute growing belt of the country especially in West Bengal, Assam, Bihar and Odisha in both rainfed and irrigated agro-ecosystem for growing during April to July and is also responsive to higher doses of fertilizer in fertility deficient soils. Fibre crop of this variety generally matures in 110 to 130 days depending upon time of sowing and crop management practices which attain average plant height ranging from 420 to 450 cm at the time of harvesting but seed crops mature in between 135-150 days, if sown in July-August.

Tossa jute variety JROP 4 excelled over all the elite lines evaluated in station trial during 2017 for its fibre yield potential and hence included for multi-location yield evaluation trials during 2018-2022 under All India Network Project on Jute and Allied Fibres, Barrackpore. Multi-location trials under All India Network Project on Jute and Allied Fibres were conducted in seven locations across five jute growing states namely, Coochbehar, Kalyani, and Barrackpore in West Bengal, Katihar in Bihar, Kendrapara in Odisha, Nagaon in Assam and Rahuri in Maharashtra. In Initial Varietal trials (IVT), variety JROP 4 topped amongst ten test entries with average fibre yield of 33.57 q/ha across locations. In Advance Varietal Trial –I and II (AVTs), it ranked 1st with average fibre yield of 29.94 q/ha and 30.53 q/ha, respectively. Variety JROP 4 also out-yielded (31.89 q/ha) commercial check varieties JRO 204 and JRO 524 by 7.10 % and 5.40 %, respectively, in Adaptive trials conducted in the farmers' fields of tossa jute growing states viz., West Bengal, Assam, Odisha and Maharashtra. During the three years (2018-2021) of multi-location yield evaluation trials under AINPJAF conducted in five jute growing states, the average fibre yield of tossa jute variety JROP 4 was 31.24 q/ha which was 6 to 8% superior over national check varieties JRO 204

and JRO 524 with a potential fibre yield of 38.72 q/ha.

This variety was at par with check variety JRO 204 for stem rot resistance but exhibited more resistance (40%) than the other check variety JRO 524 in nine trials. It also exhibited more tolerance to Bihar hairy caterpillar (11 - 16%); jute semilooper (5 to 20%) and stem weevil (18 – 28%) than the check varieties JRO 204 and JRO 524 during two years of testing (2020 and 2021) at 6 locations. The quality of fibre of variety JROP 4 was also found either at par or bit superior over both the check varieties across seven trials.

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White jute (*Corchorus capsularis* L.)

Variety JRCP 7 (Arijit)

The high yielding green stem white jute variety JRCP 7 has been developed by the ICAR-Central Research Institute for Jute and Allied Fibres, Barrackpore, Kolkata and released for entire white jute growing region of the county by the Central Sub-committee on Crop Standard Notification and Release of variety vide the Gazette of India notification no. S.O. 1560(E), dated 26th March 2024. This variety has been developed though backcross breeding method involving advanced breeding line CIM-036 was crossed with popular cultivar JRC 517. The F_1 was backcrossed to JRC 517 and single plant progeny selection was made from backcross population. It is specifically adapted to capsularis jute growing belt of the country in rainfed/irrigated condition of West Bengal, Odisha, Bihar, UP, Tripura and Assam which can also withstand water logging up to the some extent. Plant height of this variety ranges from 360–400 cm with cylindrical, smooth, green stem with tinge of red at apical region. Leaf colour is green, ovate-lanceolate, serrated leaf margin with a leaf size of 12-14 cm x 4.5 cm. Fibre crop matures within 110-120 days of sowing (March-April sowing) whereas seed crop matures at 120-130 days when sown in July- August. The average fibre yield of variety JRCP 7 is 31.48 q/ha with a potential yield of 39.06 q/ha in multi-location varietal trials under All India Network Project on Jute and Allied Fibres.

Variety JRCP 7 had been evaluated in multi-location yield trials of All India Network Project on Jute and Allied Fibres under IVTs, AVT-Is, AVT-IIs and Adaptive trials during 2019 to 2022 across six locations viz., Kalyani, Barrackpore, Coochbehar (West Bengal), Kendrapara (Odisha), Katihar (Bihar) and Nagaon (Assam). Initial evaluation trials were conducted in five locations in which variety JRCP 7 topped in 2 locations and outperformed check varieties JRC 517 and JRC 698 by 3.4% and 1.6%, respectively with an average fibre yield of 31.30 q/ha. In Advanced Varietal Trials-I, variety JRCP 7 ranked 1st with an average yield of 30.40 q/ha. In AVT-II also JRCP 7 significantly outperformed check variety JRC 698 by 14.9% with average yield of 32.71 q/ha which was 7.2% superior over another popular variety JRC 517 for fibre yield. Variety JRCP 7 has also out yielded check varieties JRC 698 and JRC 517 by 7.4% and 2.8% in adaptive trials conducted at farmers' field as well as in fertilizer management trials under different fertilizer doses in three states with 9.4-14.2% yield advantage, depicted its high yield and wide adaptability to different soil fertility conditions and agro-ecological regions.

Variety JRCP 7 exhibits tolerance to the major insect pest like, Bihar hairy caterpillar, yellow mite, stem weevil and semilooper than both the check varieties JRC 698 and JRC 517. This variety had also shown less incidence of stem rot and root rot diseases in multi-location trials, indicating its field resistance against major diseases of jute. Fibre quality of JRCP 7 is also superior in terms of 5-10% less root content with 6 to 11% stronger fibre than the cultivated varieties JRC 517 and JRC 698.

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HC Mesta (Kenaf)

Variety JBMP 6 (Titli)

JBMP 6, the latest high-yielding coppery stem HC mesta/ kenaf variety has been released and notified by the Central Sub-committee on Crop Standard, Notification and Release of Varieties vide the Gazette of India notification no. S.O. 1560(E), dated 26th March 2024. It has been evolved by ICAR-Central Research Institute for Jute and Allied Fibres, Barrackpore through modified back cross [(KEX-11 × AMC 108) × AMC 108] method followed by pedigree selection. Selection was made for plant growth parametres, higher fibre yield and biomass coupled with fibre quality and reaction to various diseases and pests. This variety is adapted to rainfed mesta growing belt of India for cultivation from mid-April to May sowing. It can also be sown till 1st fortnight of June in case of delayed onset of monsoon. Variety JBMP 6 is well adapted to mid and high-land soils of rainfed agro-ecosystem of Andhra Pradesh, Odisha, Maharashtra, West Bengal, Bihar and North-Eastern states. The average plant height of this variety ranges from 380 to 390 cm depending upon the soil type, climatic conditions, sowing time and crop management practices. This variety is easily distinguishable by its typical coppery pink stem, with less bristles and green, broad and lobbed (3-5 lobes) leaves. This variety has recorded an average fibre yield of 28.06 q/ha and a potential yield of 36-37 q/ha in 120-130 days of crop duration. The seed crop is generally sown in the month of July-August which attains the harvestable maturity after 150-160 days of sowing.

Out of the 13 elite entries, kenaf variety JBMP 6 was found promising for fibre yield potential, quality of fibre and reaction to various diseases and pests evaluated in station trial during 2018. Based on its performance in station trial this variety was included in multi-location yield evaluation trials of All India Network Project on Jute and Allied Fibres (AINPJAF) in IVT, AVT-I, AVT-II and Adaptive trials during 2019 to 2022 across six locations in 5 mesta growing states namely, Barrackpore, Coochbehar (West Bengal), Kendrapara (Odisha), Amadalavalasa (Andhra Pradesh), Aduthurai (Tamil Nadu) and Rahuri (Maharashtra). Performance of this variety was excellent pertaining to its fibre yield potential, fibre quality, reactions to various diseases and insect pests and other agronomic attributes. In IET, this variety ranked first in two locations with fibre yield superiority of 11.20% over the national check variety HC 583. In AVT-I also variety JMBP 6 showed 11.10% and 16.73% higher fibre yield than the check varieties AMC 108 and HC 583, respectively. It also recorded 11.87% higher fibre yield over the check variety HC 583 in AVT-II. In fertilizer schedule trials, this variety has also recorded the highest fibre yield (32.19 q/ha) with fertilizer dose of 100:21.8:41.7 kg/ha NPK, which was 13% to 17% higher than national check varieties AMC 108 and HC 583 which indicated its responsiveness to the higher doses of fertilizers.

The fibre quality of kenaf variety JBMP 6 was also superior in terms of root content (9-19% lesser), defects (15-21% lesser), fibre fineness (>7% finer) and fibre strength (7-10% stronger) over both the check varieties AMC 108 and HC 583. Higher fibre yield potential coupled with superior fibre quality attributes make this variety more remunerative to the mesta farmers as well as most suitable for the production of high-value jute diversified products (JDPs).

HC mesta variety JBMP 6 has also exhibited less incidence of foot & stem rot disease compared to national check varieties AMC 108 and HC 583, as well as less infestation of insect pests namely, aphids, semilooper and mesta mealybug which may not only reduce the cost of pest management in mesta but it may also save the environment and human health from hazardous effects of chemical pesticides.

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