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# Effect of Cluster Front Line Demonstrations (CFLD) on Production, Profitability, and Social Impact on Mustard (*Brassica juncea* L.) cultivation in Vindhya Region.

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ABSTRACT: Brassica juncea, commonly brown mustard, Chinese mustard, Indian mustard, leaf mustard, Oriental mustard and vegetable mustard, is a species of mustard plant. Brassica juncea cultivars can be divided into four major subgroups: integrifolia, juncea, napiformis, and tsatsai. In a 100-gram  $(3+\frac{1}{2})$ -ounce) reference serving, cooked mustard greens provide 110 kilojoules (26 kilocalories) of food energy and are a rich source (20% or more of the Daily Value) of vitamins A, C, and K—K being especially high as a multiple of its Daily Value. Mustard greens are a moderate source of vitamin E and calcium. Greens are 92% water, 4.5% carbohydrates, 2.6% protein and 0.5% fat. The leaves, seeds, of this mustard variety are edible. The plant appears in in African, Bangladeshi, Chinese, Filipino, Tripuri, Italian, Indian, Japanese, Okinawan, Nepali, Pakistani, Korean, Sou thern and African-American (soul food) cuisines. Cultivars of B. juncea are grown for their greens, and for the production of mustard oil. The mustard condiment made from the seeds of the B. juncea is called brown mustard and is considered to be spicier than yellow mustard. [4][5]

Because it may contain erucic acid, a potential toxin, mustard oil is restricted from import as a vegetable oil into the United States.  $^{[6]}$  Essential oil of mustard, however, is generally recognized as safe by the U.S. Food and Drug Administration.  $^{[6]}$  In Russia, this is the main species grown for the production of mustard oil. It is widely used in canning, baking and margarine production in Russia, and the majority of Russian table mustard is also made from B. juncea.

KEYWORDS: Brassica juncea L., mustard, vitamins, production, cultivation, Vindhya, CFLD, greens, social

### I. INTRODUCTION

The leaves are used in African cooking, [7] and all plant parts are used in Nepali cuisine, particularly in the mountain regions of Nepal, as well as in the Punjabi cuisine in the northern part of the Indian subcontinent, where a dish called sarson da saag (mustard greens) is prepared. [8] *B. juncea* subsp. tatsai, which has a particularly thick stem, is used to make the Nepali pickle called achar, and the Chinese pickle zha cai. This plant is called "lai xaak" in Assamese and it is cultivated hugely during the winters. It is eaten in any form in Assam and Northeast, be it boiled or added raw in salad, cooked alone or with pork. [1]

The Gorkhas of the Indian states of Darjeeling, West Bengal and Sikkim as well as Nepal prepare pork with mustard greens (also called rayo in Nepali). It is usually eaten with relish and steamed rice, but can also be eaten with roti (griddle breads). In Nepal it is also a common practice to cook these greens with meat of all sorts, especially goat meat; which is normally prepared in a pressure cooker with minimal use of spices to focus on the flavour of the greens and dry chillies. *B. juncea* (especially the seeds) is more pungent than greens from the closely related B. oleracea (kale, broccoli, and collard greens), [9] and is frequently mixed with these milder greens in a dish of "mixed greens".[2,3]

Chinese and Japanese cuisines also make use of mustard greens. In Japanese cuisine, it is known as takana and often pickled for use as filling in onigiri or as a condiment. Many varieties of *B. juncea* cultivars are used, including zha cai, mizuna, takana (var. integrifolia), juk gai choy, and xuelihong. Asian mustard greens are most often stirfried or pickled. A Southeast Asian dish called asam gai choy or kiam chai boey is often made with leftovers from a



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large meal. It involves stewing mustard greens with tamarind, dried chillies and leftover meat on the bone. *Brassica juncea* is also known as gai choi, siu gai choi, xaio jie cai, baby mustard, Chinese leaf mustard or mostaza. [10]

Vegetable growers sometimes grow mustard as a green manure. Its main purpose is to act as a mulch, covering the soil to suppress weeds between crops. If grown as a green manure, the mustard plants are cut down at the base when sufficiently grown, and left to wither on the surface, continuing to act as a mulch until the next crop is due for sowing, when the mustard is dug in. In the UK, mustard sown in summer and autumn is cut down starting in October. April sowings can be cut down in June, keeping the ground clear for summer-sown crops. [11] One of the disadvantages of using mustard as a green manure is its propensity to harbor club root. This mustard plant is used in phytoremediation to remove heavy metals, such as lead, from the soil in hazardous waste sites because it has a higher tolerance for these substances and stores the heavy metals in its cells. [12] In particular, *Brassica juncea* was particularly effective at removing cadmium from soil. [13] The process of removing heavy metals ends when the plant is harvested and properly discarded. Phytoremediation has been shown to be cheaper and easier than traditional methods for heavy metal reduction in soils. [14] In addition, it has the effect of reducing soil erosion, reducing cross-site contamination. [12] The mustard plant is any one of several plant species in the genera Brassica and Sinapis in the family Brassica ceae (the mustard family). Mustard seed is used as a spice. Grinding and mixing the seeds with water, vinegar, or other liquids creates the yellow condiment known as prepared mustard. The seeds can also be pressed to make mustard oil, and the edible leaves can be eaten as mustard greens. Many vegetables are cultivated varieties of mustard plants; domestication may have begun 6,000 years ago. Although some varieties of mustard plants were well-established crops in Hellenistic and Roman times, Zohary and Hopf note, "There are almost no archeological records available for any of these crops." Wild forms of mustard and its relatives, the radish and turnip, can be found over West Asia and Europe, suggesting their domestication took place somewhere in that area. However, Zohary and Hopf conclude: "Suggestions as to the origins of these plants are necessarily based on linguistic considerations." [1] The Encyclopædia Britannica states that mustard was grown by the Indus Civilization of 2500–1700 BC. [2] According to the Saskatchewan Mustard Development Commission, "Some of the earliest known documentation of mustard's use dates back to Sumerian and Sanskrit texts from 3000 BC". [3]

A wide-ranging genetic study of B. rapa announced in 2021 concluded that the species may have been domesticated as long as 6,000 years ago in Central Asia, and that turnips or oilseeds may have been the first product. The results also suggested that a taxonomic re-evaluation of the species might be needed. [4]

White mustard (Sinapis alba) grows wild in North Africa, West Asia, and Mediterranean Europe, and has spread farther by long cultivation; brown mustard (*Brassica juncea*), originally from the foothills of the Himalayas, is grown commercially in India, Canada, the United Kingdom, Denmark, Bangladesh<sup>[5]</sup> and the United States; black mustard (*Brassica* nigra) is grown in Argentina, Chile, the US, and some European countries. Canada and Nepal are the world's major producers of mustard seed, between them accounting for around 57% of world production in 2010.<sup>[6]</sup> White mustard is commonly used as a cover crop in Europe (between UK and Ukraine). Many varieties exist, e.g., in Germany<sup>[7]</sup> and the Netherlands,<sup>[8]</sup> mainly differing in lateness of flowering and resistance against white beet-cyst nematode (Heterodera schachtii). Farmers prefer late-flowering varieties, which do not produce seeds; they may become weeds in the subsequent year. Early vigor is important to cover the soil quickly and suppress weeds and protect the soil against erosion. In rotations with sugar beets, suppression of the white beet-cyst nematode is an important trait. Resistant white mustard varieties reduce nematode populations by 70–90%. Recent research has studied varieties of mustards with high oil contents for use in the production of biodiesel, a renewable liquid fuel similar to diesel fuel. The biodiesel made from mustard oil has good flow properties and cetane ratings. The leftover meal after pressing out the oil has also been found to be an effective pesticide.<sup>[9]</sup>

A genetic relationship between many species of mustard, along with turnips, cabbage, horseradish, wasabi and their respective derivatives, has been observed and is described as the triangle of U. Cluster front line demonstrations (CFLDs) is a novel approach to provide a direct interface between researcher and farmer for the transfer of technologies developed by them and to get direct feedback from farming community. The proposed Centrally Sponsored Scheme 'National Food Security Mission (NFSM) is to operationalise the resolution of NDC. Cluster Front Line Demonstrations (CFLDs) is a form of adaptive research on the latest notified/released varieties during last 10 years/ technologies which are demonstrated by ICAR/SAUs system on the selected farmer's field. CFLDs are a unique approach to provide a direct interface between researcher and farmers as the scientists are directly involved in planning, execution and monitoring of the demonstrations for the technologies developed by them and get direct feedback from the farmers.

Major technological interventions under CFLD on Mustard

Seed treatment: Seed treatment refers to the application of fungicide, insecticide, or a combination of both, to seeds so as to disinfect and disinfect them from seed-borne or soil-borne pathogenic organisms and storage insects. It also refers to the subjecting of seeds to solar energy exposure, immersion in conditioned water, etc. In



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CFLD Mustard, bio fertilizers used for seed inoculation are Rhizobium, phosphorus soluble bacteria, Trichoderma viridi whereas chemicals like Bavistin, Carbendazime, Chloropyriphos, Thiram etc. are used for treating seeds [4,5]

- Line sowing: It is the dropping of seeds into the soil with the help of implement such seed drill, behind the plough and then the seeds are covered by wooden plank or harrow to have contact between seed & soil. This method helps to maintain the spacing between plants which helps in plant growth. Line spacing maintained for pigeon pea is 60-90cmX30-60cm and 25-30cmX10cm other mustard like green gram, black gram, lentil and field pea in the demonstration
- Weed management: Pulse crop farmers face unique challenges in terms of managing weed populations in their crop. Application of herbicides Pendimethalin and Imazethapyr mostly used in the demonstration.
- Integrated Nutrient Management (INM): It refers to the maintenance of soil fertility and of plant nutrient supply at an optimum level for sustaining the desired productivity through optimization of the benefits from all possible sources of organic, inorganic and biological components in an integrated manner. INM includes application of N, P, K along with micronutrients like Sulphur, Zinc and bio-fertilizers like Phosphorous Solubilizing Bacteria, Phosphorous Mobilizing Bacteria etc.In CFLD Mustard, this approach was followed with application of soil test based fertiliser, soil and foliar application of micro nutrients like Boron and Zinc and incorporation of different bio fertiliser in soil.[6,7]

Integrated pest management (IPM): It is also known as integrated pest control is a broad-based approach that integrates practices for economic control of pests. IPM aims to suppress pest populations below the economic injury level. Use of prophylactic and need based plant protective chemicals are applied for demonstration. Chemical insecticide and fungicide applied for pulses demonstration are Carbedazim, Manozeb, Prophenophos, Imidachliripid, Indoxacarb, Emamectin, Thiomethoxam, Blitox etc. Application of organic pesticide was also used in few demonstrations of mustard. Installation of pheromone traps and lures were also done. Biological control of pod borer by release of *Trichogramma chilonis* were used in case of *B. juncea* L.[8,9]

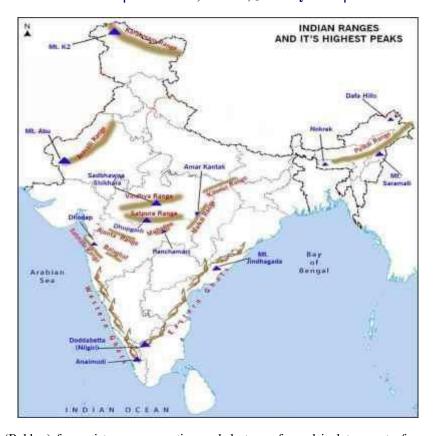
### II. DISCUSSION

The Vindhya Range geographically separates the Northern India from the Southern India as it runs across the Central India. The origin of Vindhya Range is believed to be from the wastes produced due to the weathering of Aravalli Range.The Range extends from Gujarat in the West (almost along its border with Rajasthan and Madhya Pradesh) moving eastwards towards the Ganges in Mirzapur. [10,11] The area of North and South portions of the mountain is arid and inhospitable. The region covers the following states Madhya Pradesh, Chhattisgarh, Gujarat, Southern parts of Uttar Pradesh and Bihar. The southern slopes of the range are drained by the Narmada River, which then moves westwards towards the Arabian Sea. Apart from Narmada, Ganges also drains many parts of the Range. The famous Ranthambore National park is also formed amidst this range of mountains. The range has always been known for its great reserves of wildlife. The Mountain Range which divides the North and South India is Vindhyas. The Vindhya Range is a complex, discontinuous chain of mountain ridges[12,13], hill ranges, highlands and plateau escarpments in west-central India. They divide North and South India. The Dhupgarh Peak (4,429 feet [1,350 metres]), near Pachmarhi in south-central Madhya Pradesh, is the state's highest point. Northwest of the Vindhya Range is the Malwa Plateau (1,650 to 2,000 feet [500 to 600 metres]). Today, the definition of the Vindhyas is primarily restricted to the Central Indian escarpments, hills and highlands located to the north of the Narmada River. In India specifically the mountain ranges Satpura and Vindhya found in the central- western part of the Indian sub continent are block mountains, having formed through cracks in the earth's crust, these ranges rose while the block of earth known as the Rift Valley depressed.[14,15]Several tributaries of the Ganga-Yamuna system originate from the Vindhyas. These include Chambal, Betwa, Dhasan, Ken, Tamsa, Kali Sindh and Parbati. The northern slopes of the Vindhyas are drained by these rivers. Narmada and Son rivers drain the southern slopes of the Vindhyas. [16,17]



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1.Blade harrowing (Bakhar) for moisture conservation and destroy of weed in late onset of monsoon 2. For higher production adaptation of recommended packages by sowing of mustard. 3. Seed treatment with mixture of Thiram (1.5g)+ Carbendazim (1.5g) /kg seed followed by treated with biofertilizers. Adopt various water conservation methods at village level to improve the ground water level for adequate water supply. Identification of water resources Desilting of ponds Rain water harvesting and create water bodies/watering points (when water is scarce use only as drinking water for animals) Construction of drinking water tanks in herding places/village junctions/relief camp locations Community drinking water trough can be arranged in sandies /community grazing areas[18,19]

### III. RESULTS

Indian mustard is one of the most important oilseed crop in India as it contributes maximally in domestic edible oil production. Inclusion of Indian mustard in cereal based cropping system is increasingly felt due to its beneficial effect in the system and comparatively lesser requirement of resources, hence lesser environmental footprints. Light to heavy soil is good for mustard cultivation in Vindhya region. [20,21]

RH 0749: Suitable for growing in Haryana, Punjab, Delhi, Jammu and North Rajasthan. It is high yielding variety having more number of seeds per silique. Ready to harvest in 146-148 days. Seeds are bold and having oil percentage of 40%. It give average yield of 10.5-11 qtl/acre.

RH 0406: Suitable for growing in rainfed areas. Ready to harvest in 142-145 days. It give average yield of 8.8 - 9.2 qtl/acre.

T 59 (Varuna): It is suitable under all climatic conditions. Ready to harvest in 145-150 days. Gives oil content about 39%. It gives average yield of 6-8 qtl/acre.

Pioneer 45S42: High yielding variety having medium maturity. Ready to harvest 125-130 days. Suitable under all soil conditions. Its grains are bold and high pod density. It give average yield is 12.5 qtl per acre.

Pioneer 45S35: High yielding and early maturing variety. It give average yield is 12.5 qtl per acre.

Pioneer 45S46: High yielding and medium duration variety. Its grains are bold with good oil percentage. It give average yield is 12.5 qtl per acre.[22,23]



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Pusa Agrani: Under irrigated conditions, suitable for early and late sown areas. Ready to harvest in 110 days. Gives average seed yield of 7.2 qtl/acre with oil 40% oil content.

Pusa Mustard 21: Suitable for timely sown irrigated areas. Gives average yield of 7.2-8.4 qtl/acre.

Pusa Mustard 24: Suitable for timely sown irrigated area. Gives average yield of 8-10 qtl/acre.

NPJ 112: Suitable for early sown areas. Gives average yield of 6 qtl/acre.

Pusa Mustard 26: Suitable for late sown areas. Ready to harvest in 126 days. Gives average yield of 6.4 qtl/acre.

Pusa Mustard 28: Ready to harvest in 107 days. Productivity is high compared to other variety. Oil contain about 41.5%.[24]

### IV. CONCLUSIONS

These varieties are used to develop in the Vindhyas.For good germination of crop it required a fine seed bed. Do ploughing of soil for two to three times followed by two harrowing. Do planking after every ploughing. Prepared firm, moist and uniform seed bed as it will help in uniform germination of seed. Optimum time for sowing Mustard crop is from September to October month. To control weeds take two to three weeding and two hoeing at interval of two weeks when intensity of weeds is low. Give pre-sowing irrigation before sowing of seeds. For good growth, crop required in general about three irrigation apply at interval of three weeks after sowing. Apply good amount of organic manures in soil, it will help to conserved moisture in soil. Pest and their control: Aphid: They suck the sap and plant get weak, pale and plant remain stunted and in later stage do not bear pods. To control, do timely sowing of crop. Avoid excessive use of nitrogen fertilizer. In infestation is observed in field, take spray of any one pesticide like Thiamethoxam@80gm or Quinalphos or Oxydemeton@250ml or Chlorpyriphos @200ml in 100-125Ltr water per acre. Painted bug: It destroyed crop at germination stage also at maturity stage. They suck sap and leads to drying of crop. Application of irrigation three to four week after sowing help in reducing pest population. If infestation is observed in field, take spray of Malathion @ 400ml/acre. Disease and their control: Blight: Dark brown spot with dot like bodies developed on stem, branches, leaflet and pods. In severe infestation, withering of stem and pod is observed.For cultivation use resistant varieties. On incidence of disease spray with Indofil M-45 or Captan @ 260gm/100Ltr of water per acre. If necessary repeat the spray at interval of 15days.[25]

Downy Mildew: Whitish growth is observed on lower surface of leaves. The leaves give green or yellow coloration appearance. Destroyed debris of previous crop before sowing of crop. Spray crop with Indofil M-45 @ 400gm in 150 Ltr of water per acre for four times with interval of 15 days. White Rust: White pustules are observed on leaves, stem and on flower. Swelling of affected part is observed. Because of infection flower become sterile. If infestation observed in field, to control spray with Metalaxyl 8%+Mancozeb 64% @ 2gm/Ltr of water or spray with Copper oxychloride @ 25gm/Ltr of water. If necessary repeat the spray with interval of 10-15days.

Crop takes 110 to 140 days to mature, depending variety. Harvest crop when pods turn yellow and seed become hard. To avoid shattering loss carried out harvesting in morning hours. With the help of sickle, cut crops close to ground. After then stacked harvested crops for 7-10 days. After proper drying complete threshing operation. Cleaned seed must be dried in the sun for 4-5days or till the moisture content comes down to 8 percent. After proper drying of seeds, stored seeds in gunny bags or bin.[26]

### REFERENCES

- 1. Zohary, Daniel; Hopf, Maria; Weiss, Ehud (2012). Domestication of Plants in the Old World: The Origin and Spread of Domesticated Plants in Southwest Asia, Europe, and the Mediterranean Basin (Fourth ed.). Oxford: University Press. p. 139.
- 2. ^ "Indus civilization". Encyclopædia Britannica. Encyclopædia Britannica Online. Encyclopædia Britannica Inc., 2016. Web. 16 March 2016 <a href="https://www.britannica.com/topic/Indus-civilization">https://www.britannica.com/topic/Indus-civilization</a>.
- 3. ^ "What is Mustard?". Saskatchewan Mustard Development Commission. Mustard Consumer Website. SMDC 2011. Web. 16 March 2016 <"The Mustard Site | What is Mustard?". Archived from the original on 2016-03-25. Retrieved 2016-03-16.>.
- 4. ^ Alex C McAlvay, Aaron P Ragsdale, Makenzie E Mabry, Xinshuai Qi, Kevin A Bird, Pablo Velasco, Hong An, J Chris Pires, Eve Emshwiller, *Brassica* rapa Domestication: Untangling Wild and Feral Forms and Convergence of



| ISSN: 2395-7852 | www.ijarasem.com | Impact Factor: 6.551 |Bimonthly, Peer Reviewed & Referred Journal|

### | Volume 10, Issue 1, January 2023 |

Crop Morphotypes, Molecular Biology and Evolution, msab108, https://doi.org/10.1093/molbev/msab108, 30 April 2021.

- 5. ^ "Excellent mustard production likely in Rangpur region". Dhaka Tribune. 2021-01-21. Retrieved 2022-02-07.
- 6. ^ "FAOSTAT Countries by Commodity". UN Food and Agriculture Organization. Retrieved 2012-05-08.
- 7. https://www.bundessortenamt.de/internet30/file admin/Files/PDF/bsl getreide 2015.pdf<sup>l</sup>
- 8. ^ "Brancheorganisatie Akkerbouw" (PDF). www.kennisakker.nl. Retrieved 2022-02-07.
- 9. ^ "Industrial mustard crops for biodiesel and biopesticides" (PDF). 17 November 2004. Archived from the original (PDF) on 17 November 2004.
- 10. "Mustard". hort.purdue.edu. Archived from the original on 19 January 2022. Retrieved 23 December 2021.
- 11. ^ "What Is Mustard Made Of? | Wonderopolis". www.wonderopolis.org. Archived from the original on 26 December 2021. Retrieved 27 December 2021.
- 12. ^ "Tame Mustard Production Publications". www.ag.ndsu.edu. Archived from the original on 15 June 2021. Retrieved 27 December 2021.
- 13. ^ Wysocki, D (July 2002). "Edible Mustard" (PDF). Oregon State University Extension. Archived (PDF) from the original on 27 December 2021. Retrieved 27 December 2021.
- 14. ^ "Pulses and Special Crops > Pulses and Special Crops > Producers". Agr.gc.ca. 20 March 2007. Archived from the original on 27 April 2005. Retrieved 28 July 2010.
- 15. ^ "Which Country Produces the Most Mustard Seeds?". www.helgilibrary.com. Retrieved 5 November 2022.
- 16. ^ "Major Food And Agricultural Commodities And Producers Countries By Commodity". Fao.org. Archived from the original on 19 June 2012. Retrieved 13 June 2022.
- 17. ^ "Mustard". www.agmrc.org. Archived from the original on 5 January 2022. Retrieved 5 January 2022.
- 18. ^ Meghvansi, Mukesh K.; Varma, Ajit (2015). Organic Amendments and Soil Suppressiveness in Plant Disease Management. Cham, Switzerland. pp. xi–531. ISBN 978-3-319-23075-7. OCLC 928384780. ISBN 978-3-319-23074-0. ISBN 978-3-319-36379-0.
- 19. ^ Rosskopf, Erin; Di Gioia, Francesco; Hong, Jason C.; Pisani, Cristina; Kokalis-Burelle, Nancy (25 August 2020).

  "Organic Amendments for Pathogen and Nematode Control". Annual Review of Phytopathology. Annual Reviews. 58 (1):

  277–311. doi:10.1146/annurev-phyto-080516-035608. ISSN 0066-4286. PMID 32853099. S2CID 221360634.
- 20. ^ Singh Saharan, Govind; Mehta, Naresh; Meena, Prabhu Dayal (2016). Alternaria Diseases of Crucifers: Biology, Ecology and Disease Management. Singapore: Springer Singapore. pp. xxxvii+299. doi:10.1007/978-981-10-0021-8. ISBN 978-981-10-0019-5. S2CID 27153886. ISBN 978-981-10-0021-8.
- 21. ^ "Mark 4 The Parable of the Sower". The Parable of the Sower. New International Version of the Bible. Archived from the original on 16 April 2021. Retrieved 9 June 2016.
- 22. ^ Sharman, Shreshtha; Neeta Sharma. Together with English Language & Literature (Term II). p. 222. ISBN 9788181374653. Archived from the original on 2 June 2022. Retrieved 12 August 2016.
- 23. ^ Buddhaghosa Buddhist legends, Volume 28 (published 1921) Archived 21 July 2019 at the Wayback Machine
- 24. ^ Michaelson, Jay. "The meaning of God". Learnkabbalah.com. Archived from the original on 10 March 2019. Retrieved 12 September 2019.
- 25. ^ "The Quranic Arabic Corpus Translation". corpus.quran.com. Archived from the original on 21 February 2019. Retrieved 21 February 2019.
- 26. ^ "Hadith Number 165, Book 1". Sahih Muslim. Archived from the original on 2 June 2022. Retrieved 2 June 2022.







