and number of bands unmatched between two varieties. It also informs about the presence and absence of marker in a particular profile table. It informs about the primer and its variety showing minimum coefficient in comparison with all the other primers in the list.

Functions: (1) Calculates Jaccard's coefficients between two varieties; (2) calculates Jaccard's coefficients primer wise. In this case all the varieties of one primers are compared with all the varieties of other primer; (3) calculates Jaccard's coefficients with total markers. In this case one variety is compared with other variety irrespective of primer.

The report generated by Jacarrd's coefficient has following fields: crop, technique, variety, primer, total number of records compared, field 1, field 2, availability of field1, availability of field 2, matched bands, unmatched bands, Jaccard's coefficients.

Print report: This option is used to get the detailed report. It can be used to get crop-wise, technique-wise, primer-wise, variety-wise information. It could also give report, if the choice is in combination.

Exploration for the Collection of Sesame (*Sesamum indicum* L.) Germplasm from Central Narmada Valley in Madhya Pradesh

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Key Words: Collection, Sesame, Madhya Pradesh

Sesame (*Sesamum indicum* L. syn. *S. orientale* L.) is one of the oldest oilseed crops and is under cultivation from ancient times (Joshi, 1961; Weiss, 1971). It is regarded as the "queen of oilseeds". probably because of its oil (about 50% of seed weight) resistant, to oxidation and rancidity when stored at ordinary ambient temperatures (Bedigrain and Harlan, 1986). The centre of origin of sesame is not certain. East Indies, India, the Middle East and Africa have been suggested as possible centres of origin (Nayar and Mehta, 1968). However there is no doubt about its antiquity in the Indian sub-continent. The charred *Sesamum* seeds have been recorded from Harappa (Ca. 3500-1700 BC) the oldest archeological site in the region.

Exploration for the collection of sesame (*Sesamum indicum* L.) germplasm from Central Narmada Valley or Bundelkhand region of Madhya Pradesh was undertaken by the Project Coordinating Unit (Sesame and Niger), Jawaharlal Nehru Krishi Vishwa Vidyalaya Campus, Jabalpur (MP) in October 2000. Random method of sampling with coarse grid survey was followed for the collection of samples mainly from farmers' field, threshing yards and farm stores. Mostly the emphasis was given for the collection of local types from the interior/remote areas far away from the main roads. Due care was taken to avoid the repetition of samples. Mostly one sample was collected from a specific site or a village until and unless warranted by the apparent distinct types.

A total of 120 samples of divergent types of sesame were collected from about 120 sites in different habitats ranging from undulating plains of Narmada valley to hill tops and slopes of Satpura mountains. This region is known for its richness in diversity in both flora and fauna and lie between 77° to 80°E longitude and 21.9 to 23.6°N latitude. During the course of exploration, it has been observed that sesame is a typical crop of small holders, often grown under marginal or stress conditions. Due to change in the cropping pattern the sesame crop by and large, has been replaced by soybean in the surveyed area, mainly because of its low yield and high susceptibility to diseases and insect pests.

The collected germplasm represented variability in most of the important plant characteristics such as plant height, number of branches (from highly branched to mono stem type), number of locules/capsule, seed colour ranging from white, light brown to dark black, seed size (small to bold types). White seeded types are vernacularly known as *Tilli* or *Tili* and black seeded

types as *Til.* Black seeded types are mostly used in Havan/Poojas and other rituals. In all, 25 samples represented diversity from Narsinghpur, 1 from the adjoining district of Sehore, 32 from Hosangabad and 62 from Raisen district in Narmada valley of Madhya Pradesh. Besides, some very good single plant selections were made for plant types and other devisable traits. Some of the samples were collected from old stocks of the farmers, which are likely to be of primitive type.

In the surveyed area sesame cultivation is done for various uses other than the oil extraction such for making the *Laddoo* (a vernacular sweet dish) on special occasion of *Sankranti* (day of worship of lord Shiva, on 14th January every year) particularly in the Pachmarhi. In most of the surveyed area of Narmada valley (on both the sides of holy Narmada river) sesame is grown only as mixed crop with arhar, jowar and sometimes with soybean. Only very few fields of pure crop, were observed during the course of exploration. Previously sesame was grown by each and every farming family of this area for its oil and other proposes but now a days it has been mostly replaced by soybean.

The surveyed areas are mostly inhabited by *Gonds, Korkus* tribals and *Kirars, Gurjars, Raghuwanshis* and other migrants from Northern India who were growing sesame as an oilseed crop from the ancient times for their regular and occasional domestic requirements. The crop is grown during July as a pure *kharif* crop or mixed with the other *kharif* crops. Sowing starts with the onset of monsoon or depending upon the availability of moisture and/or irrigation facilities. Sesame is also grown in *rabi*/summer season in this area. The summer types are distinct types and vernacularly known as *maghai tili* because it is grown in the month of *Magh* or the *Magha* according to the old Hindu calendar (sowing is done mostly from January 2000 to February 2001.

Research efforts are required to be strengthened for the re-establishment of this high quality oil crop (sesame), otherwise it will be completely replaced from the farmers fields. Now a days the farmers talk about sesame that "*Tili to billa gayi*" which means sesame has been completely eradicated from the area.

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Viruses Intercepted in Exotic Germplasm during 1991-2000 in Quarantine

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Key Words: Germplasm, Legume, Quarantine, Interceptions, Seed-transmitted viruses

National Bureau of Plant Genetic Resources is a nodal agency for quarantine processing of exotic germplasm and transgenic planting material introduced in the country for research purposes by both public and private sector organizations. During the decade 1991-2000, about 6692 exotic legume and 425 flowering plants/planting material were grown in post-entry quarantine nursery and greenhouses for screening against exotic viruses or strains thereof. The objective was to minimize the risk of introduction of destructive viruses and its strains into the country and release samples to the indentor from disease-free plants. A check-list of economically important seed-transmitted viruses associated with legumes and those yet not reported from India have been prepared (Kumar *et al.* 1994) and updated. Thus, based on the literature available, detection methods are employed to test the material for quarantine clearance.

Methods employed for testing legume and planting material included (i) visual inspection (ii) grow-out test of seeds and seedlings or rooted planting material grown in pots (iii) infectivity tests of suspected viruses on known hosts (iv) serological tests such as Enzyme Linked