Fruit length ranged from 6.22 cm to 17.05 cm. Contrary to this fruit breadth ranged from 4.22 - 8.50 cm, exhibiting good scope for improvement in both the traits. Average yield of 438.97 q/ha among the genotypes were observed. It ranged from 511.45-659.10 q/ha among the top 15 promising lines. Highest yield was recorded in genotype CH-450 (659.10 q/ha) followed by CH-575 (643.55 q/ha), CH-586 (633.35 q/ha) and IC-144083 (628.16 q/ha). Therefore, it is evident that a considerable range of variability has been observed for all the traits under evaluation. The low estimates SEM and CV also suggested the presence of genetic variability with low interference on non-genetic factors. Mishra and Mishra (1990), Nandi (1992) and Dutta (1988) also reported variation in germplasm of brinjal.

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Characterization of Toria (*Brassica rapa* ssp. *toria*) Germplasm

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Key Words: Agro-morphological traits, Toria germplasm, Characterization

Oilseed brassica species are cultivated most widely throughout the globe. In India, oilseed brassicas are the second most important oilseed crop after groundnut. These crops are mainly grown in winter season except for early forms of *Brassica rapa* ssp. *toria*. Toria is cultivated largely in Assam, Orissa, West Bengal, Meghalaya and Tripura, under *rabi* season. It is also cultivated as catch crop or as mixed crop with gram and lentil in northern parts of the country, while in eastern parts it is grown as winter crop. It is most suited to the multiple cropping systems. It escapes from major pests and disease due to early maturing nature, which is an added advantage over mustard cultivation.

Ninety-four lines of toria germplasm, obtained from different centres were grown in augmented design during *rabi* 1999-2000 at NRCRM, Bharatpur, in a two row plot of 3 m length with the row to row and plant to plant spacing of 30 and 10 cm, respectively. PT 303 and T-9 were used as checks. The observations were recorded on 5 randomly selected plants for plant height, primary branches/plant, secondary branches/plant, main shoot length, number of siliquae on main shoot, seeds/ siliqua, siliqua length, siliqua beak length, biological yield/per plant, harvest index, 1000-seed weight, oil and protein content. All the characters except for oil and protein content exhibited substantial variability. Highest variability was observed for seed yield/plant (cv 71.6%) followed by secondary branches/plant (cv 57.0%). Oil content showed least variability *i.e.* CV 3.3% (Table 1).

Table 1. Range, mean and coefficient of variation (CV) for different agro-morphological traits in *B. rapa* spp. *toria* germplasm

Characters	Range	Mean ± S. Em	CV (%)
Plant height (cm)	38.4-127.8	89.4 ± 2.5	22.1
Primary branches/plant	2.8-9.2	5.14 ± 0.2	27.3
Secondary branches/plant	2.0-20.8	8.7 ± 0.6	57.0
Main shoot length (cm)	32.0-65.6	46.4 ± 1.1	18.8
Siliquae on main shoot	24.2-77.8	49.5 ± 1.9	30.3
Siliqua length (cm)	3.1-5.2	4.1 ± 0.05	10.8
Siliqua beak length (cm)	0.9-1.7	1.4 ± 0.02	14.2
Seeds/siliqua	8.2-20.8	15.1 ± 0.3	14.5
1000-seed weight (g)	1.04-4.0	2.6 ± 0.1	26.6
Oil content (%)	37.8-43.9	40.9 ± 0.2	3.3
Protein content (%)	18.8-22.9	21.0 ± 0.1	4.6
Seed yield/plant (g)	2.1-25.5	8.7 ± 0.8	71.6
Harvest index (%)	13.7-39.4	28.3 ± 0.7	18.9

Many promising lines were identified for different characters as revealed in Table 2. Among the genotype evaluated, genotype NIC-7187 found superior for yield contributing traits *i.e.* primary branches/plant, main shoot length, harvest index and seed yield/plant and genotype IC-94030 was observed superior for secondary branches/plant, number of siliqua on main shoot, seed/ siliqua length, seed yield/plant, 1000-seed weight and oil content. Desirable traits such as lower plant height and small siliqua beak length is observed in genotype EC 305374.

The data reveals the vast potential of existing germplasm in developing genotypes, with desirable traits. However, efforts should be made to broaden genetic base of oilseed brassicae by collecting landraces having desired economic attributes.

Table 2. Promising accessions of toria for different economic traits

Attributes	Germplasm accessions
Plant height (<60 cm)	EC-305374, EC-333595, EC-305594, IC-147592, TS-50
Primary branches/plant (>7.0)	YS-36-4, NDT-9902, NIC-7187, IC-289660, IC-94030
Secondary branches/plant (>15.0)	YS-36-4, MCT-96, IC-94030, NDT-9902, EC-333597
Main shoot length (> 76.0 cm)	NIC-7187, EC-333597, IC-94030, IC-94030, NDT-9902
No. of siliquae on main shoot (> 74.0)	NDT-9902, PBT-221, IC-94030
Seeds/Siliqua (> 17.0)	NDT-9902, JMT-9341, MCT-96, IC-94030
Siliqua length (> 4.0 cm)	IC-94030, NDT-9902, IC-76707, IC-94306, IC-289660
Seed yield/plant (>18.0 g)	IC-289660, NIC-7187, EC-333597, IC-94030, EC-333597
Harvest index (> 35%)	NRCT-98-120, TH-9802, NIC-7187, EC-305574
Siliqua beak length (< 1.0 cm)	IC-94030, TS-50, PBT-221, EC-305374, EC-333597
1000-seed weight (> 3.5 g)	PT-303, IC-94030, TH-9802, NRCT-98-120, NDT-9902
Protein content	TK-9902, TS-51, PBT-126-6, PBT-221
Oil content (> 40%)	YS-36-4, IC-94030, IC-94030, IC-76707, IC-289660

Variability and Character Association Among Floral Traits and Yield in Bread Wheat (*Triticum aestivum* (L.) em. Thell)

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Key Words: Wheat (*Triticum aestivum*), Variability Character Association, Floral Traits, Field Traits

Development of hybrids in wheat is being considered as an alternative approach to achieve a quantum jump in grain yield. Thus, selection for floral traits which enhance magnitude of out-crossing such as duration of floral opening, greater anther extrusion in the male parent; openness of florets and stigma receptivity in the female parent is crucial for successful development of hybrids. An experiment was conducted to investigate the extent of variability among wheat genotypes for floral traits and yield along with nature of association among these traits.

The experimental material consisted of 491 diverse genotypes of bread wheat including land races, released varieties and advanced lines introduced from CIMMYT, Mexico. These were grown in randomized block design in three replications during *rabi* 1996-97. Crop was sown in the last week of November in a double row plot of 3 m length with inter-and intra-row spacings of 25 cm and 10 cm, respectively. The data were recorded for 7 floral traits, *viz.*- days to 50% flowering, anther length, stigma length, anther extrusion. openness of floret, duration of flower opening, pollen viability and yield/ plant in 10 randomly selected plants. Coefficients of variability, broad sense heritability (%), genetic advance

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