Correlation study on yield and yield contributing traits in *Brassica compestris* L.

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**ABSTRACT**

Studies on correlation among yield and yield contributing traits in *Brassica compestris* L. were carried out during the year 2012-13, using six brassica varieties including three commercial varieties and three candidates selected from the available germplasm. The genetic material used consisted of *V*₁=P-8 (UCD-8), *V*₂=P-14 (UCD-14), *V*₃=Gaj Sarhein, *V*₄=P-4 (UCD-4), *V*₅=Sindh Raya and *V*₆=S-9 (Check). The experiment was laid out in a three replicated Randomized Complete Block Design. The results revealed that among brassica genotypes significant (P<0.05) differences were observed for plant height, days to 75% flowering, pods plant⁻¹, seeds pod⁻¹, seed index and seed yield plant⁻¹; while non-significant (P>0.05) for branches plant⁻¹ and days to 90% maturity. The check variety S9 performed better in four yield traits viz; plant height, days to 90% maturity, number of pods plant⁻¹ and seed yield plant⁻¹. The cultivar P4 performed better in days to 75% flowering and seed index, whereas, Sindh Raya and gaj sirengh performed better for number of branches plant⁻¹ and number of seeds pod⁻¹ respectively. Highly significant positive correlation was observed in plant height, days to 75% flowering, number of pods plant⁻¹ and seed index vs seed yield plant⁻¹. Positive and significant correlation was observed between plant height and pods plant⁻¹ (r=0.8168**), plant height and seed yield plant⁻¹ (r=0.6138**), days to 75% flowering and seed index (r=0.5144**), days to 75% flowering and seed yield plant⁻¹ (r=0.7523**), pods plant⁻¹ and seed index (r=0.6551**), pods plant⁻¹ and seed yield plant⁻¹ (r=0.5541**), seed index and seed yield plant⁻¹ (r=0.5980**). Negative and significant correlation was observed between plant height and seeds pod⁻¹, (r= -0.6832**), branches plant⁻¹ and days to 90% maturity (r= -0.4740**) and pods plant⁻¹ and seeds pod⁻¹ (r= -0.6794**).

**INTRODUCTION**

Inspite of continuous efforts, oilseeds production in the country could not increase in accordance with the increase in the domestic demand for edible oils. The major oilseed crops grown in the country include sunflower, canola, cottonseed, rapeseed and mustard. During the year 2011-12, the total availability of edible oil was 2.748 million tons against the local production of 0.636 million tons while imports were 2.148 million tons. The import bill during 2011-12 stood at Rs. 216.4 billion; while during the year 2012-13, 1.738 million tons of edible oil valued at Rs. 153.3 billion has been imported. Total availability of edible oil from all sources is provisionally estimated at 2.35 million tons during 2012-13 and the local production was only 0.612 million tons [1]. This situation clearly suggests that local edible oil production may be increased with evolution and development of high yielding oilseed varieties.

Brassica (family Brassicaceae) comprised of a number of crop species that mostly produce oil for edible purpose. The common oilseed crops of this family are *Brassica oleracea*, *Brassica napus*, *Brassica rapa*, *Brassica juncea*, *Brassica campestris* and *Brassica chinensis*. However, the most popular ones are *Brassica juncea*, *Brassica napus*, *Brassica oleracea*, *Brassica rapa* and *Brassica campestris*.

Considerable emphasis has been given upon the inter relationship between yield and yield components in field
crops. The correlation coefficient analysis measures the magnitude of relationship between various plant characters and determines the component character on which selection can be based for improvement in yield. The genetic background of any pair of characters, whether yield, height, or maturity, is unlikely to be under totally separate control, mainly due to linkage or pleiotropy. For plant breeders it is therefore necessary to examine the relationships between pairs of characters in order to decide upon the appropriate selection criteria for a breeding program. In oil crops like Brassica campestris, the association between seed yield and the quality characters, oil and protein content, is of major interest. The present experiment was conducted to study interrelationship among yield and its contributing characters of Brassica compestris L. to identify high yielding brassica genotypes and to assess relationship between yield and its components.

MATERIALS AND METHODS

Studies on the correlations among yield and yield contributing traits in Brassica compestris L. were carried out during the year 2012-13. The experimental crop was planted at the research area of Oilseeds Section, Agriculture Research Institute, Tandojam using six genotypes including three commercial varieties and three candidates were selected from the available germplasm (Genetic stock). The experiment was laid out in a three replicated Randomized Complete Block Design (RCBD) in a plot size of 4.5m x 2.4m. The brassica varieties were sown in rows 45 cm apart on 07.11.2012. Three rows of each of the following brassica genotypes were grown:

**Varieties** = 06, V1= P-8 (UCD-8), V2= P-14 (UCD-14), V3= Gaj Sarhein, V4= P-4 (UCD-4), V5= Sindh Raya, V6= S-9 (Check)

Ten plants of each genotype from each replication selected at random were tagged to record the data in the field and laboratory. Statistical analysis included analysis of variance and correlation for assessing growth and seed yield traits of the tested Brassica compestris L. lines. The traits investigated were; 1. Plant height (cm), 2. Number of branches plant\(^{-1}\), 3. Days to 75% flowering, 4. Days to 90% maturity, 5. Number of pods plant\(^{-1}\), 6. Number of seeds pod\(^{-1}\), 7. Seed index (1000 seed weight, g), 8. Seed yield plant\(^{-1}\) (g).

Correlation coefficient

Simple correlation coefficients (r) were calculated after Snedecor and Cochran [2] for all the character combinations.

Statistical analysis:

The data collected were subjected to analysis of variance using the statistical software MSTATC. The difference among the treatment means was compared by the least significant difference (LSD) test at 0.05 P [3].

RESULTS

1. **Plant height vs Number of branches plant\(^{-1}\)**

There was positive but non-significant correlation (r=0.032\(^{\text{NS}}\)) interrelationship between number of branches plant\(^{-1}\) and plant height suggesting that with increasing plant height, the number of branches plant\(^{-1}\) may increase marginally in Brassica campestris.

2. **Plant height vs Days to 75% flowering**

The association of plant height with days to 75% flowering was positive but non-significant (r=0.2067\(^{\text{NS}}\)) which indicates that with increasing plant height of Brassica campestris genotypes, the days to 75% percent flowering may also increase to some extent.

3. **Plant height vs Days to 90% maturity**

The relationship between plant height and days to 90 percent maturity was also positive but non-significant (r=0.1631\(^{\text{NS}}\)) which indicated that increase in plant height of Brassica campestris, there may be a little increase in the days to 90 percent maturity.

4. **Plant height vs Number of pods plant\(^{-1}\)**

The correlation coefficient (r) showed positive and highly significant (r=0.8168\(^{**}\)) association between
plant height and number of pods plant$^{-1}$ which suggested that with increase in plant height, the number of pods plant$^{-1}$ will also increase remarkably.

5. Plant height vs Number of seeds pod$^{-1}$
The data in regards to correlation coefficient (r) show negative and highly significant ($r = -0.6832^{**}$) association between plant height and number of seeds pod$^{-1}$, which indicates that with increase in plant height, the number of seeds pod$^{-1}$ will decrease significantly.

6. Plant height vs Seed index (1000 seed weight)
The correlation studies indicate that plant height and seed index interrelationship was positive and non-significant ($r = 0.3836^{NS}$) which disclose that with increasing plant height, the seed index value of Brasscia campestris may increase slightly.

7. Plant height vs Seed yield plant$^{-1}$
There was a positive and highly significant ($r = 0.6138^{**}$) interrelationship between plant height and seed yield plant$^{-1}$ in Brasscia campestris which showed that with increasing plant height, the seed yield plant$^{-1}$ will also increase significantly.

8. Number of branches plant$^{-1}$ vs Days to 75% flowering
Negative and non-significant association ($r = -0.4070^{NS}$) between days to 75% flowering and number of branches plant$^{-1}$ was determined which showed that increasing number of branches plant$^{-1}$ may cause a slight decrease in the number of days to 75% flowering.

9. Number of branches plant$^{-1}$ vs Days to 90% maturity
The correlation between number of branches plant$^{-1}$ and days to 90% maturity was negative and significant ($r = -0.4740^{*}$), showing that increase in the number of branches plant$^{-1}$ in Brasscia campestris will cause a decrease in the number of days to 90 percent maturity.

10. Number of branches plant$^{-1}$ vs Number of pods plant$^{-1}$
The correlation coefficient reveals positive and non-significant association ($r = 0.1466^{NS}$) between number of branches plant$^{-1}$ and number of pods plant$^{-1}$ which suggested that increase in the number of branches plant$^{-1}$ in Brasscia campestris may also increase the number of pods plant$^{-1}$ to some extent.

11. Number of branches plant$^{-1}$ vs Number of seeds pod$^{-1}$
The association between number of branches plant$^{-1}$ and the number of seeds pod$^{-1}$ was negative and non-significant ($r=-0.2623^{NS}$) which guided that with increase in the number of branches plant$^{-1}$, the number of seeds pod$^{-1}$ may decrease slightly in Brasscia campestris.

12. Number of branches plant$^{-1}$ vs Seed index (1000 seed weight)
The association of number of branches plant$^{-1}$ with seed index was positive but non-significant ($r = 0.1012^{NS}$) suggesting that with increasing the number of branches plant$^{-1}$, a marginal increase in the seed index of Brasscia campestris is expected.

13. Number of branches plant$^{-1}$ vs Seed yield plant$^{-1}$
The correlation coefficient suggested positive and non-significant association ($r= 0.2018^{NS}$) between the number of branches plant$^{-1}$ and seed yield plant$^{-1}$ of Brasscia campestris indicating that with increase in the number of branches plant$^{-1}$ in marginally, a minor increase in seed yield plant$^{-1}$ is anticipated.

14. Days to 75% flowering vs Days to 90% maturity
There was a non-significant but positive association ($r=0.4081^{NS}$) between days to 75% flowering and the days to 90% maturity, indicating that with increase in the days to 75% flowering, a smaller increase in the number of days to 90% maturity is guessed in Brasscia campestris.

15. Days to 75% flowering vs Number of pods plant$^{-1}$
The association of days to days to 75% flowering and number of pods plant$^{-1}$ of Brasscia campestris depicts
positive but non-significant association (r=0.1040NS) indicating that with increasing days to 75% flowering, the number of pods plant\(^{-1}\) may also increase to a little bit.

**16. Days to 75% flowering vs Number of seeds pod\(^{-1}\)**
The correlation coefficient illustrated positive but non-significant association (r=0.2542NS) between days to 75% flowering and the number of seeds pod\(^{-1}\) of *Brassica campestris*, suggesting that with increasing the days to 75% flowering, an insignificant increase in the number of seeds pod\(^{-1}\) is predicted.

**17. Days to 75% flowering vs Seed index (1000 seed weight)**
There was a positive and significant (r=0.5144*) correlation between the days to 7% flowering and the seed index value, which indicated that with increase in the days to 75% flowering, a significant increase in the seed index of *Brassica campestris* is foreseen.

**18. Days to 75% flowering vs Seed yield plant\(^{-1}\)**
The association between days to 75% flowering and seed yield plant\(^{-1}\) was positive and highly significant (r= 0.7523**), referring as days to 75% flowering increase, the seed yield plant\(^{-1}\) is expected to increase simultaneously in *Brassica campestris*.

**19. Days to 90% maturity vs Number of pods plant\(^{-1}\)**
Interrelationship between days to 90% maturity and number of pods plant\(^{-1}\) showed positive but non-significant correlation (r= 0.1749NS), revealing that with the increase in days to 90% maturity, a slight increase in the number of pods plant\(^{-1}\) in *Brassica campestris* is expected.

**20. Days to 90% maturity vs Number of seeds pod\(^{-1}\)**
Number of days to 90% maturity and number of seeds pod\(^{-1}\) interrelationship revealed positive and non-significant correlation (r=0.1853NS), which suggested that with increase in days to 90% maturity, a negligible increase in the number of seeds pod\(^{-1}\) of *Brassica campestris* is anticipated.

**21. Days to 90% maturity vs Seed index (1000 seed weight)**
Correlation between days to 90% maturity and seed index of *Brassica campestris* showed positive but non-significant association (r = 0.3557NS). This emphasizes that as the number of days to 90% maturity increase, the seed index value will decrease slightly.

**22. Days to 90% maturity vs Seed yield plant\(^{-1}\)**
Interrelation between days to 90% maturity and seed yield plant\(^{-1}\) showed positive but non-significant correlation (r= 0.1911NS). It means as the number of days to 90% maturity increase, a small increase in the seed yield plant\(^{-1}\) of *Brassica campestris* is expected.

**23. Number of pods plant\(^{-1}\) vs Number of seeds pod\(^{-1}\)**
The results revealed that correlation for number of pods plant\(^{-1}\) and number of seeds plant\(^{-1}\) of *Brassica campestris* was negative and significant to each other (r = -0.6794**); hence, the increase in the number of pods plant\(^{-1}\) will cause a substantial decrease in the number of seeds pod\(^{-1}\).

**24. Number of pods plant\(^{-1}\) vs Seed index (1000 seed weight)**
The correlation for number of pods plant\(^{-1}\) and seed index value was positive and highly significant to each other (r = 0.6551**). So, the increase in the pods plant\(^{-1}\) will cause significant increase in seed index value of *Brassica campestris*.

**25. Number of pods plant\(^{-1}\) vs Seed yield plant\(^{-1}\)**
There was a positive and highly significant (r = 0.5541**) correlation between the number of pods plant\(^{-1}\) seed yield plant\(^{-1}\), which suggested that with increase in the number of pods plant\(^{-1}\) of *Brassica campestris* the seed yield plant\(^{-1}\) will increase significantly.

**26. Number of seeds pod\(^{-1}\) vs seed index**
The correlation coefficient for number of seeds pod\(^{-1}\) and seed index showed negative and non-significant relationship (r = -0.3764NS). This shows that with increase in the number of seeds pod\(^{-1}\) the seed index will decrease to some extent in *Brassica campestris*.
27. Number of seeds pod$^{-1}$ vs seed yield plant$^{-1}$

There was negative and non-significant interrelationship ($r= -0.1948^{NS}$) between number of seeds pod$^{-1}$ and seed yield plant$^{-1}$, indicating that with increase in the number of seeds pod$^{-1}$, the seed yield plant$^{-1}$ in Brassica campestris could receive an insignificant adverse effect.

28. Seed index (1000 seed weight) vs Seed yield plant$^{-1}$

These two parameters (seed index value and seed yield plant$^{-1}$) were positively and highly significantly correlated with each other ($r= 0.5980^{**}$), showing that as the seed index value increases, the seed yield plant$^{-1}$ will also increase significantly in Brassica campestris.

DISCUSSION:

The findings of the present study indicated that the correlation studies showed that positive and significant correlation was observed between plant height and pods plant$^{-1}$ ($r=0.8168^{**}$), plant height and seed yield plant$^{-1}$ ($r=0.6138^{**}$), days to 75% flowering and seed index ($r=0.5144^{*}$), days to 75% flowering and seed yield plant$^{-1}$ ($r=0.7523^{**}$), pods plant$^{-1}$ and seed index ($r=0.6551^{**}$), pods plant$^{-1}$ and seed yield plant$^{-1}$ ($r=0.5541^{**}$), seed index and seed yield plant$^{-1}$ ($r=0.5980^{**}$). Negative and significant correlation was observed between plant height and seeds pod$^{-1}$, ($r= -0.6832^{**}$), branches plant$^{-1}$ and days to 90% maturity ($r= -0.4740^{*}$) and pods plant$^{-1}$ and seeds pod$^{-1}$ ($r= -0.6794^{**}$). These results are further supported by many past workers, who have studied genetic parameters for yield improvement in rapeseed and mustard. Ali [4] found highly significant and positive correlations of seed yield per plant with harvest index (0.573) and seed index (0.432). Flowering duration was also significantly correlated (0.238) with seed yield. Seed yield per plant was negatively and non-significantly correlated with days to maturity and branches per plant. Masood [5] reported that branches per plant showed significant correlation (0.557) with pods per plant in brassica genotypes. The results of the present study are partially supported by many past researchers. Engqvist and Becker [6] concluded that genetic correlations with yield in every genotype may be low; and a consistency of high positive correlation among yield components in all genotypes was observed. This largely influenced the predictions for the proportion of lines that are superior for two characters simultaneously. Masood [5] found that seed yield per plant was negatively and non-significantly correlated with days to maturity and branches per plant; while branches per plant also showed significant correlation (0.557) with pods per plant and negative but highly significant correlations with seeds/pod (-0.326). Malik [7] observed positive correlation of seed yield with branches, pods plant$^{-1}$, while negative highly significant relation of days to flowering and plant height. Alemayehu and Becker [8] observed highly significant negative correlation coefficient among yield and yield traits in brassica. Aggarwal [9] reported that the seed index had positive and significant (P<0.05) correlation with the seed yield in brassica genotypes. Akbar [10] found that seed index had non-significant positive correlation with plant height while significant association with seed yields. Muhammad [11] found highly significant positive correlation between seed yield and number of branches plant$^{-1}$. Zhang and Zhou [12] observed that number of seed pod$^{-1}$ and 1000-grain weight were positively correlated with seed yield plant$^{-1}$ in brassica; and Basalma [13] reported that an increased plant height affected rise in branching adversely, which increased lodging resulting in reduced seed yield. Khan [14] found low correlation among different traits; however some of the related characters like days to flowering, pods raceme$^{-1}$, pods length, plant height, seed pod$^{-1}$, yield ha$^{-1}$, oleic acid, and moisture were highly significant and positively correlated with each other as compared to the remaining traits which are negatively and non-significantly correlated with each other. So selections for such traits are useful for yield and quality improvement. Sheemar [15] reported significant and positive correlation of seed weight with seed yield plant$^{-1}$ in brassica. Abideen [16] reported significant and positive correlation of seed yield plant$^{-1}$ with pods plant$^{-1}$ and protein content was important in making indirect selection for seed yield.
CONCLUSIONS:

1. *Brassica compestris* genotypes differed significantly (P<0.05) for plant height, days to 75% flowering, pods plant\(^{-1}\), seeds pod\(^{-1}\), seed index and seed yield plant\(^{-1}\); while non-significant (P>0.05) for branches plant\(^{-1}\) and days to 90% maturity.

2. The check variety S9 performed better in four yield traits viz; plant height, days to 90 % maturity, number of pods plant\(^{-1}\) and seed yield plant\(^{-1}\).

3. The cultivar P4 performed better in days to 75% flowering and seed index, whereas, Sindh Raya and gaj sirenh performed better for number of branches plant\(^{-1}\) and number of seeds pod\(^{-1}\) respectively.

4. Highly significant positive correlation was observed in plant height, days to 75% flowering, number of pods plant\(^{-1}\) and seed index vs seed yield\(^{-1}\).

Table 1: Mean squares from analysis of variances for plant height, number of branches plant\(^{-1}\), days to 75% flowering and days to 90% maturity of *Brassica campestris*

<table>
<thead>
<tr>
<th>Source of variation</th>
<th>Degrees of Freedom</th>
<th>Characters</th>
<th>Plant height</th>
<th>No. of branches plant(^{-1})</th>
<th>Days to 75% flowering</th>
<th>Days to 90% maturity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Replications</td>
<td>2</td>
<td>172.22</td>
<td>0.02000</td>
<td>5.0556</td>
<td>0.3889</td>
<td></td>
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<tr>
<td>Genotypes</td>
<td>5</td>
<td>1733.79**</td>
<td>0.15467(^{NS})</td>
<td>21.1556**</td>
<td>3.9556(^{NS})</td>
<td></td>
</tr>
<tr>
<td>Error</td>
<td>10</td>
<td>70.16</td>
<td>0.47067</td>
<td>1.5889</td>
<td>5.7222</td>
<td></td>
</tr>
</tbody>
</table>

\(^{**}=\) Significant at 1% probability level.
\(^{NS}=\) Non-Significant

Table 2: Mean squares from analysis of variances for number of pods plant\(^{-1}\), number of seeds pod\(^{-1}\), seed index and seed yield plant\(^{-1}\) of *Brassica campestris*

<table>
<thead>
<tr>
<th>Source of variation</th>
<th>Degrees of Freedom</th>
<th>Character</th>
<th>Number of pods plant(^{-1})</th>
<th>Number of seeds pod(^{-1})</th>
<th>Seed index (g)</th>
<th>Seed yield plant(^{-1}) (g)</th>
</tr>
</thead>
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<td>Replications</td>
<td>2</td>
<td>86.10</td>
<td>0.247</td>
<td>0.0028</td>
<td>0.0078</td>
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<tr>
<td>Genotypes</td>
<td>5</td>
<td>95350.10**</td>
<td>134.448(^{**})</td>
<td>0.5415(^{**})</td>
<td>8.1938(^{**})</td>
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<tr>
<td>Error</td>
<td>10</td>
<td>27.70</td>
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<td>0.0021</td>
<td>0.0020</td>
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\(^{**}=\) Significant at 1% probability level.

Table 3: Mean performance of *Brassica campestris* genotypes for plant height, number of branches plant\(^{-1}\), days to 75% flowering and days to 90% maturity

<table>
<thead>
<tr>
<th>Genotypes</th>
<th>Characters</th>
<th>Plant height</th>
<th>No. of branches plant(^{-1})</th>
<th>Days to 75% flowering</th>
<th>Days to 90% maturity</th>
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</thead>
<tbody>
<tr>
<td>P-8 (UCD-8)</td>
<td></td>
<td>191.33</td>
<td>6.33</td>
<td>74.00</td>
<td>132.00</td>
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<tr>
<td>P-14 (UCD-14)</td>
<td></td>
<td>192.33</td>
<td>6.06</td>
<td>76.00</td>
<td>131.67</td>
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<tr>
<td>Gaj Sarhein</td>
<td></td>
<td>140.00</td>
<td>6.20</td>
<td>75.33</td>
<td>134.00</td>
</tr>
<tr>
<td>P-4 (UCD-4)</td>
<td></td>
<td>165.00</td>
<td>6.26</td>
<td>77.33</td>
<td>134.00</td>
</tr>
<tr>
<td>Sindh Raya</td>
<td></td>
<td>177.67</td>
<td>6.73</td>
<td>70.00</td>
<td>132.67</td>
</tr>
<tr>
<td>S-9 (Check)</td>
<td></td>
<td>208.00</td>
<td>6.40</td>
<td>76.66</td>
<td>134.33</td>
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<td>S.E.±</td>
<td></td>
<td>6.8389</td>
<td>0.5602</td>
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<td>LSD 0.05</td>
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<td>15.238</td>
<td>NS</td>
<td>2.2932</td>
<td>NS</td>
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</table>

http://www.lsij.org
Table 4: Mean performance of *Brassica campestris* cultivars for number of pods plant$^{-1}$, number of seeds pod$^{-1}$, seed index and seed yield plant$^{-1}$

<table>
<thead>
<tr>
<th>Genotypes</th>
<th>Number of pods plant$^{-1}$</th>
<th>Number of seeds pod$^{-1}$</th>
<th>Seed index (g)</th>
<th>Seed yield plant$^{-1}$ (g)</th>
</tr>
</thead>
<tbody>
<tr>
<td>P-8 (UCD-8)</td>
<td>209.67</td>
<td>13.40</td>
<td>1.50</td>
<td>5.05</td>
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<tr>
<td>P-14 (UCD-14)</td>
<td>193.00</td>
<td>16.33</td>
<td>1.90</td>
<td>5.55</td>
</tr>
<tr>
<td>Gaj Sarhein</td>
<td>43.33</td>
<td>30.40</td>
<td>1.75</td>
<td>2.96</td>
</tr>
<tr>
<td>P-4 (UCD-4)</td>
<td>248.33</td>
<td>16.33</td>
<td>2.57</td>
<td>4.73</td>
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<tr>
<td>Sindh Raya</td>
<td>329.33</td>
<td>12.33</td>
<td>1.98</td>
<td>1.97</td>
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<td>S-9 (Check)</td>
<td>576.67</td>
<td>14.00</td>
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<td>S.E.$\pm$</td>
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Table 5 Correlation (r) coefficients among various traits in *Brassica campestris* cultivars

<table>
<thead>
<tr>
<th>Character</th>
<th>Plant height</th>
<th>No. of branches plant$^{-1}$</th>
<th>Days to 75% flowering</th>
<th>Days to 90% maturity</th>
<th>No. of pods plant$^{-1}$</th>
<th>No. of seeds pod$^{-1}$</th>
<th>Seed index</th>
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<tbody>
<tr>
<td>No. of branches plant$^{-1}$</td>
<td>0.032NS</td>
<td>-0.4070NS</td>
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<td>Days to 75% flowering\</td>
<td>0.2067NS</td>
<td>-0.4740*</td>
<td>0.4081NS</td>
<td></td>
<td></td>
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<tr>
<td>Days to 90% maturity \</td>
<td>0.1631NS</td>
<td>-0.7623NS</td>
<td>0.1040NS</td>
<td>0.1749NS</td>
<td></td>
<td></td>
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<tr>
<td>No. of pods plant$^{-1}$</td>
<td>0.8168**</td>
<td>0.1466**</td>
<td>0.2542NS</td>
<td>0.1853NS</td>
<td>-0.6794**</td>
<td></td>
<td></td>
</tr>
<tr>
<td>No. of seeds pod$^{-1}$</td>
<td>-0.6832**</td>
<td>-0.2623NS</td>
<td>0.3557NS</td>
<td>-0.3764NS</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Seed index</td>
<td>0.3836NS</td>
<td>0.1012NS</td>
<td>0.5144*</td>
<td>0.1911NS</td>
<td>0.5541**</td>
<td>-0.1948**</td>
<td>0.5980**</td>
</tr>
<tr>
<td>Seed yield plant$^{-1}$</td>
<td>0.6138**</td>
<td>0.2018NS</td>
<td>0.7523**</td>
<td></td>
<td></td>
<td></td>
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</tr>
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REFERENCE


http://www.lsij.org