

## SUMMARY AND CONCLUSION

The present investigation entitled, “Effect of seed treatment on growth and yield of Indian Mustard (*Brassica juncea* L.)”, was conducted in plot No.16 B at Crop Research Farm, Department of Agronomy, Allahabad School of Agriculture, Sam Higginbottom Institute of Agriculture, Technology and Sciences, Allahabad during *spring* season of 2011-12. The experiment was laid out in Randomized Block Design consisting of 13 treatments replicated thrice. The different treatments were allocated randomly in each replication results of the investigation are summarized below.

1. A steady increase in plant height was observed from 20 to 80 DAS. Plant height all significantly highest was observed in treatment T<sub>13</sub> Carbendazim 50% WP + Mancozeb M-45 and it was statistically at par to the treatment T<sub>8</sub> Mancozeb M-45 at 40, 60 & 80, DAS , T<sub>7</sub> Carbendazim 50% WP at 40, 60 & 80 DAS.

2. The highest number of branches plant<sup>-1</sup> was observed in treatment T<sub>13</sub> Carbendazim 50% WP + Mancozeb M-45 at 40, 60 and 80 DAS and it was statistically at par to the treatment T<sub>8</sub> Mancozeb M-45 at 60 & 80, DAS. followed by T<sub>7</sub> Carbendazim 50% WP at 60 & 80 DAS. followed by T<sub>9</sub> KCl + Mancozeb M-45 at 80 DAS.

3. At 20, 40, 60 & 80 DAS highest plant dry weight was observed in treatment T<sub>13</sub> Carbendazim 50% WP + Mancozeb M-45 it was statistically at par to the treatment T<sub>8</sub> Mancozeb M-45 at 40, 60 & 80 DAS, followed by T<sub>7</sub> Carbendazim 50% WP at 80 DAS followed by T<sub>9</sub> KCl + Mancozeb M-45 at 40 DAS. followed by T<sub>5</sub> CaCl<sub>2</sub> at 80, DAS .

4. At 20 to 40, 40 to 60 DAS intervals highest CGR was observed in treatment T<sub>13</sub> Carbendazim 50% WP + Mancozeb M-45 and it was statistically at par to the treatment T<sub>8</sub> Mancozeb M-45 20 to 40 & 40 to 60. followed by T<sub>7</sub> Carbendazim 50% WP 40 to 60 DAS.

5. At 0 to 20 DAS highest RGR was observed in treatment T<sub>7</sub> Carbendazim 50% WP. where as at 20 to 40 DAS highest RGR was observed in treatment no soaking while at 60 to 80 DAS highest RGR was observed in treatment T<sub>6</sub> CaCl<sub>2</sub> at 60 to 80 DAS and it

was statistically at par to the treatment T<sub>12</sub> NaCl + Mancozeb M-45. followed by T<sub>10</sub> K<sub>2</sub>SO<sub>4</sub> + MancozebM-45. but 20 to 40 & 40 to 60 DAS that was found non significant.

6. Maximum number of siliqua plant<sup>-1</sup>, seed yield, seed siliqua<sup>-1</sup>, straw yield, harvest index (%), oil content & test weight (g) was observed in treatment T<sub>13</sub>Carbendazim 50% WP + Mancozeb M-45. that was found statistically at par to the treatment T<sub>7</sub> Carbendazim 50% with seed siliqua<sup>-1</sup>, seed yield, straw yield, test weight (g) followed by Mancozeb M-45 with seed siliqua<sup>-1</sup>, seed yield, straw yield, test weight (g) but harvest index (%) non significant.

7. Maximum oil content (%) was observed in treatment T<sub>6</sub> CaCl<sub>2</sub>. Lowest oil content (%) with T<sub>1</sub> no soaking treatment .

8. Highest gross return (₹ 78430.00), net return (₹43439) and benefit-cost ratio (2.24) were observed in treatment T<sub>13</sub> Carbendazim 50% WP + Mancozeb M-45 compared with other treatment combinations.

## **CONCLUSION**

The required quantity of seed soaked for 6 hr in the solution of these chemicals and then dried in shade. Indian mustard variety Mahyco bold was grown with 80 kg N, 60 kg P and 40 kg K/ha basal. The total rainfall received during the growth season was 6.22 mm in 2011-12. Crop-growth rate was recorded at different growth stages of plant growth. It may be concluded that amongst the treatments Carbendazim 50% WP+ Mancozeb M-45 in combination with seed treatment, was found to be the best for obtaining highest seed yield 1.96 ( t ha<sup>-1</sup> ) and benefit cost ratio 2.24 in mustard. Since the findings are based on the research done in one season it may be repeated for confirmation.