

| <b>Experiment No. : 11</b> |                                  |   |   |               |    |               |
|----------------------------|----------------------------------|---|---|---------------|----|---------------|
| <b>1.</b>                  | <b>Title of experiment</b>       | : | <b>BRINJAL HYBRID ROUND-AVT-II</b>                                  |               |    |               |
| <b>2.</b>                  | <b>Location</b>                  | : | Regional Horticultural Research Station, A.C.H.,<br>N.A.U., Navsari |               |    |               |
| <b>3.</b>                  | <b>Agro-ecological situation</b> | : | South Gujarat Heavy Rainfall Zone, AES-III                          |               |    |               |
| <b>4.</b>                  | <b>Name of Investigator</b>      | : | PI: Dr.J.M.Vashi<br>Co-PI: Dr.H.R.Rathod<br>Asso. PI: Dr. N.K.Patel |               |    |               |
| <b>5.</b>                  | <b>Year and Season</b>           | : | <i>Rabi</i> 2024-2025   |               |    |               |
| <b>6.</b>                  | <b>Experimental detail</b>       | : |   |               |    |               |
|                            | <b>(a) Design</b>                | : | RBD   |               |    |               |
|                            | <b>(b) No. of Entries</b>        | : | 7   |               |    |               |
|                            |                                  |   | 1.  | 2022/BRRHYB-1 | 5. | 2022/BRRHYB-5 |
|                            |                                  |   | 2.  | 2022/BRRHYB-2 | 6. | 2022/BRRHYB-6 |
|                            |                                  |   | 3.  | 2022/BRRHYB-3 | 7. | 2022/BRRHYB-7 |
|                            |                                  |   | 4.  | 2022/BRRHYB-4 |    |               |
|                            | <b>(c) Replication</b>           | : | 3   |               |    |               |
|                            | <b>(d) Plot Size</b>             | : | 4.5 m X 4.2 m   |               |    |               |
|                            | <b>(e) Spacing</b>               | : | 75 cm X 60 cm   |               |    |               |
|                            | <b>(f) Fertilizer NPK kg/ha</b>  | : | 100-50-50   |               |    |               |
|                            | <b>(g) Date of seed sowing</b>   | : | 06/11/2024  |               |    |               |
|                            | <b>(h) Date of transplanting</b> | : | 10/12/2024  |               |    |               |
|                            | <b>(i) Date of first picking</b> | : | 10/2/2025   |               |    |               |
|                            | <b>(j) Date of last picking</b>  | : | 08/5/2025   |               |    |               |
| <b>7.</b>                  | <b>Methodology</b>               | : | As per the guideline given by PC cell                               |               |    |               |
| <b>8.</b>                  | <b>Research results</b>          | : | Table -1 to Table – 8   |               |    |               |

**Table 1. Days to first marketable fruit maturity (Brinjal Hybrid Round - AVT-II)**

| Days to first marketable fruit maturity |                  |             |       |       |       |
|---|------------------|-------------|-------|-------|-------|
| Sr. No.                                 | Entries/Genotype | RI          | RII   | RIII  | Mean  |
| 1                                       | 2022/BRRHYB-1    | 72.00       | 76.00 | 71.00 | 73.00 |
| 2                                       | 2022/BRRHYB-2    | 70.00       | 77.00 | 73.00 | 73.33 |
| 3                                       | 2022/BRRHYB-3    | 74.00       | 71.00 | 76.00 | 73.67 |
| 4                                       | 2022/BRRHYB-4    | 68.00       | 70.00 | 74.00 | 70.67 |
| 5                                       | 2022/BRRHYB-5    | 69.00       | 70.00 | 64.00 | 67.67 |
| 6                                       | 2022/BRRHYB-6    | 71.00       | 77.00 | 70.00 | 72.67 |
| 7                                       | 2022/BRRHYB-7    | 74.00       | 73.00 | 66.00 | 71.00 |
| <b>SEm±</b>                             |                  | <b>1.87</b> |       |       |       |
| <b>CD at 5%</b>                         |                  | <b>NS</b>   |       |       |       |
| <b>CV%</b>                              |                  | <b>4.51</b> |       |       |       |

**Table 2. Marketable fruit yield (kg/plot) (Brinjal Hybrid Round - AVT-II)**

| Marketable fruit yield (kg/plot) |                  |              |       |       |       |
|----------------------------------|------------------|--------------|-------|-------|-------|
| Sr. No.                          | Entries/Genotype | RI           | RII   | RIII  | Mean  |
| 1                                | 2022/BRRHYB-1    | 48.72        | 40.36 | 52.44 | 47.17 |
| 2                                | 2022/BRRHYB-2    | 59.33        | 77.69 | 60.12 | 65.71 |
| 3                                | 2022/BRRHYB-3    | 49.78        | 56.88 | 46.91 | 51.19 |
| 4                                | 2022/BRRHYB-4    | 70.40        | 65.22 | 77.32 | 70.98 |
| 5                                | 2022/BRRHYB-5    | 67.33        | 70.49 | 72.90 | 70.24 |
| 6                                | 2022/BRRHYB-6    | 71.14        | 65.55 | 59.83 | 65.51 |
| 7                                | 2022/BRRHYB-7    | 59.16        | 55.39 | 51.27 | 55.27 |
| <b>SEm±</b>                      |                  | <b>3.80</b>  |       |       |       |
| <b>CD at 5%</b>                  |                  | <b>11.72</b> |       |       |       |
| <b>CV%</b>                       |                  | <b>10.82</b> |       |       |       |

**Table 3. Marketable fruit yield (q/ha) (Brinjal Hybrid Round - AVT-II)**

| Marketable fruit yield (q/ha) |                  |              |        |        |               |
|-------------------------------|------------------|--------------|--------|--------|---------------|
| Sr. No.                       | Entries/Genotype | RI           | RII    | RIII   | Mean          |
| 1                             | 2022/BRRHYB-1    | 257.78       | 213.54 | 277.46 | 249.59        |
| 2                             | 2022/BRRHYB-2    | 313.92       | 411.06 | 318.10 | 347.69        |
| 3                             | 2022/BRRHYB-3    | 263.39       | 300.95 | 248.20 | 270.85        |
| 4                             | 2022/BRRHYB-4    | 372.49       | 345.08 | 409.10 | <b>375.56</b> |
| 5                             | 2022/BRRHYB-5    | 356.24       | 372.96 | 385.71 | 371.64        |
| 6                             | 2022/BRRHYB-6    | 376.40       | 346.83 | 316.56 | 346.60        |
| 7                             | 2022/BRRHYB-7    | 313.02       | 293.07 | 271.27 | 292.45        |
| <b>SEm±</b>                   |                  | <b>20.12</b> |        |        |               |
| <b>CD at 5%</b>               |                  | <b>62.00</b> |        |        |               |
| <b>CV%</b>                    |                  | <b>10.82</b> |        |        |               |

**Conclusion:**

Total seven hybrids were evaluated under Brinjal (round) AVT-II trial. Differences among the genotypes for fruit yield were found significant. Hybrid 2022/BRRHYB-4 exhibited significantly higher fruit yield (375.56 q/ha), which were statistically at par with 2022/BRRHYB-5 (371.64 q/ha), 2022/BRRHYB-2 (347.69 q/ha) and 2022/BRRHYB-6 (346.60 q/ha). Among all the coded hybrids, 2022/BRRHYB-4 was found promising at Navsari centre.

**Table 4. Average weight of single fruit (g) (Brinjal Hybrid Round - AVT-II)**

| Average weight of single fruit (g) |                  |             |       |       |       |
|------------------------------------|------------------|-------------|-------|-------|-------|
| Sr. No.                            | Entries/Genotype | RI          | RII   | RIII  | Mean  |
| 1                                  | 2022/BRRHYB-1    | 54.10       | 58.78 | 63.34 | 58.74 |
| 2                                  | 2022/BRRHYB-2    | 66.32       | 65.49 | 71.94 | 67.92 |
| 3                                  | 2022/BRRHYB-3    | 46.30       | 49.20 | 55.38 | 50.29 |
| 4                                  | 2022/BRRHYB-4    | 66.89       | 70.33 | 72.38 | 69.87 |
| 5                                  | 2022/BRRHYB-5    | 70.92       | 59.87 | 65.36 | 65.38 |
| 6                                  | 2022/BRRHYB-6    | 59.33       | 62.45 | 71.14 | 64.31 |
| 7                                  | 2022/BRRHYB-7    | 60.89       | 63.38 | 52.94 | 59.07 |
| <b>SEm±</b>                        |                  | <b>2.68</b> |       |       |       |
| <b>CD at 5%</b>                    |                  | <b>8.25</b> |       |       |       |
| <b>CV%</b>                         |                  | <b>7.46</b> |       |       |       |

**Table 5. Fruit length (cm) (Brinjal Hybrid Round - AVT-II)**

| Fruit length (cm) |                  |             |      |      |      |
|-------------------|------------------|-------------|------|------|------|
| Sr. No.           | Entries/Genotype | RI          | RII  | RIII | Mean |
| 1                 | 2022/BRRHYB-1    | 4.88        | 4.73 | 5.18 | 4.93 |
| 2                 | 2022/BRRHYB-2    | 5.69        | 5.86 | 4.92 | 5.49 |
| 3                 | 2022/BRRHYB-3    | 5.02        | 4.53 | 4.36 | 4.64 |
| 4                 | 2022/BRRHYB-4    | 6.12        | 5.33 | 5.74 | 5.73 |
| 5                 | 2022/BRRHYB-5    | 5.66        | 4.85 | 5.19 | 5.23 |
| 6                 | 2022/BRRHYB-6    | 4.78        | 5.02 | 5.33 | 5.04 |
| 7                 | 2022/BRRHYB-7    | 4.62        | 4.89 | 5.07 | 4.86 |
| <b>SEm±</b>       |                  | <b>0.21</b> |      |      |      |
| <b>CD at 5%</b>   |                  | <b>0.64</b> |      |      |      |
| <b>CV%</b>        |                  | <b>7.03</b> |      |      |      |

**Table 6. Fruit diameter (cm) (Brinjal Hybrid Round - AVT-II)**

| <b>Fruit diameter (cm)</b> |                         |             |            |             |             |
|----------------------------|-------------------------|-------------|------------|-------------|-------------|
| <b>Sr. No.</b>             | <b>Entries/Genotype</b> | <b>RI</b>   | <b>RII</b> | <b>RIII</b> | <b>Mean</b> |
| 1                          | 2022/BRRHYB-1           | 4.66        | 4.77       | 5.14        | 4.86        |
| 2                          | 2022/BRRHYB-2           | 5.19        | 5.80       | 5.63        | 5.54        |
| 3                          | 2022/BRRHYB-3           | 4.70        | 5.09       | 4.77        | 4.85        |
| 4                          | 2022/BRRHYB-4           | 5.85        | 6.12       | 6.42        | 6.13        |
| 5                          | 2022/BRRHYB-5           | 5.36        | 5.89       | 4.75        | 5.33        |
| 6                          | 2022/BRRHYB-6           | 4.82        | 5.03       | 5.19        | 5.01        |
| 7                          | 2022/BRRHYB-7           | 5.23        | 4.77       | 4.39        | 4.80        |
| <b>SEm±</b>                |                         | <b>0.20</b> |            |             |             |
| <b>CD at 5%</b>            |                         | <b>0.62</b> |            |             |             |
| <b>CV%</b>                 |                         | <b>6.64</b> |            |             |             |

**Table 7. Plant height (m) (Brinjal Hybrid Round - AVT-II)**

| <b>Plant height (m)</b> |                         |              |            |             |             |
|-------------------------|-------------------------|--------------|------------|-------------|-------------|
| <b>Sr. No.</b>          | <b>Entries/Genotype</b> | <b>RI</b>    | <b>RII</b> | <b>RIII</b> | <b>Mean</b> |
| 1                       | 2022/BRRHYB-1           | 0.75         | 0.72       | 0.70        | 0.72        |
| 2                       | 2022/BRRHYB-2           | 0.98         | 0.90       | 1.02        | 0.97        |
| 3                       | 2022/BRRHYB-3           | 0.87         | 1.17       | 0.95        | 1.00        |
| 4                       | 2022/BRRHYB-4           | 1.22         | 1.12       | 1.25        | 1.20        |
| 5                       | 2022/BRRHYB-5           | 0.98         | 0.93       | 0.90        | 0.94        |
| 6                       | 2022/BRRHYB-6           | 1.06         | 0.82       | 0.98        | 0.95        |
| 7                       | 2022/BRRHYB-7           | 0.92         | 0.72       | 0.67        | 0.77        |
| <b>SEm±</b>             |                         | <b>0.06</b>  |            |             |             |
| <b>CD at 5%</b>         |                         | <b>0.18</b>  |            |             |             |
| <b>CV%</b>              |                         | <b>10.78</b> |            |             |             |

**Table.8 Ancillary observation**

| <b>Sr. No.</b> | <b>Entries/Genotype</b> | <b>FSB</b> | <b>BW</b> | <b>Nematode</b> |
|----------------|-------------------------|------------|-----------|-----------------|
| 1              | 2022/BRRHYB-1           | Tolerant   | Tolerant  | Tolerant        |
| 2              | 2022/BRRHYB-2           | Tolerant   | Tolerant  | Tolerant        |
| 3              | 2022/BRRHYB-3           | Tolerant   | Tolerant  | Tolerant        |
| 4              | 2022/BRRHYB-4           | Tolerant   | Tolerant  | Tolerant        |
| 5              | 2022/BRRHYB-5           | Tolerant   | Tolerant  | Tolerant        |
| 6              | 2022/BRRHYB-6           | Tolerant   | Tolerant  | Tolerant        |
| 7              | 2022/BRRHYB-7           | Tolerant   | Tolerant  | Tolerant        |

