**Table.1 Effect of herbicide spray in death time of weed plant. (Plot size 4**x**2m2)**

|  |  |  |  |
| --- | --- | --- | --- |
| **S. No.** | **Variety Name** | **Treatment Name** | **Death time of weed plant** |
|  | NRC 130 | Imazethapyr 35% + Imazamox 35 % WG | 8 |
|  | Glyphosate 41% S.L. | 6 |
|  | Paraquat dichloride 24% S.L. | 3 |
|  | NRC 86 | Imazethapyr 35% + Imazamox 35 % WG | 8 |
|  | Glyphosate 41% S.L. | 6 |
|  | Paraquat dichloride 24% S.L. | 3 |

**Table 2. Effect of different herbicides applied at crop maturity stage on weed population (Plot size 4x2 m2)**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Variety** | **Treatment Name** |  | ***Euphorbia hirta*** | ***Amaranthus viridis*** | ***Commelina benghalensis*** | ***Echinochloa***  ***colona*** | ***Cyperus rotundus*** | **Total** |
| NRC 130 | Imazethapyr + Imazamox | Before spray | 15 | 16 | 14 | 15 | 11 | **71** |
| After spray | 6 | 5 | 7 | 6 | 7 | **31** |
| Glyphosate | Before spray | 15 | 14 | 16 | 16 | 14 | **75** |
| After spray | 2 | 1 | 4 | 1 | 6 | **14** |
| Paraquat dichloride | Before spray | 16 | 11 | 17 | 15 | 13 | **72** |
| After spray | 0 | 0 | 0 | 0 | 4 | **4** |
| NRC 86 | Imazethapyr + Imazamox | Before spray | 12 | 14 | 16 | 18 | 16 | **76** |
| After spray | 7 | 7 | 6 | 8 | 4 | **32** |
| Glyphosate | Before spray | 13 | 19 | 17 | 17 | 12 | **78** |
| After spray | 2 | 3 | 4 | 1 | 5 | **15** |
| Paraquat dichloride | Before spray | 15 | 16 | 18 | 17 | 11 | **77** |
| After spray | 0 | 0 | 0 | 0 | 3 | **3** |

**Table 3. Yield and 100 seed weight**

**Plot Size 126**x**3.15 m = 396.9 m2**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **S. No.** | **Variety** | **Treatment Name** | **Plot / Kg** | **q/Ha** | **100 Seed W.T.** |
| 1 | NRC 130 | Imazethapyr + Imazamox | 41 | 10.33 | 13.303 |
| 2 | Glyphosate | 46 | 11.58 | 13.546 |
| 3 | Paraquat dichloride | 45 | 11.33 | 13.358 |
| 4 | Control | 47 | 11.84 | 13.236 |
| 5 | NRC 86 | Imazethapyr + Imazamox | 33 | 8.3 | 9.502 |
| 6 | Glyphosate | 35 | 8.81 | 9.766 |
| 7 | Paraquat dichloride | 32 | 8.06 | 9.332 |
| 8 | Control | 36 | 9.07 | 9.658 |

**Table 4. Seed Germination Test**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **S. No.** | **Variety** | **Treatment Name** | **Germination % After 15 Days** | **Germination %**  **After 30 Days** | **Germination% After 45 Days** |
| 1 | NRC130 | Imazethapyr + Imazamox | 86 | 92 | 90.5 |
| 2 | Glyphosate | 88 | 89 | 87.5 |
| 3 | Paraquat dichloride | 86 | 88 | 92.5 |
| 4 | Control | 82 | 91 | 89.5 |
| 5 | NRC 86 | Imazethapyr + Imazamox | 83 | 67 | 63.5 |
| 6 | Glyphosate | 75 | 72 | 75 |
| 7 | Paraquat dichloride | 82 | 77.5 | 76 |
| 8 | Control | 69 | 61 | 64.5 |

**Table 5. Seed Vigour**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **S. No** | **Variety** | **Treatment Name** | **Vigour I** | | | **Vigour II** | | |
| 15 Days | 30 Days | 45 Days | 15 Days | 30 Days | 45 Days |
| 1 | NRC 130 | Imazethapyr + Imazamox | 1861.9 | 1984.4 | 2538.3 | 134.50 | 160.82 | 142.54 |
| 2 | Glyphosate | 1843.6 | 1840.2 | 2005.0 | 139.74 | 154.68 | 136.24 |
| 3 | Paraquat dichloride | 1730.2 | 1608.4 | 2523.0 | 139.62 | 150.48 | 172.98 |
| 4 | Control | 1810.2 | 1493.1 | 2212.4 | 130.73 | 163.62 | 141.14 |
| 5 | NRC 86 | Imazethapyr + Imazamox | 1949.7 | 1473.3 | 1463.4 | 85.49 | 72.63 | 73.85 |
| 6 | Glyphosate | 1633.4 | 1452.4 | 1923 | 86.64 | 88.49 | 98.78 |
| 7 | Paraquat dichloride | 1929.11 | 1732.3 | 1887.4 | 98.94 | 78.20 | 96.06 |
| 8 | Control | 1621.5 | 1288.2 | 1611.21 | 72.86 | 68.14 | 83.21 |

**Table 6.** **Accelerated Ageing Germination Test.**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **S. No.** | **Variety** | **Treatment Name** | **Germination After 3 Days At 40o Cin BOD** | **Germination After 7 Days At 40o C in BOD** |
| 1 | NRC130 | Imazethapyr + Imazamox | 87 | 93 |
| 2 | Glyphosate | 87.5 | 93.5 |
| 3 | Paraquat dichloride | 88.5 | 90 |
| 4 | Control | 90.5 | 88 |
| 5 | NRC 86 | Imazethapyr + Imazamox | 77 | 81 |
| 6 | Glyphosate | 74.5 | 84.5 |
| 7 | Paraquat dichloride | 79.5 | 82.5 |
| 8 | Control | 76.5 | 73.5 |

**Table 7. Seed Vigour of Accelerated Ageing Germination Test.**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| **S. No.** | **Variety** | **Treatment Name** | **Vigour I** | | **Vigour II** | | |
| 3 Days | 7 Days | 3 Days | 7 Days | |
| 1 | NRC 130 | Imazethapyr + Imazamox | 2225.4 | 2300.8 | 283.36 | | 151.78 |
| 2 | Glyphosate | 2222.5 | 2313.1 | 271.08 | | 155.21 |
| 3 | Paraquat dichloride | 2224.8 | 1996.2 | 330.19 | | 145.35 |
| 4 | Control | 2094.1 | 2127.8 | 345.35 | | 157.52 |
| 5 | NRC 86 | Imazethapyr + Imazamox | 2192.9 | 2204.8 | 161.62 | | 107.00 |
| 6 | Glyphosate | 2039 | 2135.3 | 149.52 | | 115.85 |
| 7 | Paraquat dichloride | 2307 | 2234.9 | 179.75 | | 103.29 |
| 8 | Control | 1977.5 | 2068.2 | 152.16 | | 100.99 |