Table 1: The morphological, physical and chemical properties of soil (0-15 cm) of the experimental field

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| A. Morphological characteristics | | | | | | | | |
|  |  | Soil Tract | | : | | | Old Brahmaputra Alluvium | | |
|  |  | Soil Series | : | | | Sonatola Series | | |
|  |  | Parent materials | : | | | Old Brahmaputra River Borne Deposit | | |
| B. Physical characteristics of soil | | | | | | | | |
|  |  | Sand (2.00-0.50 mm) | | | : | | | 25.2% | | |
|  |  | Silt (0.5-0.002 mm) | | | : | | | 72.0% | | |
|  |  | Clay (< 0.002 mm) | | | : | | | 2.8% | | |
|  |  | Textural class | | | : | | | Silty loam | | |
| C. Chemical characteristics of soil | | | | | | | | |
|  |  | pH | : | | | 6.71 | | |
|  |  | Organic matter (%) | : | | | 0.93 | | |
|  |  | Total matter (%) | : | | | 0.13 | | |
|  |  | Available sulphur (ppm) | : | | | 13.9 | | |
|  |  | Available phosphorus (ppm) | : | | | 16.3 | | |
|  |  | Exchangeable potassium (ppm) | : | | | 0.28 | | |

Table 2. Effect of tillage practice on yield contributing characters and yield of rice

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Tillage practices | Plant  height  (cm) | No. of  effective  tillers  m-2 | No. of non-effective tillers  m-2 | Panicle length (cm) | No. of  grains  panicle-1 | No. of sterile spikelets  panicle-1 | 1000  grain weight (gm) | Grain yield  (t ha-1) | Benefit-Cost Ratio |
| 2013-14 |  |  |  |  |  |  |  |  |  |
| CT | 110.4 | 209 | 44 | 24 | 159 | 47 | 30 | 5.20 | 0.72b |
| ST | 109.9 | 211 | 44 | 25 | 157 | 49 | 31 | 5.17 | 0.88a |
| LSD(0.05) | NS | NS | NS | NS | NS | NS | NS | NS | 0.13 |
| CV (%) | 2.74 | 12.6 | 11.7 | 2.4 | 3.47 | 2.27 | 1.32 | 0.34 | 4.72 |
| 2014-15 |  |  |  |  |  |  |  |  |  |
| CT | 107.3 | 361b | 70a | 23.9 | 114b | 41 | 21.9 | 5.23b | 0.81b |
| ST | 105.6 | 382a | 56b | 24.4 | 126a | 40 | 23.0 | 5.72a | 0.99a |
| LSD(0.05) | NS | 4.59 | 3.00 | NS | 8.29 | NS | NS | 0.09 | 0.03 |
| CV (%) | 4.60 | 1.20 | 5.68 | 3.84 | 5.14 | 8.88 | 6.83 | 2.10 | 1.24 |
| In a column, the figure with similar letter do not differ significantly whereas dissimilar letter differs significantly  CT= Conventional tillage, ST= Strip tillage, CV=Co-efficient of variance | | | | | | | | | |

Table 3. Effect residue level on yield contributing characters and yield of rice

|  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Residue  levels | Plant  height  (cm) | No. of  effective  tillers  m-2 | No. of non-effective tillers  m-2 | Panicle length (cm) | No. of  grains  panicle-1 | No. of sterile spikelets  panicle-1 | 1000  grain weight (gm) | Grain yield  (t ha-1) | Benefit-Cost Ratio |
| 2013-14 |  |  |  |  |  |  |  |  |  |
| R0 | 110.6 | 208 | 44 | 24.6 | 160 | 53 | 29.90 | 5.20 | 0.76 |
| R50 | 109.5 | 209 | 43 | 24.5 | 159 | 54 | 29.88 | 5.19 | 0.79 |
| LSD(0.05) | NS | NS | NS | NS | NS | NS | NS | NS | NS |
| CV (%) | 2.74 | 12.67 | 11.71 | 2.40 | 3.47 | 2.27 | 1.32 | 0.34 | 4.72 |
| 2014-15 |  |  |  |  |  |  |  |  |  |
| R0 | 104.9 | 368b | 56b | 24.4 | 115b | 41 | 22.7 | 5.39b | 0.85b |
| R50 | 106.3 | 376a | 69a | 24.5 | 130a | 40 | 22.9 | 5.56a | 0.94a |
| LSD(0.05) | NS | 2.65 | 1.73 | NS | 4.78 | NS | NS | 0.05 | 0.018 |
| CV (%) | 4.60 | 1.20 | 5.68 | 3.84 | 5.14 | 8.88 | 6.83 | 2.10 | 1.24 |
| In a column, the figure with similar letter do not differ significantly whereas dissimilar letter differs significantly  CT= Conventional tillage, ST= Strip tillage, CV= Co-efficient of variance | | | | | | | | | |

Table 4. Combination effect of tillage practice and residue level on yield contributing characters and yield of rice

|  |  |  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| Tillage practice | Residue levels | Plant  height  (cm) | No. of  effective  tillers  m-2 | No. of non-effective tillers  m-2 | Panicle length (cm) | No. of  grains  panicle-1 | No. of sterile spikelets  panicle-1 | 1000  grain weight (gm) | Grain yield  (t ha-1) | Benefit-Cost Ratio |
| 2013-14 |  |  |  |  |  |  |  |  |  |  |
| CT | R0 | 109.3 | 207 | 45 | 24.2 | 162 | 53 | 29.5 | 5.21 | 0.73b |
| R50 | 111.5 | 211 | 43 | 24.6 | 158 | 54 | 29.2 | 5.19 | 0.71b |
| ST | R0 | 110.8 | 209 | 43 | 24.6 | 158 | 53 | 29.8 | 5.20 | 0.80a |
| R50 | 109.1 | 207 | 44 | 24.5 | 160 | 55 | 30.3 | 5.20 | 0.88a |
| LSD(0.05) |  | NS | NS | NS | NS | NS | NS | NS | NS | 0.18 |
| CV (%) |  | 2.74 | 12.67 | 11.71 | 2.40 | 3.47 | 2.27 | 1.32 | 0.34 | 4.72 |
| 2014-15 |  |  |  |  |  |  |  |  |  |  |
| CT | R0 | 108.3 | 359c | 84a | 24.3 | 100c | 41 | 21.6 | 5.17d | 0.78bc |
| R50 | 106.3 | 363c | 70b | 24.5 | 121b | 39 | 22.2 | 5.29c | 0.83c |
| ST | R0 | 104.2 | 376b | 53c | 24.4 | 129ab | 41 | 22.9 | 5.60b | 0.92b |
| R50 | 106.3 | 388a | 41d | 24.2 | 139a | 40 | 23.0 | 5.81a | 1.06a |
| LSD(0.05) |  | NS | 6.50 | 4.25 | NS | 11.72 | NS | NS | 0.13 | 0.045 |
| CV (%) |  | 4.60 | 1.20 | 5.68 | 3.84 | 5.14 | 8.88 | 6.83 | 2.10 | 1.24 |
| In a column, the figure with similar letter do not differ significantly whereas dissimilar letter differs significantly  CT= Conventional tillage, ST= Strip tillage, CV= Co-efficient of variance | | | | | | | | | | |