Table 1. Analysis of variance and means for blanks, doubles, triples and singles as influenced by drum levels. Values are the averages from 100 planter strikes.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Source of variation | df | Blanks | Doubles | Triples | Singles |
|  |  | Sig. level |
| Drum Level  | 2 | <.0001\*\*\* | <.0001\*\*\* |  0.7081 NS | 0.5083 NS |
|  |  | Means for seed size |
| Agitation |  | 5 | 13 | 0 | 82 |
| Medium  |  | 12.5 | 6.5 | 0 | 81 |
| Small |  | 6 | 11 | 0 | 83 |

NS—not significant

\*\*\*-- Significant at 0.01

Table 1 shows result sorted by drum level. Doubles and blanks are significantly different for the three drum levels. However, there is no significant difference in singles between the three drum levels. Overall, small drum is slightly better than agitated and medium size drums.

Table 2. Analysis of variance and means for blanks, doubles, triples and singles as influenced by brush size. Values are the averages from 100 planter strikes.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Source of variation | df | Blanks | Doubles | Triples | Singles |
|  |  | Sig. level |
| Brush Level  | 1 | 0.7722 NS | 0.9117 NS |  0.3094 NS  | 0.9347 NS |
|  |  | Means for seed size |
| Brush 2 |  | 8.0 | 10.1 | 0.3 | 81.6 |
| Brush 3  |  | 7.8 | 10.0 | 0.2 | 82.0 |

NS—not significant

\*\*\*-- Significant at 0.01

There is no significant difference between brush 2 and 3 (table 2).

Table 3. Analysis of variance and means for blanks, doubles, triples and singles as influenced by seed size. Values are the averages from 100 planter strikes.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Source of variation | df | Blanks | Doubles | Triples | Singles |
|  |  | Sig. level |
| Seed size  | 2 | <.0001\*\*\* | <.0001\*\*\* |  0.3559 NS | <.0001\*\*\* |
|  |  | Means for seed size |
| Large round  |  | 5 | 5 | 0 | 90 |
| Medium flat |  | 12.1 | 12 | 0.3 | 75.6 |
| Medium round  |  | 6.5 | 13.0 | 0.3 | 80.2 |

NS—not significant

\*\*\*-- Significant at 0.01

Seed size shows significant difference in number of blanks, doubles and singles. For large round seeds, blanks and doubles were fewer giving the highest percent singulation compared to medium flat and medium round seeds. Medium flat seeds showed lowest percent singulation with comparatively higher blanks and doubles.

Table 4. Means for blanks, doubles and singles as influenced by the interaction of drum level, brush size and seed size. Values are the averages from 100 planter strikes.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Level of****Drum** | **Level of****brush** | **Level of****seed size** | **blanks** | **doubles** | **singles** |
| **Mean** |
| Agitation | 2 | Large round | 5 | 6 | 89 |
| Agitation | 2 | Medium flat | 9.5 | 13 | 77.5 |
| Agitation | 2 | Medium round | 7.5 | 13 | 79.5 |
| Agitation | 3 | Large round | 1.5 | 11 | 87.5 |
| Agitation | 3 | Medium flat | 4 | 18 | 78 |
| Agitation | 3 | Medium round | 3.5 | 16.5 | 80 |
| Medium | 2 | Large round | 6.5 | 3.5 | 90 |
| Medium | 2 | Medium flat | 12.5 | 12.5 | 75 |
| Medium | 2 | Medium round | 5.5 | 13.5 | 81 |
| Medium | 3 | Large round | 9 | 1 | 90 |
| Medium | 3 | Medium flat | 29.5 | 4.5 | 66 |
| Medium | 3 | Medium round | 12.5 | 5 | 82.5 |
| Small | 2 | Large round | 5 | 5 | 90 |
| Small | 2 | Medium flat | 13 | 12 | 75 |
| Small | 2 | Medium round | 7.5 | 13.5 | 79 |
| Small | 3 | Large round | 2.5 | 6 | 91.5 |
| Small | 3 | Medium flat | 5 | 14 | 81 |
| Small | 3 | Medium round | 3 | 17 | 80 |

Table 4 shows interaction between the three variables. The best brush and drum combination across seed size is small drum with brush number three where singulations were ≥80%,number of blanks and doubles are equally reduced.

