

# [Genstat analysis of variance of two seed](https://assignbuster.com/genstat-analysis-of-variance-of-two-seed/)

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﻿GENSTAT Analysis of Variance of Two Seed
The results of the test with respect to germination capacity and germination index values indicate deteriorative alterations that occur during seed ageing, which is reflected in the alterations within seed vigor.
ANOVA depicts the factors that significantly contribute to variation. The wide variation amidst Seed lot U and Seed lot A depicts interaction amidst embryo and maternal genotype.
Hypothesis:
H0= there is more seedlings with unaged seeds
H1= there is more seedlings with aged seeds
Using the ANOVA below to test the hypothesis-value is 0. 36382 while the significance level α= 0. 05. The P-value 0. 36382> α hence we accept the null hypothesis. Therefore, there will be more seedlings there will be more seedlings with unaged seeds as compared to aged seeds
Anova: Single Factor
SUMMARY
Groups
Count
Sum
Average
Variance
Column 1
24
331
13. 79167
103. 6504
Column 2
24
276
11. 5
46. 17391
ANOVA
Source of Variation
SS
df
MS
F
P-value
F crit
Between Groups
63. 02083
1
63. 02083
0. 841263
0. 36382
4. 051749
Within Groups
3445. 958
46
74. 91214
Total
3508. 979
47

Treatment of the aged and unaged
Prediction
Lot
A
U
True treatment
MinT
10. 54
39. 16
P
8. 17
51. 35
PH
7. 53
49. 45
PHRC
1. 86
4. 42
ZeroT
13. 17
23. 49

There is correlation between of the treatment and Seed lot A and U as depicted on the graph above. MinT, P, PH, PHRC and ZeroT was more predominant on the unaged seeds than aged seeds.
Interaction of seedbed preparation and seed ageing
Aged seedlings increased sharply in the initial stages of seedbed preparation process implying that preparation process impacted positively on their growth. Nevertheless, their growth started declining drastically and then again increased steadily as depicted in the above graph. Conversely, unaged declined steadily in the initial stages of seedbed preparation then started increasing steadily. This implies that preparation process impacted negatively on the growth on the unaged seeds. Seed preparation directly correlates to the seedling ageing.
There is relatively higher frequency with the unaged seeds as compared to the aged seeds. Therefore, this confirms the results of the ANOVA that there is more seedlings with unaged seeds as compared to aged seeds.
Bibliography
Williams, E. R., Matheson, A. C., & Harwood, C. (2002). Experimental Design and Analysis for Tree Improvement. Collingwood, CSIRO Publishing. http://search. ebscohost. com/login. aspx? direct= true&scope= site&db= nlebk&db= nlabk&AN= 90824.