

# [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.