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### **USE OF THE SEED VIABILITY EQUATION TO RELATE DIFFERENT STORAGE CONDITIONS AND PREDICT SHELF LIFE OF A SEED LOT**

#### **ABSTRACT**

In the UK as in other countries some treated seed is not used in the season it is produced and is stored for about 18 months before it is planted in the subsequent season. Stocks of unopened boxes of seed are stored in warehouse conditions at roughly 50% RH and 20°C on average. However this is not always the case, as some seed can be stored on farm under various conditions. Any seed, if not stored properly can deteriorate quite rapidly, especially if the storage conditions are damp and/or warm. Understanding what a difference of a few degrees in temperature or a few percent in relative humidity has on storage potential is useful when storing seed and managing stocks. The seed viability equation developed by Ellis and Roberts describes how seed populations deteriorate over time at different conditions of seed moisture and temperature. We have used the principles set out by the equation to calculate how long it will take under different conditions for seeds to deteriorate to the same level, and results from initial storage tests are confirming these predictions.

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