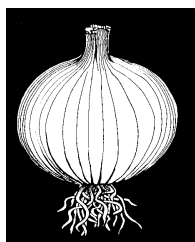




RESULTS for HDC

Project FV 201g



Onion Storage from Seed & Sets 2007/2008

Introduction

Ambient Regime

NIAB trials are normally stored in an ambient insulated store with frost protection. The small scale plots are not treated with sprout suppressant so results should represent genetic differences.

Bulbs were placed in nets in bulk boxes. Bulbs from the seeded trials were scored from February to the end of April to assess sprouting and rotting levels and those from the set trials were assessed from January to March.

Rots have been classified into Neck rot, soft rot, Basal rot, watery scale, bacterial and Penicillium mould.

Cold Storage

Nets from two replicates of the seeded main trial at P.Rix & Sons, Great Horkesley were placed in their commercial box cold store. These were removed in the last week of May and any rots recorded and discarded. Sound bulbs were passed through a static topper then scored for skin quality and bulb firmness. Bulbs were assessed for sprouting and rots after 1, 2 and 3 weeks. After three weeks 10 bulbs from each sample were then cut longitudinally and the length of internal sprouts recorded. A "sprouting index" was calculated from these records as a function of incidence and severity. (see table 3)

Trials

Seven trials were stored as follows:

<i>Trial</i>	<i>sites</i>	<i>table</i>
Spring seed small plots Main & Preliminary trials	Great Horkesley, Essex. Croxtan, Norfolk	<i>table 1</i> <i>table 2</i>
Commercial Cold store	Great Horkesley, Essex	<i>table 3</i>
Spring sets	Moulton, Lincolnshire Thorpeness, Suffolk	<i>table 4</i> <i>table 5</i>

Yield and quality data from these trials has been reported previously and are available from HDC or NIAB

All trials were assessed at NIAB

Comments on the Storage Results

Seed

Both trials stored well with about 60% sound in mid March and 48% (Essex) and 32% (Norfolk) still sound in April in ambient conditions.

Sets

As in the previous two year the East Anglian sets stored better than the Lincolnshire sets by January with little difference after that. Penicillium and bacterial rots and sprouting accounted for most of the unmarketable bulbs.

Commercial Cold Storage

The store environment was:

<i>Stage</i>	<i>Temperature</i>	<i>Relative humidity</i>
Stage 2 curing	27°C	62-67%
Storage	-0.05°C	80-85%

When bulbs were removed from cold store at the end of May there were no visible sprouts and only 1% rots apart from one susceptible white variety. 28% sprouted after 2 weeks shelf life and 74% after 3 weeks.

Comments on the Varieties

(all with no sprout suppressant)

Seed

Main trials (tables 1 & 2)

Brown varieties

Vision was outstanding in both trials with 76% and 52% still sound in the 3rd week of April with no sprout suppressant.

other varieties that stored well from both sites were **Wellington, Napoleon and Sunskin.**

Centro stored well from the Essex trial

and **Renate, Hypark and Sprinter** stored well from the Norfolk trial.

Barito, and Hybing stored poorly from both sites. **Arlondo** and **ADV 00335** stored poorly from Norfolk.

Red varieties

Red Spark was again the outstanding red variety for storage followed by **Kamal** which performed well from Essex.

Preliminary trial (also tables 1 & 2)

AS 07011, 81901 and ADV 02455 stored very well from both sites. The white variety **ADV 19131** stored very badly.

Commercial Cold Storage (table 3)

Brown varieties

Vision was outstanding followed by **Wellington, Sunskin, Sprinter and Napoleon. Centro** and **Arlondo** were the best of the rest. **Barito** and **ADV 98664** stored poorly in these conditions.

Red varieties

Red Spark and **Kamal** were the best of the reds and **Red Baron** the worst.

Sets (tables 4 & 5)

Brown varieties

Sturon (ESC), VCS 6004, Sturon (ABS) and Setton stored well from both sites. **Alpha** stored well from Suffolk despite a high level of Penicillium.

Jagro, Troy and Forum, VCS 6003 and ABS 101 all stored poorly at both sites while **VCS 6162** and **VCS 6164** were poor from Suffolk due to rots but better from Lincs.

Red Varieties

Unlike the previous year when it struggled **Hyred** was the best of the reds from both sites. **Kamal** suffered with Penicillium and **Red Emperor** stored very poorly.