



Celebrating 100 years of the OSTs

The hairstyles may have changed but it is surprising how few of the procedures have, as we celebrate the Official Seed Testing Station's centenary in 2017 and take a look back over the past 100 years of the service at NIAB.

Acredited by the International Seed Testing Association (ISTA), the OSTs for England and Wales is based at NIAB Cambridge, and provides critical support to the statutory systems for Defra and the UK seeds industry.

The OSTs first opened in London in 1917, established in the Government's Food Production Department. It moved and became part of NIAB in Cambridge in 1921, with its primary function to monitor the quality of seed in commerce, as required by the 1920 Seeds Act, particularly in respect of its germination and purity.

With the need for seed testing came the need for reliable seed sampling methods and sampling instruments, led by Professor Friederich Nobbe (1830-1922). He is considered the founder of seed testing, establishing the first seed testing laboratory in Germany in 1869. One of his original designs for a seed sampling spear (trier) is still used today.

From the early days of seed testing, the importance of following the same procedures and rules was quickly recognised, so results from different laboratories could be readily understood and compared. The OSTs was heavily involved in the formation of the International Seed Testing Association (ISTA) in Cambridge in 1924. The primary function of the Association was to produce and publish a single set of seed testing rules which could be followed by all countries testing and trading in seed.

At its peak there were 80+ seed analysts and support staff at the OSTs, testing over 80,000 samples each year. In 100 years little has changed in the techniques used in seed purity analysis and germination protocols are still very much the same. Modern seed testing still

depends on the skill of the analyst: Dr Steve Jones, OSTs Chief Officer from 1997 to 2008, believed that the most essential piece of equipment is always a well-trained seed analyst, "able to identify, by sight, over 200 species of crop and weed seeds to allow purity and other plant species examinations". The skill is being able to recognise and identify one seed of a different species in 25,000 seeds.

Today, the OSTs at NIAB includes the Chief Officer, LSTS Audit Manager, two laboratory managers, seven qualified seed analysts and four trainee seed analysts, supported by two lab technicians, working on around 6,000 samples a year. The species we test are mainly cereals, fodder pulses, oilseed rape, grasses and vegetables.

The seed testing service includes:

- enforcement (control) testing: to monitor the quality of certified seed at point of sale
- Licensed Seed Testing Stations, OSTs audit and monitoring of 26 laboratories



Modern purity testing



- LSRP (Licensed Stations Reserve Portions) – OSTs check testing of 5% of seed lots certified by LSTSs
- export testing including issuing of ISTA Orange International Certificates
- certification testing
- advisory testing
- contracts for international companies.

However, not everything remains the same. Aids have been incorporated into purity testing such as Optical Inspection Systems. Copenhagen Tanks have made way for more efficient incubators and there has been a move to using paper media instead of sand and soil. As well as the routine seed tests offered OSTs has experience in a wide range of vigour tests, including expertise in areas of tetrazolium testing. And not just in agricultural crops. We also have extensive knowledge of flower and tree species and excellent training programmes for bespoke courses.