

# Whisky Crop Success for Orkney

Orkney College's Agronomy Institute was opened in June 2002. It was set up to provide a crop based research and development facility, specialising in northern temperate plant species for the Highland and Islands area of Scotland.

Agricultural diversification is a priority for the economic development of the region and the Institute has developed a programme to address this. This includes:

- Identifying new crops
- Screening those crops with growers and commercial users
- Encouraging the development of new supply chains

The Institute has established relationships with a range of companies and organisations throughout the Highlands and Islands, including the Highland Park distillery, based on Orkney. Together, Peter Martin (Director of the Agronomy Institute) and Russell Anderson (Highland Park Distillery Manager) identified an opportunity to develop the growing of malting barley on the island. This could be processed in the maltings retained by the distillery on the Islands to produce a hand turned malt in the traditional way and which would then be used to distil an all-Orkney whisky with unique provenance.

**With C2 support, this novel and innovative whole supply chain trial was able to get underway.**

Says Peter: "The distillery was using barley sourced from elsewhere in Scotland as it wasn't known if modern barley varieties – producing high malt quality - could be grown

on the island. Our job was to investigate the commercial feasibility of growing malting barley on the island – which many people said couldn't be done".

The project began in 2009 with a field trial of five malting barley varieties. These were then subjected to micro-malting analysis at Highland Park. The trials identified one particular variety, Tartan, as the best barley for growing in Orkney and Highland Park asked the Institute to organise a supply chain to provide 50 tonnes of malting barley for the following year.



Early in 2010 the Institute and Highland Park brought together four other local growers to look at the trial results and the opportunity. The farmers then agreed to grow and produce malting barley for the distillery. This represented a new market for the farmers who had previously grown barley, but mainly only varieties suitable for animal feed.

"In addition to establishing the supply chain, it was also recognised that it was important to build a research component into what we were doing," adds Peter. "Highland Park asked us to collect data on the characteristics of the



Improving Scotland's  
food and drink businesses  
through collaboration

**SCOTLAND**  
OF FOOD & DRINK

fields being used to grow the barley - such as cropping history, soil analysis results, how much fertiliser was applied - and combine this with yield and grain quality data from the samples we provided to Highland Park. The aim was to try to identify management practices which produced the best combination of yield and quality and then share that information with everyone in the supply chain”.

After the first harvest in 2010, 56 tonnes of malting barley were delivered to Highland Park. Most of the quality criteria - moisture, germination, screenings - were met but three growers had grain nitrogen contents above 1.65%, which is the upper limit that Highland Park normally accepts for their malting.



The Institute’s research was able to show that it was necessary to have several years of arable cropping before sowing a crop of malting barley to achieve grain nitrogen levels below 1.65%.

This information, along with other practices known to contribute to good crop production, was then fed back to the supply chain. It enabled the farmers to improve the agronomy of the crop whilst demonstrating to Highland Park that it is possible to grow good quality malting barley on the island on a consistent basis.

The relationship between Highland Park and the growers is a commercial one, with growers receiving premiums or deductions depending on the quality of barley produced. For Highland Park, being able to source part of its malting barley on the island and to develop a local Orkney whisky as a result, offers both a reduction in transport costs and a valuable marketing opportunity.

But the supply chain’s confidence was put to the test in 2011. Says Peter: “The weather at harvest time was awful. Like the rest of Scotland we hardly had a dry day in September. Despite that, we were able to harvest just about the entire crop at around the same volumes as the first year. And, in addition, all the barley harvested came in with nitrogen levels below 1.65%. That has given us a real boost and a belief that, grown in the right way, we should be able to produce good quality malting barley on Orkney in most years.”

Russell Anderson of Highland Park adds: “The project continues to be very interesting and rewarding. It is particularly pleasing that 2011 crop was of even better quality than 2010, even with the poor weather at harvest. This confirms that good quality malting barley can be grown on Orkney and further reinforces the tremendous work carried out by the Agronomy Institute. It has also provided a mutually beneficial collaboration between the Agronomy Institute, Highland Park and the growers in developing a local supply chain and I look forward to this continuing in the years ahead.”

As before, the information collected during the growing season and from the harvest will be shared with the farmers and Highland Park. This will help the continued development of the crop’s agronomy and ensure the supply chain builds on the expertise it has already established.

The Agronomy Institute is also testing a new variety to supersede Tartan which is becoming outclassed by other new varieties making seed very difficult to source. This will help to improve competitive barley growing on the island and provide a basis for the volumes produced from the existing supply chain to grow.

The rewards are there for all the supply chain and everyone can look forward to the launch of an all-Orkney whisky at the end of the maturation period around 2020.

**For further information about the Agronomy Institute, visit [www.agronomy.uhi.ac.uk](http://www.agronomy.uhi.ac.uk)**

**For further information about the Cultivating Collaboration project please go to [www.ctwo.org.uk](http://www.ctwo.org.uk)**

**Supported By**

