Our Commitment

We will work with our supply chain in areas which are not under our direct control (e.g. maltings, glass manufacture, transport/distribution) to

- **Encourage the adoption of high environmental standards and relevant sustainable practices**
- **Agree partnership targets and other opportunities for environmental improvement**
- **Minimise the total environmental impact of the Scotch Whisky industry**

Scotch Whisky distillers are working with their suppliers to encourage environmental improvements, with a particular focus on reducing off-site carbon emissions from manufacturing and transport.

The Edrington Group-Highland Grain collaboration is just one example.

The Edrington Group produces such famous brand names as The Famous Grouse and Highland Park. Highland Grain Ltd is a farmer-owned and run co-operative specialising in malting barley production. Based on the Black Isle, it has 85 members, who are also shareholders, producing all of the malting barley processed by the co-operative.

Highland Grain produces barley for Edrington's Tamdhu maltings, meeting tight specifications for nitrogen content, water sensitivity and screenings. Barley consistency results in a 1-2 % increase in distillation efficiency, reducing costs and energy use, whilst maximising alcohol yield. The nitrogen used in producing the barley is controlled, with associated benefits to the water environment and reduction in carbon emissions from fertiliser manufacture.

A strong customer-supplier relationship encourages continuous improvement in efficiency and environmental performance, price stability and long term planning. Stability also supports investment to reduce energy costs, with Highland Grain on target to reduce fuel consumption by 50% in 5 years by introducing a new drying regime and installation of a heat recovery system.

The tonnage of barley supplied by Highland Grain to The Edrington Group has increased from 1,000 tonnes in 1995 to 13,000 tonnes in 2007. The offsite carbon footprint has been reduced.

Highland grain site

70% of all wheat grown in Scotland is used in the manufacture of grain spirit, a key constituent of Blended Scotch Whiskies.

Improving wheat quality for alcohol production through advanced genetic understanding is the focus of the **Green Grain LINK project**. Under the umbrella of the DEFRA Sustainable Arable Link programme, the £2m five year project brings together the Scotch Whisky Research Institute (SWRI), Scottish Crop Research Institute, ADAS, FOSS, Wessex Grain, Syngenta, Green Spirit Fuels, Nottingham University, HGCA and Grampian Country Foods.

The project aims to decrease the overall off-site carbon footprint of distillers by minimising the environmental impact of growing wheat, with the focus being on reducing the nitrogen content of wheat without compromising the yield. The science is based on associating genetic mapping of the grain with the characteristics of the grain and the crop yield. This helps plant breeders to produce new optimised varieties.

A range of benefits are expected. Breeding for low nitrogen content results in greater starch accumulation in the grain, improving alcohol yields in the grain distillation process. An associated 30% reduction in crop nitrogen uptake also relates to a 50% reduction in fertiliser application.

Such a reduction in fertiliser use benefits the environment because excess Nitrogen can result in eutrophication of water courses and high nitrate levels in groundwater, whilst large amounts of energy are required to manufacture and transport nitrogen fertilisers.

Green Grain is a flagship for research into sustainability, demonstrating how good science can offer paybacks at many levels. SWRI's Dr James Brosnan commented it ***'is a fantastic long term project, with public and private sector partners coming together to reduce the environmental impact of grain growing, whilst producing improved cereal varieties resilient to future changes in growing conditions and agronomics. Through collaboration, it will reduce the on and off-site carbon footprint of the distillation process.'***