

Horn to Corn ...

Castleton of Eassie is the operational base of G M Marshall & Son, where George and Mary Marshall have over the past 12 months changed the emphasis of the business from dairy to arable farming.

The 520 acre farm is situated on a fertile strip of land between Coupar Angus and Forfar and during the period when the dairy herd was the main enterprise, more than 50% of the farm was devoted to forage production. In line with many other UK dairy farmers, the decision was taken in 2009 to dispose of the dairy herd with the result that the area of combine-able crop increased significantly.

This today comprises 35 acres winter barley (Retriever), 270 acres spring barley (Westminster/Belgravia) for seed, 35 acres wheat for feed/distilling, 50 acres h.e.a.r oilseed rape with the balance let for vining peas and potatoes. One of the legacies of the dairy herd is the difficulty of growing low nitrogen barley suitable for malting – seed contracts are a good alternative.

All straw is round baled and stored under cover which makes it much sought after by stock farmers further

west. Castleton of Eassie is not without stock today as George buys-in 4/5month old black and white bulls which are finished on an ad lib home mixed ration – between 100 and 150 are finished each year.

The grain drying facility on the farm, based around a Wilder Automatic Batch dryer, had served the farm well for a number of years, but with a more than doubling of the combine-able area, George started to look at ways to upgrade the drying facility. Weather conditions and later harvesting will always dictate that a hot air dryer is the only option for farms in the Northern part of the UK and certainly in Scotland.

One aspect of the new plant that had to have serious consideration was the close proximity of an up market hotel that could have serious repercussions if noise levels were not kept to a minimum. Various options were considered, but for reasons of space, local manufacture and technically advanced features, the decision was taken to install a GrainTek Tornado 610 20tph Mixed Flow Dryer that comes as standard with a plc control panel with full colour touch screen. This panel will control the whole drying operation either as a fully automatic batch or continuous flow and gives



sequential start/stop of all handling equipment. Another feature of the Tornado is that it is clad and insulated that not only increases the life of the dryer, but gives a considerable energy saving by greatly reducing heat loss. An additional feature fitted to the dryer is the silencer on the fan which has kept operating noise to an acceptable level.

With the new dryer to be positioned outside the existing store, thoughts then turned to handling equipment to fill/empty the dryer and transfer to store. In conjunction with John Fyfe of GrainTek and Jim Donald of Grain Drying Services, Kongskilde 40tph equipment was chosen as offering a quality, better than most, at an affordable price and very significantly the conveyors are equipped as standard with a 10mm PEHD floor that not only pro-longs the life of the conveyor, but is very quiet in operation.

This comprised of a KBE40 intake elevator(E1) that would either feed to a holding silo or direct to the KF40 aspirator. From the aspirator a screw conveyor (S1) delivers the grain to the intake of the KBE40 dryer feed elevator(E2) and in turn to a short screw conveyor(S2)

which feeds to the centre of the dryer column. The dryer discharge screw(S3) feeds either back into E2 when operating as a batch dryer or into the KBE40 dry grain elevator(E3) before going onto KCC40 store feed conveyor when transferring dry grain to store. A number of electro-pneumatic diverters have been incorporated to allow all transfer functions to be controlled automatically by the panel.

With harvest 2010 now well underway George comments " I have to confess to being a little apprehensive at the thought of embracing this new technology, however with a little hand holding, I have been impressed at the ease with which the whole plant function is controlled. The elevators and conveyors have worked faultlessly and the aspirator has done a great job in tidying up the sample to enhance the dryers performance. The quality of the equipment and the support we have had from all involved, leaves me in no doubt that we have a drying plant that will stand us in good stead for the future".

