

Matching soil, crop and establishment technique



John Crowley and Eoin Lyons examine the depth which the furrow press is reaching.

In a difficult spring for tillage farmers, this Wexford malting barley grower is constantly aiming to optimise his system

Eoin Lyons

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John Crowley, a monitor farmer in Teagasc/Boortmalt joint programme, grows winter barley, spring beans and spring malting barley on a Clonroche series soil close to Ferns in north Wexford. The spectacular view from many of John's fields are thanks to their elevated and hilly location.

Nonetheless, this is ideal land for growing malting crops. The free-draining Clonroche series, which is found in abundance throughout Wexford, allows for early drilling in the spring, which is ideal for producing good yields of malting barley within specification.

"Choosing the right crop is vital on this soil type," says John. "Winter wheat does not do well here, but spring malting barley thrives. I've only been under 3t/ac once in the last eight years."

John's success is due in large part to careful soil management at drilling, which is essential to avoiding prob-

lems during the growing season.

"For a number of years, I ran a one-pass drill consisting of a power harrow unit and an Accord drill. While this method was effective for completing drilling quickly, I felt that the soil was being over-cultivated, which was leading to a reduction in the overall quality of the soil and to issues such as crop manganese deficiency during the growing season."

To achieve the necessary fine, firm seedbed, John's approach is to "press, press and press again." The ring or furrow press allows for perfect consolidation of soil, leaving the seedbed firm and in ideal condition for drilling. The process begins at ploughing, where John uses a furrow press attached to the plough.

This initial consolidation of the soil helps prevent important nutrients such as phosphorus and potassium being washed through the free draining soil during periods of heavy rain. Before drilling takes place, a land press is used. The large diameter rings on the machine consolidate the soil below the surface, but also leaves an adequate tilth on the surface.

Drilling is carried out with a trailed disc drill, which cultivates to a shallow depth. The shallow drilling depth means that the area where the land press has consolidated below the surface will not be disturbed at drilling. Post-drilling, the seedbed is rolled, which further firms the soil surface.

The Horsch drill that Johns runs on the farm allows for combination drilling of seed and fertiliser. Trial studies have shown that combination drilling of NPK can improve rooting and early crop performance, compared to broadcasting into the seedbed or post-drilling.

The advantages of this are even greater on low-index P and K soils. "I've seen a marked improvement in early crop development since moving to combination drilling and it is now a key management tool for producing top-yielding crops of malting barley," says John. His approach to crop selection and seedbed preparation has evolved over time. Gaining a better understanding of what crop choice and soil management techniques suit his farm has allowed him to optimise his farm performance.