



A clear solution for farmers

CATCHMENT SENSITIVE FARMING



Catchment Sensitive Farming (CSF) in partnership with the Maize Growers Association (MGA)

Case study 1: Maize Charter

Dorset dairy farmer Joe Foot's experience 2016/17

The MGA Maize charter – The MGA, with the support of Catchment Sensitive Farming, Wessex Water and the Poole Harbour Catchment Initiative, developed the MGA Maize Charter where the inherent field characteristics and farm management targets are used to generate a 'suitability for maize growing' score for each field.



Tim Stephens, Wessex Water, reviewing field suitability with the MGA Maize Charter in Dorset

Who? - Joe Foot of D Foot Ltd was one of 10 farms taking part in the 2016/17 MGA Maize Charter project.

Joe and his brother Sam milk dairy cows on land close to Dorchester in Dorset. Joe oversees the maize growing on the holding, all of which is used as silage to feed the farm's livestock.

Why? - As a consequence of the marginal nature of maize growing in the UK, careful consideration of the suitability for each individual field for maize is important. Factors to consider are not limited to the climatic suitability of a field, but should also take account of the location of the field within the wider environment, including proximity to environmental features, highways or property.

Rainwater runoff, be that with or without sediment, agrochemicals or nutrient from fields, can have a significant negative impact on the surrounding features.

The overall aim of the charter is to identify soil related risks of individual fields and provide clear advice as to the most appropriate way to manage these fields to reduce soil related issues.

What was done - John Morgan from the MGA office team visited Joe's farm in January 2017 and, having identified the fields dedicated to the 2018 maize crop, assessed each against the eight criteria of the MGA Maize Charter Score Sheet.

The eight criteria reviewed within the maize charter are:

1. Target harvest date
2. Target drilling date
3. The altitude/aspect of the field
4. Soil/seedbed potential
5. Annual rainfall
6. Slope and underlying drainage of the field
7. Proximity to environmental feature, highways and/or property
8. Location within the UK

A Suitability Score was generated for each of Joe's fields. The score relates directly to MGA Maturity Score published in the Recommended Variety book each December and as a consequence provides guidance as to the most suitable varieties for that field.

The higher the Maize Charter score the more risky the field in terms of soil issues. The higher the MGA Maturity Score on the recommended list the earlier in the year the variety will be to reach a suitable harvest maturity.

Maize Stubble Management - In addition to the individual field scoring, the potential of post-harvest stubble

Management, be that via cultivation or following crop establishment, was discussed with Joe.

Results - Joe's fields scored relatively highly, due to the undulating nature of the farm and subdivision of land with roads etc. The scores generated tied in well with Joe's variety choices and post-harvest management (every one of Joe's maize fields has a following crop or cover crop over winter).

Table 1 D Foot Ltd Maize Charter Scores

Field Name	Charter Score
Hungry Hill	11
Smugglers	12
Tar Corner	10
Lower Common	10
Marsh	10
South Close	10
Lower Barn Ground	8

Farmer response - Joe confirmed that the higher scoring fields are targeted for early drilling, harvest and cover crop establishment in order to mitigate their increased risk of harvest related soil water issues.

Phase 2 - A second element of the MGA Maize Charter, where the existing nutrient management planning of the business is examined, was introduced during the summer of 2017. During the review the strengths and weaknesses of the existing crop nutrient management plan, including the use of organic manures, are considered and advice given as to any opportunities for improvement.

What's next? - Joe is scheduled for a phase 2 Maize Charter visit this winter where the farm's maize nutrient planning will be examined. Key to this review will be the use of organic and bagged fertiliser to match crop requirements, with the dual aim of ensuring Joe gets the most from his fertiliser/manure and in so doing leaves less in the field vulnerable to loss via leaching or surface run off.