Maize followed by maize - increasing the profitability of growing maize

Maize is a very valuable crop, but the October harvest date and the April/May sowing date mean that there is a 6 month period where the land, far from being productive, is actually decreasing in value.

Over the late autumn, winter and early spring period the maize stubble will lose N, P and K and if there is any slope on the field at all, top soil loss is also likely.

Options after maize are very limited, however there is at least one viable option that will address all the issues. This is the sowing of Humbolt Forage Rye directly after the maize harvest, ground conditions permitting.

In ‘open’ Autumns, rye will take through October and even into early November.

### Soil Type/Site Selection:
As Humbolt Forage Rye grows at low temperatures it is very suited to be grown before maize drilling as it will be harvested/early grazed in March. A weed-free, sheltered, well drained field is ideal and if it has a southerly facing aspect then even better (suits the maize as well). Humbolt will grow on a very wide range of soil types.

### Seedbed & Sowing Methods:
The seedbed for Humbolt Forage Rye should be reasonably firm and well consolidated. A seed rate of between 160-185kg/ha [65-75kg/acre] is adequate under most circumstances and the seed should be drilled to a depth of 3.5-5cm.

Cross drilling the Forage Rye usually helps to promote a thicker stand and direct drilling is an option if required.

Direct drilling will eliminate soil disturbance and will give a much firmer footing for the stock in the spring.

### Feeding:
The best way to utilise Humbolt is to zero graze the crop. This avoids having to take the stock onto the field – which in wet weather can help reduce poaching. To help you plan your feed requirements you should work on the basis that one hectare has the potential to provide two weeks of grazing for 25 cows or 50 lactating ewes.

If you are grazing dairy cows on Forage Rye, then the crop length needs to be about 30-35cm. For sheep the crop can be a little shorter.

If you graze early enough then you may well get a second flush of growth before you need to plough out the field for the following crop. Controlled grazing, using an electric fence is very important to avoid excessive wastage.

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**SOWING INFORMATION:**

- **Sowing Period:** October to early November
- **Direct Drill:** 185kg/ha (75kg/acre)

**GROWING COSTS:**

- £339 per hectare
- Fresh Weight: £12 per tonne
- Dry Matter: £78 per tonne

**YIELD & FEED QUALITY:**

- **Average Dry Matter Yield:** 5-6 tonnes/ha
- **Average Fresh Yield:** 20-24 tonnes/ha
- **Dry Matter:** 25%
- **Crude Protein:** 11-12%
- **Digestibility Value:** 67%
- **Metabolisable Energy:** 10 ME/kg DM

**LIKELY VALUE OF NUTRIENTS TAKEN UP:**

- **Nitrogen:** 100kg/ha
- **Phosphate:** 15kg/ha
- **Potassium:** 125kg/ha
  = £125/ha
GETTING THE MOST FROM THE ROTATION

Westerwold Infosheet

Wheat followed by maize

The same principles apply as above, but of course there is a larger sowing window and hence more options. In August/September the annual ryegrass Westerwolds can be sown. Peleton is a tetraploid variety and Prompt is a diploid variety of Westerwold, both will considerably out yield Italian ryegrass.

The ground cover of Prompt and Peleton is very good for Westerwolds and is similar to Italian ryegrass, enabling early spring operations to harvest the crop.

SOWING INFORMATION:
- Sowing Period: August to end October
- Sowing Rate: 15kg/acre

YIELD & FEED QUALITY:
- Rapid production in 12-14 weeks from sowing, therefore if sowing in August, a cut/graze in October is possible followed by another in March, with yields up to 13.5t DM/ha.
- Fresh yield at 25% DM would be up to 54t/ha
- Crude Protein: 15%
- ME: 10.6