

## Growing maize silage

The starch, energy and intake characteristics of maize silage, together with its high dry matter yield potential make it a good feed for beef cattle and sheep.

Maize is not suitable for growing in all parts of England; farm location, soil type, altitude and field aspect must be considered carefully before deciding if and where to grow it.

### Seedbed preparation

While most maize is precision drilled following the plough, an increasing area is being established with different techniques including:

1. **Min-till:** Maize is sown into uncultivated or rough cultivated ground. This has potential to cut establishment costs and reduce soil erosion and runoff, but should only be considered if soil structure is good.
2. **Strip tillage:** Maize is drilled into cultivated strips within an uncultivated field, leaving the rest of the field undisturbed. This reduces the cost and increases the speed of establishment.

### Varieties

Use local knowledge to identify varieties that work well and consult the British Society of Plant Breeders (BSPB) Forage Maize Descriptive List. The primary factor to consider when selecting a variety is maturity.

Each one has a specific heat requirement for grain fill, with early maturing varieties requiring less heat than those that mature later. Early maturing varieties have a shorter growing season than later ones, so their total yield is lower, but the risk of poor harvest conditions is reduced.

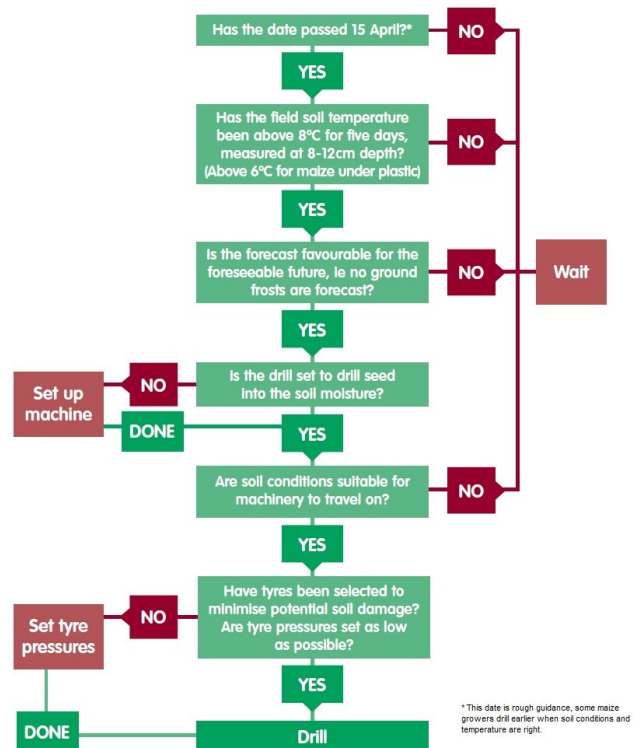
### Sowing

Maize is usually precision drilled in rows 76cm apart at a depth of 2.5-10cm deep, depending on soil moisture depth. Maize drilling should start when soil temperatures reach 8°C for five consecutive days after 15<sup>th</sup> April, or 6°C for maize grown under plastic.

### Weed control

Herbicides and inter-row hoeing are the main forms of weed control. Competition is most damaging during the first six weeks post-emergence. Weed control carried out at this stage will kill weeds before they impact on performance.

Product choice should be based on the weeds present and those expected to germinate over the following weeks. Seek advice from a BASIS qualified advisor and follow best practice application to protect watercourses and the wider environment.



## Crop nutrition

To manage nutrients effectively, send relevant soil and manure samples to a laboratory for nutrient analysis. Use this information, along with crop requirement recommendations calculated from Fertiliser Manual (RB209), to determine manure application rate and the amount of any additional fertiliser needed.

Where maize is grown continuously, nitrogen (N) can build up in the soil, particularly where organic manures are spread regularly. Rotating with another crop, such as grass or potatoes, or planting an autumn crop after the maize has been harvested can make the most of any residual N.

## Soil protection

Growing maize requires attention to detail to avoid environmental damage and requires more measures for crop compliance than other crops. These may include land drainage, use of early maturing varieties, cultivating across a slope, using low ground pressure tyres, introducing a cover crop or undersowing.

## Pests and diseases

The threat posed by pests and diseases to maize can be split into those that affect the seed and those that attack the growing plant. The most potentially damaging pests are wireworm and maize spot.

Pest / Disease	Risk Factors	How to minimise the risk	Control options
<b>Wireworm</b> Larvae feed on growing seedlings	Previously undisturbed grassland. South facing fields	Insecticide seed dressing. Allow a substantial break between grassland and maize. Ploughing	Application of insecticide once there are more than 75 wireworms/m <sup>2</sup> .
<b>Maize eyespot</b> First seen as spotting on the leaf. When the spots are held up to the light a yellow halo can be seen around each one.	Wet cool conditions Non-inversion cultivation techniques eg min-till Proximity to fields with maize crop residues Two or more years of maize cultivation.	Plough maize stubble Drill late into a warm seedbed. Rotate the maize crop with other crops.	Fungicide treatment as soon as disease is identified, plus second treatment if conditions remain wet/cold. Disease stops at temperatures above 27°C.

Seek advice from a BASIS qualified agronomist for the most appropriate treatment for any crop pest or disease.

Take a look at the Better Returns Programme manual, [Growing and feeding maize silage for Better Returns](#), for more information