

TO GROW UNDER PLASTIC OR NOT

Complete cover plastic mulch can be used to increase soil temperatures at sowing and speed up plant development in the spring. The plastic is laid by contractors with a special Samco drill to drill the seed, lay the plastic and apply the herbicide under the plastic. Drilling can occur in early April three weeks earlier than non-plastic drilling depending on soil conditions.

PROS for use of plastic	CONS of using plastic
<p>Expands maize growing into areas with insufficient heat units to allow full maturity. Potential for growing grain maize for crimping.</p> <p>Increases grain and plant maturity due to higher accumulation of heat units.</p> <p>Higher starch yields may be achieved.</p> <p>Earlier harvest allows field to be re-sown with winter wheat or grass re-seeds.</p>	<p>Many varieties are not suitable for growing under plastic. The varieties ability to break through the plastic and then achieve a significant benefit for growers is critical.</p> <p>Higher cost of plastic and contract drilling charges Approx £125/acre.</p> <p>Degradability of plastic can be an issue. If late sown plastic may have to be manually slit if temperatures get high.</p> <p>Requires deep, stone free soil to ensure plastic is well buried.</p> <p>Effectively only one chance of weed control. If dry conditions then pre-em control maybe limited. Once the plants are through the plastic they are large and soft. If crop sprayed too early after plant emergence and in warm weather then severe scorch can occur.</p>

Consider growing an Ultra Early variety not under plastic on suitable fields with lower growing costs.



Pin holes in the plastic helps plants to break through. Variety choice critical.



Grainseed Ltd

TO GROW UNDER PLASTIC OR NOT



Since 2014 The Maize Growers Association has conducted replicated maize trials under SAMCO film in the UK offering breeders the opportunity to test varieties in 3 locations.

In 2014 three trials were drilled and harvested in SWales, NWales and S Scotland, full quality analysis was undertaken and results presented to the members of the MGA.

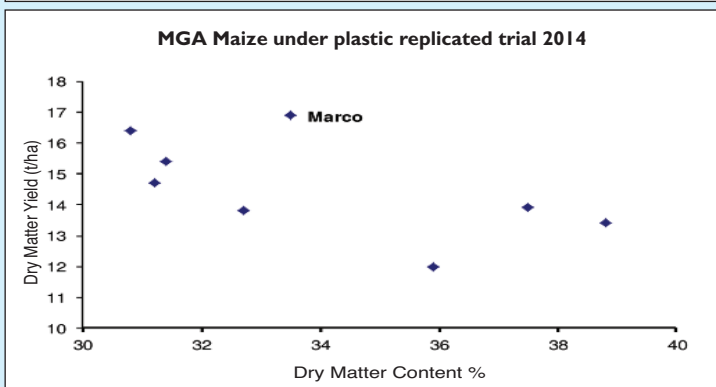
To join MGA email info@maizegrowersassociation.co.uk

2014 results

	DM (%)	Dry Yield (TDM/ha)	ME (Mj/kg)	ME Yield (Mj/ha 1000's)	Starch (%)	Starch Yield (t/ha)
MARCO	33.5	16.9	12.1	205	45.2	7.6
Average	34.0	14.6	11.7	170	41.7	6.1

Es Marco produced a high yield at over 30% dry matter on all 3 locations.

Under plastic Marco produces 2 cobs which are fully mature and this increases the starch content of the silage enabling more starch and energy to be grown on each field and ultimately more animal output per hectare.



2015 results

	DM (%)	Dry Yield (TDM/ha)	ME (Mj/kg)	ME Yield (Mj/ha 1000's)	Starch (%)	Starch Yield (t/ha)
MARCO	31.8	17.7	10.9	193	28.5	5.0
Average	29.6	15.8	10.8	171	23.9	3.8
Non plastic	22.7	14.5	10.6	153	6.6	1.3

In 2015 the MGA replicated plastic trial have been repeated. A non plastic treatment drilled at the same time has been added to show growers the benefit of plastic against non plastic on these locations.

The trials in Devon and Scotland in 2015 were on farms that routinely use plastic. Whist the trial in Cheshire was on a non plastic farm.

Full results on the trials are available to members of the MGA.

