

Maize

Wholecrop Maize

Successful maize is not just a matter of yield, the key is quality. Quality silage starts with quality varieties suited to local growing conditions. As the crop matures, sugars produced in the leaves and stem are transported to the cob and converted to starch which is the valuable source of silage energy. If a hybrid fails to convert the sugars the result can be silage with lower intake qualities and food value lost in effluent. The mature crop should have an optimum whole plant dry matter of 30% to allow maximum benefit from the silage.

Agronomy

Site Ideally fields should be south facing, a slope of up to 45 degrees, free draining deep soil and not above 400 feet. Avoid fields where soils are compacted or known to have frost pockets.

Fertiliser Adequate levels of N, P and K are all required and up to 50% can be supplied from slurry or FYM. (Remember that FYM will release its nutrients much slower than slurry)

Crop	0	1	2	3	4	5
Nitrogen(N) All mineral soils	120	80	40	0	0	
Phosphate (P2O5)	110	85	60M	20	0	0
Potash (K2O)	230	205	180M(2-) 155(2+)	110	0	0

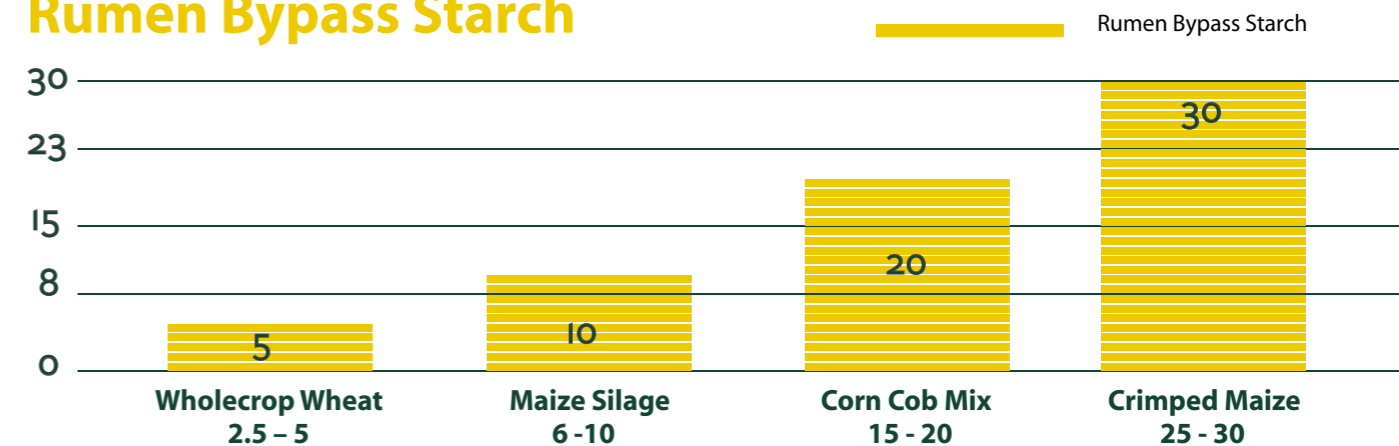
Chart courtesy of RB209 (In practice higher levels of N are used but these will most likely be restricted under the Nitrates Directive) SOIL pH - ideally at 6.5. Yields can be affected once pH falls below 6.0

Seedbed Avoid soil compaction at all costs. Sub-soil the previous autumn if required. The crop requires a firm, fine tilth that will retain as much moisture as possible particularly on lighter soils.

	Typical Analysis		
	Forage Maize	Corn Cob Mix	Crimped Maize
DM %	30	55	70
STARCH	30	45	70
ME (MJ/KG)	11.2	13.0	14.5



Rumen Bypass Starch



Crimped Maize

Here only the grain is harvested with a conventional combine fitted with a maize picker header (the same header is used on a forage harvester for CCM). While tonnes per acre are lower both ME and starch are higher. The grain is harvested at around 30% moisture, crimped and treated. Ensiling should take place immediately as with normal crimped cereals.

Field selection for CCM and crimped maize is important due to the later harvest. For Northern Ireland conditions only early varieties should be grown under plastic. Maize starch which has a higher bypass fraction is an ideal complement to feed along with grass silage, wholecrop cereals and wholecrop maize.



Selecting The Right Variety

The forage maize varieties available from Morton's have been selected for their yield and quality to suit local growing conditions.

Mas 07.B	An early variety for use in open ground. Good digestibility in cell wall and whole plant. Stay green variety with fast dry down of grain.
SERGIO KWS	An early variety with very good vigour for early or late sowing in open ground. Highest starch yields on NI Recommended List (129) with very good ME content (10.7). Robust plant type with good pollination.
KOUGAR	From the same Breeder as Sergio. Has good early vigour and starch yields (107). Slightly later to mature than Sergio.
Mas 11.F	A new early variety with very good starting vigour. Produces high quality silage with high starch levels. This variety can also be used for a grain harvest which is to be crimped. This is the replacement for Mas 12A which was widely grown throughout Northern Ireland.

