

Maize for anaerobic digestion - BSPB/NIAB 2016 List

The 'Maize for Anaerobic Digestion List' is available to provide anaerobic digestion (AD) plant operators and growers with independent data to use when selecting varieties to maximise biogas (methane) production.

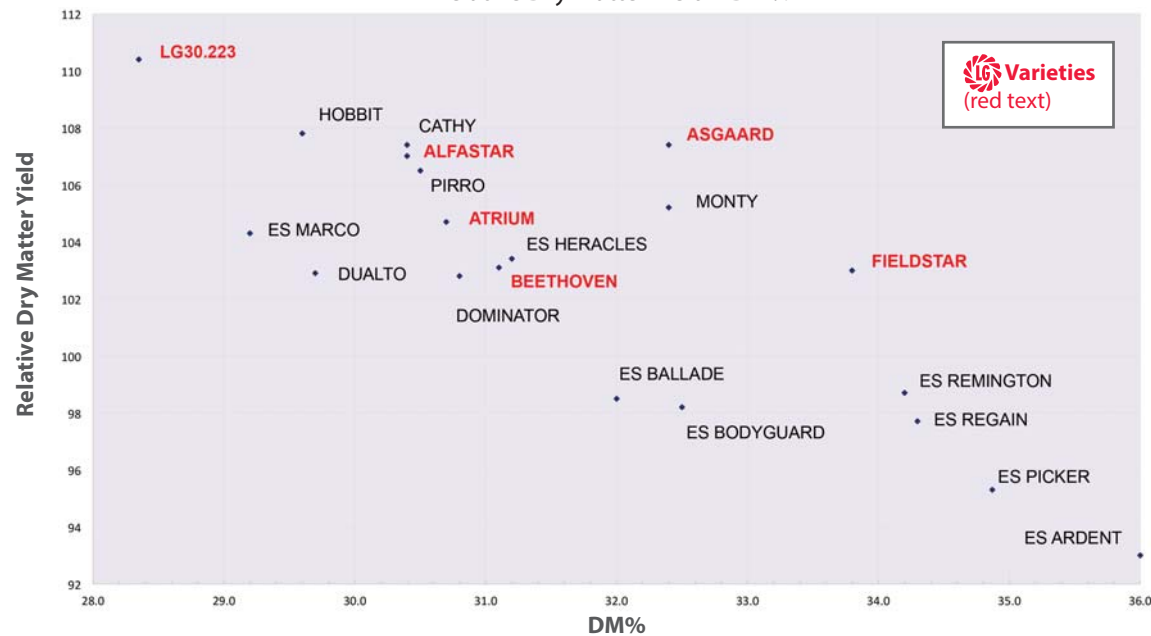
This List has been compiled from over five years of independent BSPB/NIAB trial data and recognises that the selection criteria for anaerobic digesters are different from those for livestock feeding. **When selecting varieties to maximise the production of biogas, the best indication of their potential is the total energy (ME) yield per hectare.**

As with the List for forage maize, information on variety performance is provided for sites which are Favourable and Less Favourable. On this page, the Favourable List is shown, as most AD plants are in good growing areas. Further information for Less Favourable sites can be found at www.lgseeds.co.uk/maize



BSPB/NIAB 2016 AD List for Favourable Sites

Relative Dry Matter Yield v DM%



DESCRIPTION	MATURITY			YIELD DATA		AGRONOMIC DATA		ENERGY DATA			
	VARIETY	MATURITY CLASS **	DM % (at harvest)	# Days Earlier to harvest	DM YIELD (t/ha)	RELATIVE DM YIELD (%)	EARLY VIGOUR (9=good, 1=poor)	STANDING (at harvest) (9=good, 1=poor)	ME YIELD (MJ/kg at harvest)	REL ME YIELD (%)	ME (MJ/kg DM at harvest)
Mean of 4&5 year varieties			33.0		16.9	100	7.1	8.2	191,028	100	11.3
	LG30.223	3	28.4	0	18.6	110	7.4	8.3	206,689	108	11.1
	ASGAARD	7	32.4	14	18.1	107	7.8	8.3	207,144	108	11.4
	ATRIUM	6	30.7	8	17.7	105	7.4	8.2	204,579	107	11.6
	ALFASTAR	5	30.4	7	18.1	107	7.6	8.3	203,515	107	11.3
	CATHY	5	30.4	7	18.1	107	7.2	8.3	202,679	106	11.2
	HOBBIT	5	29.6	4	18.2	108	7.3	8.1	201,714	106	11.1
	MONTY	7	32.4	14	17.8	105	6.8	8.3	201,157	105	11.3
	FIELDSTAR	8	33.8	19	17.4	103	7.5	8.3	197,887	104	11.4
	DUALTO	5	29.7	5	17.4	103	6.5	8.3	196,545	103	11.3
	ES MARCO	4	29.2	3	17.6	104	6.2	8.2	195,177	102	11.1
	PIRRO	6	30.5	7	18.0	107	7.0	7.4	194,249	102	10.8
	BEETHOVEN	6	31.1	9	17.4	103	6.9	8.1	194,017	102	11.2
	DOMINATOR	6	30.8	8	17.4	103	6.9	8.3	190,154	100	11.0
	ES HERACLES	6	31.2	10	17.5	103	6.6	8.1	189,543	99	10.9
	ES BODYGUARD	7	32.5	14	16.6	98	6.4	8.3	187,314	98	11.3
	ES BALLADE	7	32.0	13	16.6	99	6.8	8.2	186,229	97	11.2
	ES REGAIN	9	34.3	21	16.5	98	7.3	8.3	186,034	97	11.3
	ES REMINGTON	9	34.2	20	16.7	99	7.4	8.3	185,766	97	11.2
	ES PICKER	9	34.9	23	16.1	95	7.3	8.3	181,737	95	11.3
	ES ARDENT	10	36.0	27	15.7	93	6.5	8.3	177,108	93	11.3

Limagrain estimated days earlier to harvest than LG30.223. MC = Limagrain estimation of maturity class

The varieties tabulated are forage maize varieties that the breeders have nominated as having potential suitability for AD use. The List may not represent the full range of forage maize or biogas varieties that are available for the market.

LG Maize varieties for anaerobic digestion

Maize variety selection for AD production

Maize can be successfully grown in most areas of the UK, but it is important to choose varieties suited to the growing conditions of your farm which can achieve a dry matter content of 28-32%.

As large areas of maize are needed to feed an AD plant, a range of different maturing varieties should be sown. This enables harvesting before wet weather sets in and helps avoid soil structure damage.

Recommended LG maize varieties

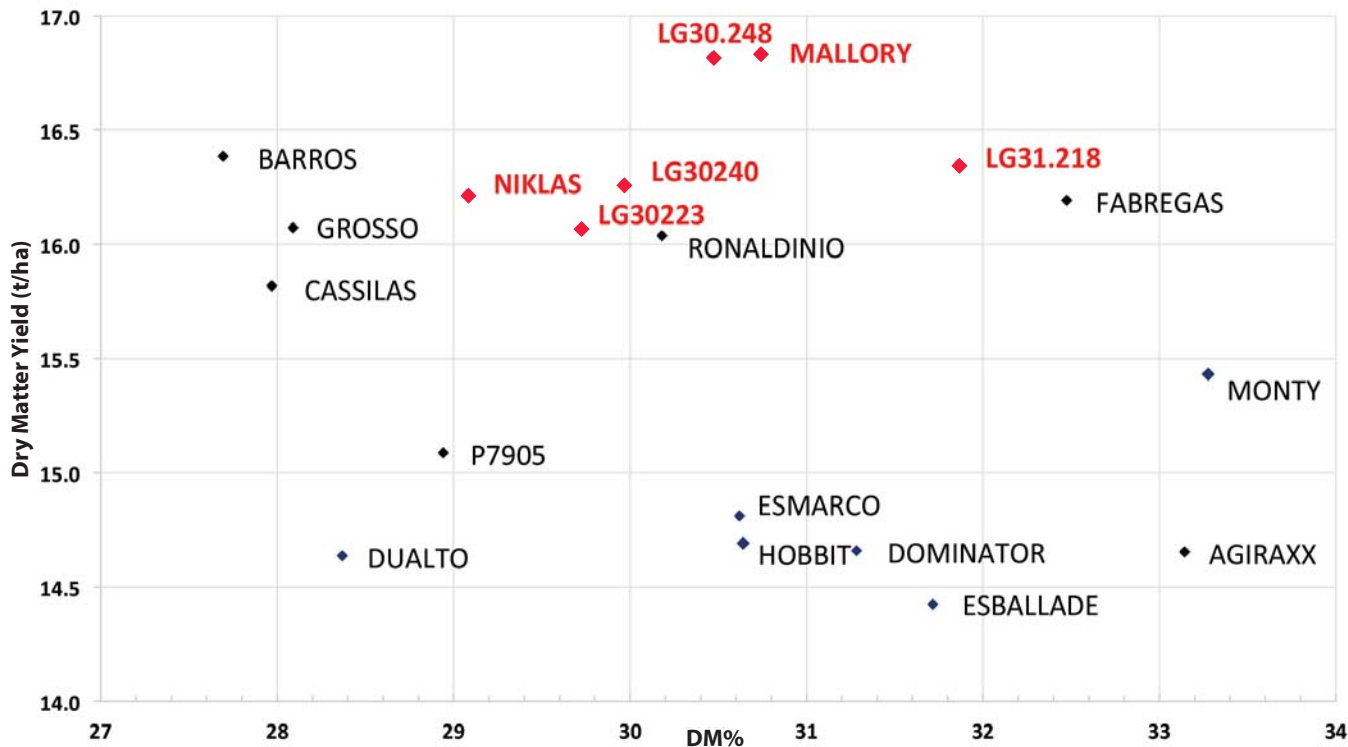
The extensive UK-based Limagrain research programme has tested potential new varieties against current commercial ones at trial sites across the country and on working AD plants for over three years.

Limagrain has used a vigorous selection process to ensure that only the very best varieties are available to growers.



Limagrain Anaerobic Digestion (AD) Variety Trials (2010-14)

Dry Matter Yield v DM%



Varieties recommended for anaerobic digesters

ALFASTAR

High yield and good ME content.

ASGAARD

Combines early maturity with good digestibility for a very high ME yield and content.

ATRIUM

Top cell wall digestibility and ME content, with high yields make an ideal feedstock.

BEETHOVEN

Reliable performer used on many AD units.

FIELDSTAR

Early maturing with a high ME yield for an earlier harvest, enabling sowing of a following crop.

LG30.223

The highest yielding BSPB/NIAB AD List variety, widely used for feedstock in Europe.

LG30.240



One of the highest yielding varieties available for AD use.

LG30.248



Very high yielding with good agronomic and quality characteristics.

LG31.218



An exciting new variety only recently added into our trials, early with very high yield and quality.

NIKLAS



Proven performer in our trials system.

MALLORY



One of the highest yielding varieties widely grown in Germany, well proven in trials in the UK but with limited seed availability in 2016.