

# AstonEnergy – best in forage quality

# Recommended grass and clover list England and Wales

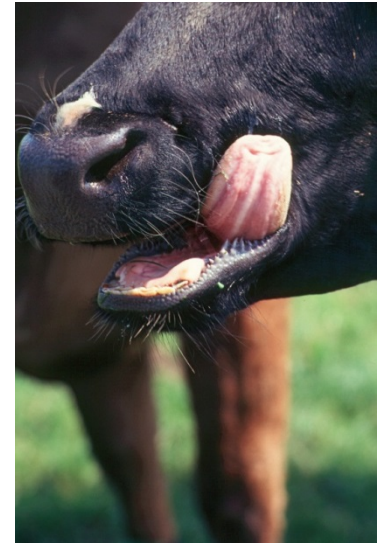
# Feeding quality – since years essential for British farmers

## Characteristic in variety recommendation in the UK:

- **d-value (midsummer);** digestibility under simulated grazing management
- **d-value 2nd conservation cut;** digestibility of the second silage cut in the first year of use

## According to NIAB trials have shown that

- animals eat more grass of a variety with a high d-value (digestibility)
- in situations, when enough forage is available, higher digestibility has a huge impact on animal performance



# Increased digestibility = better performance

Effect of unit increase in D-value on performance per animal (unrestricted forage supply)					
Animal	System	Range in D-value	Range in animal performance per day	Mean animal response (unit/day)	Mean animal % response (unit D/day)
Dairy cows	Silage + fixed concs.	60-72	15-18 l (milk)	<b>0,25 l</b>	1,5
Beef cattle	Silage + fixed concs.	61-68	0,82-1,11 kg (Lwg)	41 g	4,3
Dairy cows	Rotational grazing	69-74	17,2 - 18,6 l (milk)	0,28 l	1,6
Beef cattle	Rotational grazing	75-77	0,68-0,76 (Lwg)	40 g	5,6

Walters R.J.K (1984): D-value: The significance of small differences on animal performance. In *The Grass Ley Today*. NIAB Crop Conference, Plumridge Ltd., Cambridge; pp 60-68

**Conclusion:** If the digestibility of forage (D-value) is one unit better, a cow gives **0,2 l-0,25 l** more milk per day!

# Recommended grass and clover list England and Wales, 2014

*Diploids - Good for long term grazing and cutting leys.  
Good for ground cover.*

*Tetraploids – Good for medium term cutting leys.*

Variety Name	Heading Date	Simulated grazing management		Conservation management		Ground Cover <i>1 = poor 9 = good</i>	Crown Rust <i>1 = poor 9 = good</i>
		Total Annual Yield <i>% of 10.50 t/ha</i>	D-value Midsummer	Mean Total Annual Yield <i>% of 15.40 t/ha</i>	D-value 2nd conservation cut		
AstonEnergy	31 May	101	78.2	99	75.7	4.7	8

- Best variety in forage quality for grazing and cutting
- For conservation management AstonEnergy is 2.9 units better compared to the mean of all intermediate, tetraploid perennial ryegrasses \*

\*without AstonEnergy and hybrids

# 22.900 liter more milk with AstonEnergy!



## Calculation feeding quality:

When grass silage/fresh grass of AstonEnergy (unlimited intake) is given, then a dairy cow will produce **additional 0,75 l milk per day** compared to a dairy cow, fed with silage, which is produced out of all other tetraploid intermediate perennial ryegrasses (without hybrids and AstonEnergy).

- Calculated for a 305-days-lactation of a dairy cow (milk giving period): **0,75 l x 305 = 229 l**.
- That means for 100 dairy cows:

**22.900 l more milk are possible!**

# Digestibility (D value -65)

## Recommended grass and clover list

### England and Wales, 2006/07 – 2014/15

year	AstonEnergy					
	Simulated grazing			conservation management		
	AstonEnergy	Mean of all interm., tetrapl. per. ryegr.*	difference	AstonEnergy	Mean of all interm., tetrapl. per. ryegr.*	difference
2006/07	11	8,1	2,9	11,3	8,3	3
2007/08	10,7	7,9	2,8	10,5	7,6	2,9
2008/09	10,5	7,8	2,7	9,8	6,8	3
2009/10	9,4	6,3	3,1	8,1	4,4	3,7
2010/11	14,1	11,8	2,3	13	9,1	3,9
2011/12	13,5	11,3	2,2	11,6	7,7	3,9
2012/13	13,7	10,8	2,9	11,6	7,7	3,9
2013/14	13,4	11,3	2,1	11	7,9	3,1
2014/15	13,2	11,3	1,9	10,7	7,8	2,9

Since first recommendation of AstonEnergy in 2006/07 it is the best intermediate, tetraploid forage quality variety of the perennial ryegrass portfolio in England and Wales.

\*without AstonEnergy and hybrids

# Grass and Clover - Recommended Varieties for Northern Ireland 2014/15



# Grass and Clover - Recommended Varieties for Northern Ireland 2014/15

## Perennial Ryegrass

### 'Bold Type' Tetraploids for Grazing

	Diploid Variety	Heading Date	Total Yield	Grass Quality		Seasonal grazing yields				Sward Density	Maturity Class
				12.1*	D Value	Spring	Early Summer	Late Summer	Autumn		
			%	%	2.4*	4.7*	3.3*	1.7*	(0-9)		
	AberTorch(T)	7 May	98	75.2	124	91	94	91	5.7	Early	
+	Niagara(T)	18 May	98	77.1	106	95	98	96	6.3	Inter	
+	Trintella(T)	18 May	97	75.3	108	95	97	91	5.5	Inter	
+	Malone(T)	18 May	101	75.8	117	96	98	95	5.3	Inter	
+	Magician(T)	19 May	101	75.9	111	98	101	92	5.7	Inter	
+	Seagoe(T)	21 May	106	74.6	112	100	110	101	5.4	Inter	
+	Eurostar(T)	24 May	99	75.9	106	99	98	93	6.0	Inter	
+	Dunluce(T)	28 May	104	76.2	101	106	105	100	5.6	Inter	
+	AstonEnergy(T)	31 May	102	78.5	96	103	105	101	5.4	Inter	
+	AberCraigs(T)	1 Jun	97	77.9	92	102	97	94	5.8	Late	
+	Dundrum(T)	2 Jun	97	77.2	84	105	96	98	5.6	Late	
+	AberGain(T)	3 Jun	108	77.2	109	109	108	103	5.5	Late	
+	AberBite(T)	4 Jun	102	78.4	88	107	103	110	5.6	Late	
+	Twymax(T)	4 Jun	99	75.4	92	106	97	92	6.1	Late	
+	Kintyre(T)	5 Jun	99	76.0	91	102	99	104	5.7	Late	

Official variety description of AstonEnergy in Northern Ireland\*

AstonEnergy produces excellent grazing yields with the highest measured quality of any perennial ryegrass on the list. This quality characteristic is also apparent in the very high 2-cut digestible silage yields. Second cut silage yield is very high plus excellent aftermath and late summer growth.

\*Variety descriptions provide an overview of the main agronomic characteristics of each variety, highlighting the main strengths and specific uses as appropriate.

AstonEnergy achieved the best grass quality (forage quality) for the tetraploid segment of perennial ryegrass for grazing in Northern Ireland

# Ireland (Moorepark)

# Moorepark '13 - New Development in Grass Cultivar Evaluations

**Table 1. Milk yield, milk solids yield and post grazing sward height results from two experiments investigating the effect of cultivar on animal performance**

	Tetraploids		Diploids	
Trial 1	AstonEnergy	Bealey	AberMagic	Spelga
Milk yield (kg/cow/d)	25.8	25.8	24.5	25.0
Milk solids yield (kg/cow/d)	2.0	2.0	1.9	1.9
Post grazing height (cm)	4.0	4.0	4.2	4.2
Trial 2	AstonEnergy	Delphin	Glenroyal	Tyrella
Milk yield (kg/cow/d)	21.2	20.8	19.9	19.9
Milk solids yield	1.7	1.7	1.6	1.6
Post grazing height (cm)	4.0	4.1	4.1	4.0

## Conclusion

Animal performance studies will identify the important traits influencing intake and milk or meat production, thus ensuring grass breeders can select those traits which are most desirable for a grazing system. Results from Moorepark are indicating improved animal performance can be achieved from tetraploid cultivars due to their increased leaf proportion, higher digestibility and increased utilisation compared to diploid cultivars.

Source: New Development in Grass Cultivar Evaluations, McEvoy and O'Donovan, Moorepark 2013

## ...Background

- Most valuable pasture is that which is converted to milk
- Farmers want to know superior cultivars before they reseed – not find out afterwards!!
- Requirement to evaluate cultivars under grazing animals
- To determine differences in
  - Sward characteristics
  - Nutritive value
  - Intake



- As well as showing the best milk yield **AstonEnergy** was seen to be the best grazed out variety
- **AstonEnergy** is highly digestible and therefore very palatable to cows.
- **AstonEnergy** produces very few heads in the summer so rejection is very low.
- **AstonEnergy** tolerates intensive grazing well and has been shown to have a lower lamina height (height above the ground that the first leaf is produced from the sheath ) than other varieties - perhaps as a result of selection under a rotational grazing management rather than a silage type management
- **AstonEnergy** has very good all round disease resistance again reducing rejection

# France

# AstonEnergy – official standard variety in FR

## Ray-grass anglais fourrage

Variété	Nombre de résultats	Expérimentation CTPS 2010-2011-2012			
		Astonenergy	Barelan	Cantalou	Lactal
Dossier CTPS		4037951	1007034	1001262	1004150
Code Cultivar		1029827	1005420	1001020	1002967
Année d'inscription		2013	2005	2002	2004
Ploïdie		Tétraploïde (1)	Tétraploïde (1)	Tétraploïde (1)	Tétraploïde (1)
<b>Caractères agronomiques</b>					
Groupe de précocité		Demi tardif	Demi tardif	Intermédiaire	Intermédiaire
Alternativité	2	1,0	1,0	1,0	1,5
Départ en végétation	10	84	85	86	86
Date d'épiaison	6	136	142	130	130
Souplesse d'exploitation	6	62	70	55	54
Remontaison	10	1,7	2,3	2,5	2,4
Pérennité	3	7,7	7,8	7,7	7,3
Résistance au froid	-	-	-	-	-
Résistance à la sécheresse	-	-	-	-	-
Résistance à la verse	-	-	-	-	-
Résistance aux maladies diverses	2	5,5	4,5	4,5	5,6
Résistance aux rouilles sp.	9	7,2	6,3	5,8	6,4
Résistance à l'helminthosporiose	6	6,8	5,8	6,3	6,5
Résistance aux viroses	1	6,5	6,5	3,8	6,0
<b>Valeur technologique</b>					
Teneur en matière azotée totale	4	13,7%	14,6%	14,4%	14,7%
Teneur en ligno-cellulose	4	20,1%	21,8%	21,4%	21,2%
Teneur en sucres solubles réducteurs	3	22,8%	19,4%	18,8%	20,6%
<b>Rendements en herbe</b>					
1 <sup>ère</sup> coupe A2 + A3	10	3,7 t /ha (108%)	3,2 t /ha (93%)	3,5 t /ha (102%)	3,7 t /ha (106%)
Printemps A2 + A3	11	9,8 t /ha (105%)	9,4 t /ha (100%)	9,4 t /ha (100%)	9,4 t /ha (100%)
Été - Automne A2 + A3	11	4,8 t /ha (102%)	4,9 t /ha (105%)	4,5 t /ha (97%)	4,7 t /ha (99%)
Total A1 + A2 + A3	16	19,5 t /ha (106%)	18,6 t /ha (101%)	18,1 t /ha (98%)	18,5 t /ha (100%)

AstonEnergy is on the absolutely top-level of the new registered varieties in 2013 in FR (CTPS-tested Lp-varieties, 2010-2012) with a low content of acid detergent fibre and a high content of water soluble carbohydrates.

(1) Témoin des variétés de ray-grass anglais tétraploïdes intermédiaires à demi-tardives

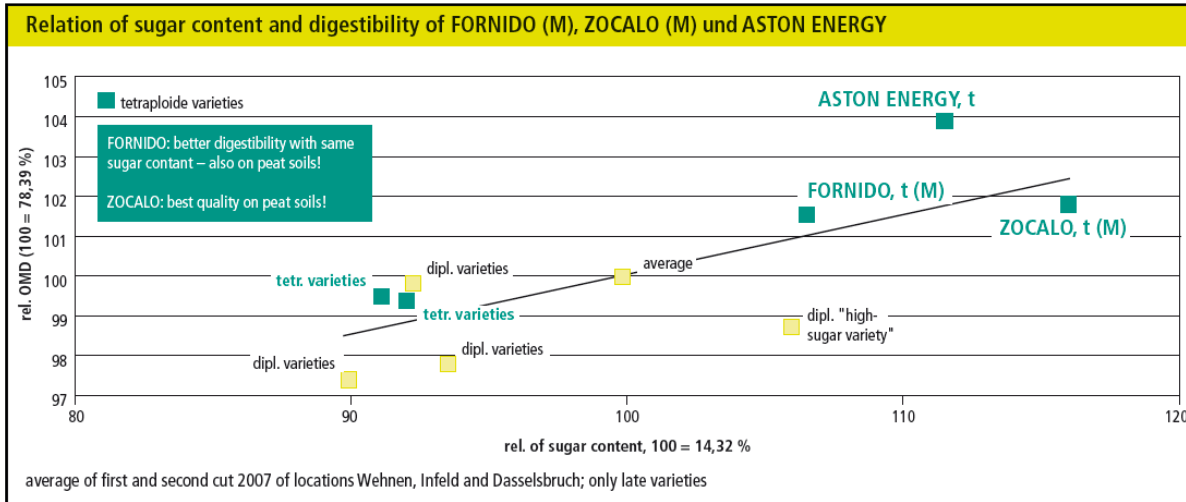
(2) Teneurs en nutriments exprimées en pourcent de matière sèche, obtenues par spectrophotométrie proche infrarouge (NIRS), pondérées par le rendement des coupes correspondantes

(3) Rendements en herbe exprimés en tonne de matière sèche par hectare et en pourcent du témoin théorique intermédiaire à demi tardif (Cantalou + Lactal + Barelan) / 3

Source: Geves, April 2013, Plantes Fourragères, Nouvelles Variétés proposées à l'inscription sur la Liste A du Catalogue Officiel français

# Germany

# AstonEnergy – best in forage quality



The outstanding quality of **AstonEnergy** is based on a significant higher sugar content and, as a difference to most of all other varieties, a very high digestibility of the cell walls.

