

FACTS[®]

Maize Hybrids



Dear Pioneer Maize Grower,

We are very pleased to present to you the results of the 2021 PACTS® Trials. PACTS® is an abbreviation for 'Pioneer Accurate Crop Testing System' and we conduct these on-farm trials every year so that we can accurately describe the performance of the Pioneer maize hybrids we offer for sale.

PACTS® hybrid performance highlights

P7326 – Extra Early

The biggest selling maize hybrid in the UK again in 2021 (source: Kynetec). The fastest Pioneer hybrid to reach 30% dry matter and a hybrid that delivers the reliability growers seek.

P7034 – Very Early

The area planted to this early flowering, and very early maturity, dent grain textured hybrid has increased every year since its launch in 2018. Growers clearly appreciate its impressive rumen degradable starch content.

P7364 – Very Early

NEW FOR 2022 (available in Ireland only in 2022). P7364 combines yield with earliness and very good standing power. Check out its performance in its first year of PACTS® trials.

P7892 – Early

This ever-popular hybrid combines high dry matter yields with high starch yields. Strong agronomic features including very good early vigour and fast stover dry down.

P7524 – Early

P7524 is ideally suited to growers looking for an early maturity hybrid that can surpass their current silage dry matter yields.

Pioneer brand silage inoculants

Our comprehensive proprietary range of silage inoculants have been developed to reduce dry matter losses and improve silage quality. Applying the most appropriate Pioneer silage inoculant can make dramatic differences to your profitability. **You can see the full range of our silage inoculants on pages 6 and 7.**

Our sincere thanks go to the farmers and contractors who have participated in the 2021 PACTS® Trials. Their practical help, patience, and frequent sound

advice during the growing season make a significant contribution to each trial we conduct.

When you choose a Pioneer hybrid tested in PACTS® Trials you can be sure farmers with the same challenges as yours have thoroughly evaluated it on their farms.

P7948 – Early

P7948 tops the favourable open site table for yield again. For favourable sites this flint textured hybrid has the ability to add many extra tonnes to your silage clamp.

P8200 – Intermediate

In PACTS® trials over many locations, P8200 has shown good adaptation to favourable sites when grown in the open and a wide range of sites when sown using the SAMCO system.

P8201 – Intermediate

P8201 combines a very high dry matter yield with a high yield of rumen degradable starch. It is suited to favourable locations in the open and good sites under film.

P8171 – Very Late

Big yielding for the most favourable locations in the open and favourable sites when grown under film.

P8329 – Very Late

For niche situations where heat is not limiting, and harvest can be taken late.

advice during the growing season make a significant contribution to each trial we conduct.

Yours sincerely,

On behalf of Corteva Agriscience



Andy Stainthorpe

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We're helping farmers to maximise their homegrown forage for a more sustainable and resilient future.

Our people, knowledge and expertise are on hand to help you grow the best quality and quantity forage for your livestock.

Discover more by talking to your advisor today or visit: www.corteva.co.uk/forage



SOW hybrid maize varieties from Pioneer, the world's leading breeder, to best suit your needs and maximise your yield potential.

NURTURE your forage crops with our wide range of proven, highly effective weed control solutions.

IMPROVE silage quality with our inoculants and enhance the use of nitrogen with our stabilizer technology.



The purpose of PACTS® trials

Whether a particular maize hybrid realises its full genetic potential depends largely upon how well it is adapted to the local environment and how successfully it is managed. The PACTS® Trial Results are provided to help growers identify which Pioneer hybrids are best suited to their own location and circumstances. In addition, they indicate agronomic techniques that may help you maximise the yield and quality of your crop.

Layout

Each PACTS® Trial is established within a commercial crop of maize and is planted and harvested by the host farmer with the assistance of Pioneer staff. All trials are managed as part of the field and the results therefore are reflective of the effect of local weather conditions and commercial crop management practices.

A PACTS® Trial is generally comprised of between 15 and 20 plots. The plots are planted in identically sized marked areas adjacent to each other across a uniform part of the selected field. Each plot is 6 or 8 rows wide and normally 50 metres in length. Typically every fourth strip is the same hybrid and is designated as a Control variety. The Control hybrid provides data that is used to offset the variable effects of soil type changes across a trial. In 2021, the Control hybrid was the hybrid P7892.

Sites

Each trial site is classified as being Favourable or Less Favourable depending upon the heat accumulation that would typically be measured at that location. The results from individual trials are detailed in this book however, due to space restrictions, occasionally some trials are not shown. The results from any trials not shown are always available on request.

Competitor hybrids

Typically, three or four varieties from competitor plant breeding companies that have been widely grown commercially in recent years are included in each PACTS® Trial - depending whether it is a favourable or less favourable site. The competitor hybrids used in 2021 were Cito KWS, Calvini KWS, Glory, Ambition and Gatsby.

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Analysis

Representative samples from every PACTS® plot are taken at harvest and promptly oven dried to determine percentage dry matter content. Dried samples are subsequently tested in a Near Infra-Red Spectrophotometer (NIRS) machine. Results from NIRS tests provide multiple quality results including starch content, whole plant digestibility and Neutral Detergent Fibre (NDF). The large number of PACTS® locations, and the samples tested, ensure that the NIRS data generated can be regarded as a reliable indicator of the relative maize silage hybrid performance a purchaser can expect. Ear samples are taken on the day of harvest to later determine rumen degradable starch.



Maize hybrid selection

The selection of a particular hybrid for cultivation inevitably varies according to the different criteria a grower has. In many situations yield is of paramount importance but earliness of maturity is usually another critical factor. Other factors such as standing power, silage nutritional quality and end-use intentions e.g. whole plant silage fed to livestock or used for biogas production should be taken into account. No single hybrid will suit all situations.

Growing a maize crop that meets all requirements depends upon selecting a hybrid with the most appropriate genetic potential and then managing that hybrid in a manner that will meet the chosen objectives.

The factors shown in the table below are just some of those that can have a major influence on the quantity, quality and value of the maize crop produced.

The environment	Crop husbandry	Hybrid genetics
Latitude	Seedbed quality	Yield potential
Soil type	Drilling date	Early vigour
Altitude	Planting population	Disease resistance
Aspect	Fertiliser policy	Maturity
Shelter	Use of the Samco System	Standing power
Harvesting and storage	Use on-farm	Sell off-farm
Harvesting method	As feed	Silage quality
Harvest timing	For biogas production	Consistent supply
Storage method	Ration supplementation	Value versus other feeds
Feed-out methods	Ration consistency	Local demand
Use of inoculant	Yeast and mould content	Transport costs

Historical forage PACTS® trials results summary

Year	Control Hybrid	Fresh Weight Yield tonnes/hectare (t/ha)	Dry Matter (%)	Dry Matter Yield (t/ha)	Starch (%)	Starch Yield Converted to Grain (t/ha at 15% Moisture)	Sugar (%)	Whole Plant Digestibility (%)	Neutral Detergent Fibre (%)	Number of Sites
2021	P7892	49.295	35.0	17.3	35.3	9.306	2.8	75.2	59.4	15
2020	P7892	45.488	35.7	16.3	30.9	7.692	5.2	67.6	40.6	16
2019	P7892	43.243	39.3	17.0	34.7	9.019	4.5	68.8	41.4	19
2018	P7892	41.295	37.0	14.8	31.5	7.130	3.8	69.6	41.4	14
2017	P7892	48.662	35.8	18.0	32.6	8.975	5.1	70.4	37.9	19
2016	P7892	47.607	35.8	17.0	33.2	8.660	5.6	70.4	40.9	14
2015	PR39V43	47.603	31.9	15.2	25.0	5.807	9.8	69.5	43.2	15
2014	PR39V43	47.822	36.2	17.3	34.1	9.022	5.4	68.8	40.5	18
2013	PR39V43	44.695	35.6	15.9	35.3	8.587	4.0	71.6	38.9	13
2012	PR39V43	37.966	32.4	12.3	29.4	5.531	4.9	70.1	43.0	12
2011	JUSTINA	48.100	33.1	15.9	31.1	7.586	2.1	70.1	43.6	14
2010	JUSTINA	45.994	33.7	15.5	36.2	8.582	1.4	70.6	41.7	10
2009	JUSTINA	55.161	31.0	17.1	27.2	7.114	4.8	66.0	nr	13
2008	JUSTINA	46.108	30.4	14.0	30.0	6.425	3.4	69.1	nr	16
2007	JUSTINA	55.853	29.9	16.7	30.0	7.662	3.3	68.2	nr	14
2006	JUSTINA	45.042	35.3	15.9	37.0	8.998	3.0	nr	nr	13
2005	JUSTINA	54.633	31.3	17.1	33.4	8.735	2.6	nr	nr	16
2004	JUSTINA	50.774	32.3	16.4	33.9	8.503	2.7	nr	nr	15
Average		47.519	34.0	16.1	32.3	7.963	4.1	69.7	42.7	15

NOTE: All trials included in this summary were grown in the open; nr = not recorded

Pioneer brand silage inoculant technology

The use of Pioneer silage inoculants will lead to lower dry matter losses, higher nutritional value and improved aerobic stability.

Complementary, proprietary, and highly efficient strains of lactic acid producing bacteria are incorporated into many Pioneer silage inoculants to rapidly and efficiently convert sugar to lactic acid. The activity of these bacterial strains leads to a much faster drop in silage pH with many beneficial consequences including higher dry matter recovery, increased microbial protein and a reduction in ammonia content.

Pioneer strains of *Lactobacillus buchneri* convert lactic acid to the two compounds acetic acid and propandiol. These strains are included in Pioneer products intended for use on silages at risk from aerobic instability. The compounds they produce, when present together, suppress mould growth and minimise silage heating. The inclusion of proven Pioneer strains of *L. buchneri* in various Pioneer products ensures silage can be made so that it is aerobically stable.

The latest Pioneer *L. buchneri* strains are faster acting and the incorporation of them can lead to aerobic stability being achieved in as little as 7 days after ensiling. Products including these strains are referred to as Rapid React products. **RAPID REACT. AEROBIC STABILITY**

Special patented strains of *L. buchneri* included in Pioneer fibre technology products are able to generate ferulate esterase enzymes during the fermentation process. The activity of these enzymes leads to improved fibre digestion rates and further enhances silage nutritional value.

Pioneer brand silage inoculants are suitable for use in Organic Agriculture in accordance with EC regulation n° 834/2007, www.inputs.bio.

The full range of Pioneer silage inoculants from Corteva Agriscience can be seen at www.corteva.co.uk/Pioneer/silage-inoculants.html.



Pioneer inoculants enable faster and more efficient fermentation, meaning less dry matter losses and improved stability and digestibility of silage crops.

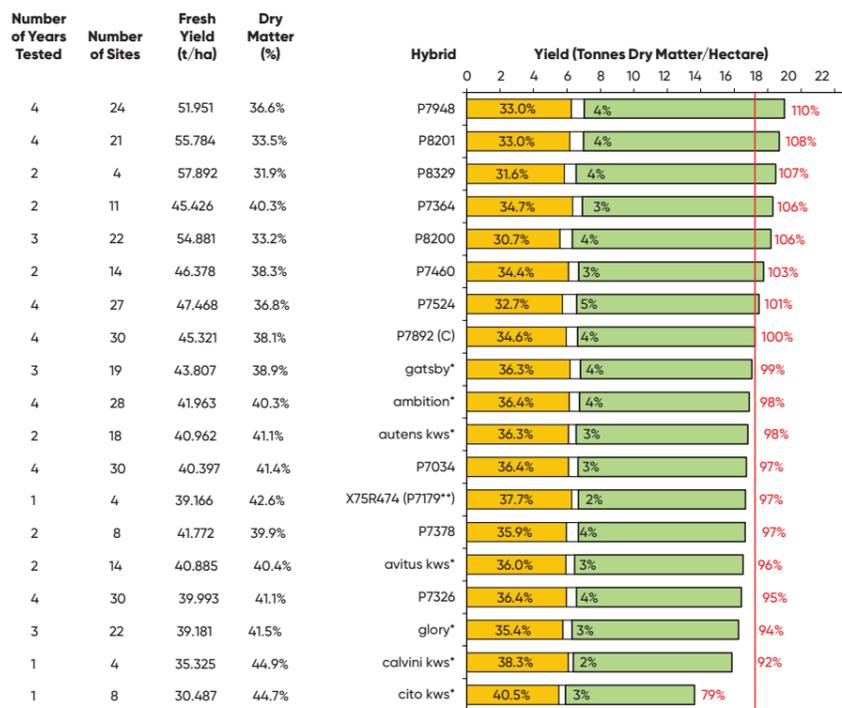
Unique fibre technology

Product	Forage	Improvement purpose
PIONEER® 11GFT	Grass and wholecrop cereal silages	Fermentation, animal performance and fibre digestibility, aerobic stability
PIONEER® 11CFT	Maize silage	Fermentation, animal performance and fibre digestibility, aerobic stability
PIONEER® 11CH4	A wide range of high dry matter silages	Aerobic stability and gas production
PIONEER® 11GH4	High dry matter grass and cereal silages	Fermentation and aerobic stability of grass and wholecrop silages intended for gas production

Traditional technology and with Rapid React

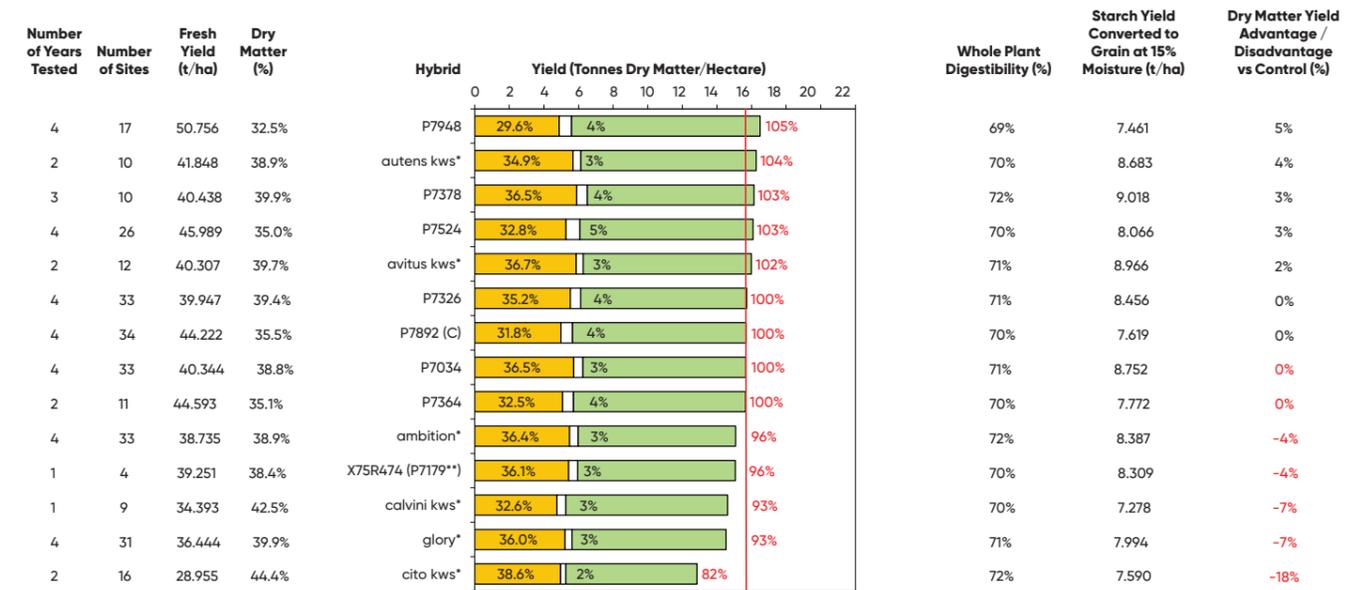
Product	Forage	Improvement purpose
PIONEER® 11G22 RAPID REACT. AEROBIC STABILITY	High dry matter grass, wholecrop cereal and pea/cereal silages	Fermentation, animal performance and aerobic stability
PIONEER® 11C33 RAPID REACT. AEROBIC STABILITY	Maize silage	Fermentation, animal performance and aerobic stability
PIONEER® 11B91 RAPID REACT. AEROBIC STABILITY	Crimped maize grain	Fermentation, animal performance and aerobic stability
PIONEER® 11A44 RAPID REACT. AEROBIC STABILITY	A wide range of high dry matter silages	Aerobic stability
PIONEER® 1188	Grass silage below 30% dry matter	Fermentation and animal performance
PIONEER® 11A44	A wide range of high dry matter silages	Aerobic stability
PIONEER® 11XH4	A wide range of high dry matter silages	Fermentation and aerobic stability in a wide range of silages intended for gas production

Whole plant forage, favourable sites, 2018 - 2021



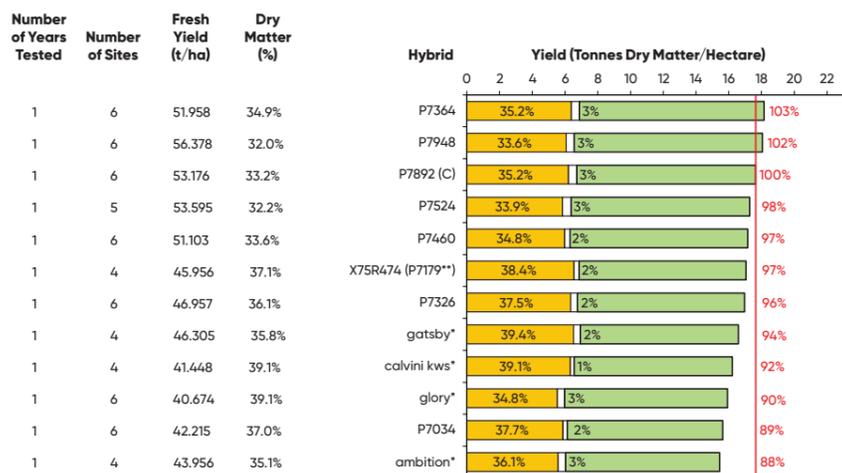
Whole Plant Digestibility (%)	Starch Yield Converted to Grain at 15% Moisture (t/ha)	Dry Matter Yield Advantage / Disadvantage vs Control (%)
69%	9.580	10%
70%	9.441	8%
66%	8.926	7%
70%	9.701	6%
67%	8.538	6%
69%	9.338	3%
69%	8.755	1%
70%	9.118	0%
71%	9.461	-1%
71%	9.399	-2%
70%	9.332	-2%
71%	9.323	-3%
70%	9.616	-3%
71%	9.142	-3%
71%	9.091	-4%
70%	9.138	-5%
70%	8.811	-6%
70%	9.296	-8%
74%	8.438	-21%

Whole plant forage, less favourable sites, 2018 - 2021



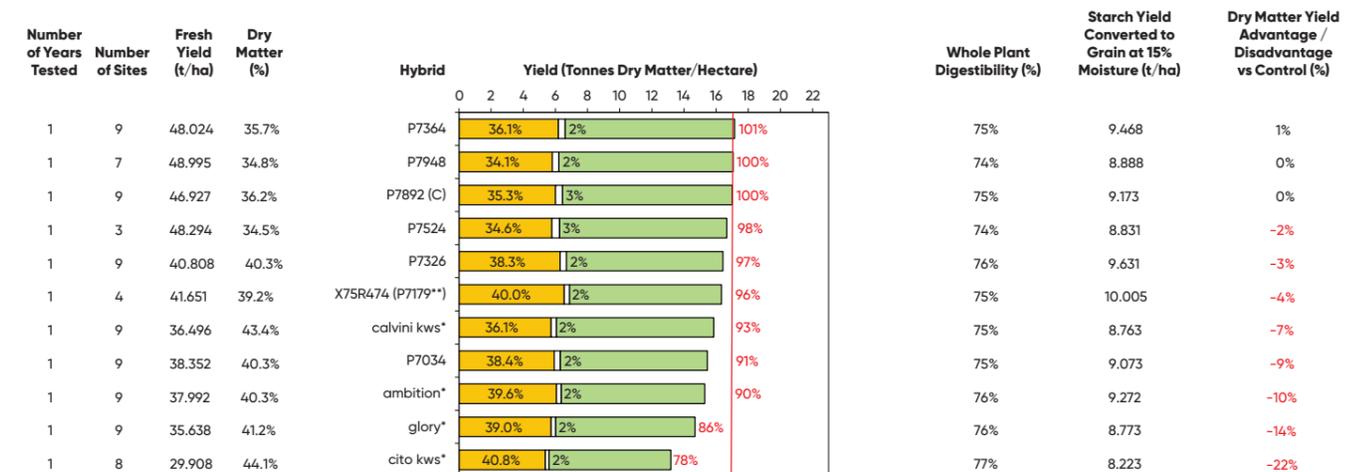
Whole Plant Digestibility (%)	Starch Yield Converted to Grain at 15% Moisture (t/ha)	Dry Matter Yield Advantage / Disadvantage vs Control (%)
69%	7.461	5%
70%	8.683	4%
72%	9.018	3%
70%	8.066	3%
71%	8.966	2%
71%	8.456	0%
70%	7.619	0%
71%	8.752	0%
70%	7.772	0%
72%	8.387	-4%
70%	8.309	-4%
70%	7.278	-7%
71%	7.994	-7%
72%	7.590	-18%

Whole plant forage, favourable sites, 2021



Whole Plant Digestibility (%)	Starch Yield Converted to Grain at 15% Moisture (t/ha)	Dry Matter Yield Advantage / Disadvantage vs Control (%)
75%	9.769	3%
74%	9.291	2%
75%	9.505	0%
75%	8.941	-2%
74%	9.141	-3%
75%	10.024	-3%
76%	9.720	-4%
76%	9.984	-6%
75%	9.691	-8%
75%	8.474	-10%
75%	9.001	-11%
75%	8.538	-12%

Whole plant forage, less favourable sites, 2021



Whole Plant Digestibility (%)	Starch Yield Converted to Grain at 15% Moisture (t/ha)	Dry Matter Yield Advantage / Disadvantage vs Control (%)
75%	9.468	1%
74%	8.888	0%
75%	9.173	0%
74%	8.831	-2%
76%	9.631	-3%
75%	10.005	-4%
75%	8.763	-7%
75%	9.073	-9%
76%	9.272	-10%
76%	8.773	-14%
77%	8.223	-22%

■ Starch Yield & % □ Sugar Yield & % ■ Stover Yield ■ Relative Dry Matter Yield index (C=100%)

C = Control Hybrid; * = Competitor Hybrid, ** = Hybrid trade name following official registration

Pioneer hybrids for energy production

The most appropriate maize hybrid for biogas production in any one situation depends on multiple factors. Maize hybrid selection for biogas production should always begin with a field assessment to determine appropriate

hybrid maturity. PACTS® trials enable Pioneer to predict gas yields that can be achieved from different Pioneer hybrids cultivated on different sites in the open and under film.

Methane gas yield predictions from PACTS® trials

Favourable Sites Grown In The Open 2018 - 2021					
Hybrid	Methane Yield*		Dry Matter %	No. Yrs Tested	No. Sites Tested
	Litres / ha	Litres / kg Dry Matter			
P7948	5,920,688	312	36.6%	4	24
P8201	5,869,950	314	33.5%	4	21
P7364	5,763,940	315	40.3%	2	11
P8329	5,586,269	302	31.9%	2	4
P7460	5,564,396	313	38.3%	2	14
P8200	5,556,076	305	33.2%	3	22
P7524	5,474,526	313	36.8%	4	27
P7892 (C)	5,458,174	316	38.1%	4	30
gatsby*	5,438,856	319	38.9%	3	19
ambition*	5,399,204	320	40.3%	4	28
autens kws*	5,330,251	316	41.1%	2	18
P7378	5,318,673	319	39.9%	2	8
X75R474 (P7179**)	5,305,901	318	42.6%	1	4
P7034	5,304,586	318	41.4%	4	30
avitus kws*	5,262,470	318	40.4%	2	14
P7326	5,212,120	317	41.1%	4	30
glory*	5,127,399	315	41.5%	3	22
calvini kws*	5,016,816	317	44.9%	1	4
agiraxx*	4,926,405	310	34.8%	1	6
cito kws*	4,483,617	328	44.7%	1	8



C = Control Hybrid
* = Competitor Hybrid
(O) = Hybrid Grown In The Open on a Samco System Site

Methane yield figures are determined using a calculation based on the Weissbach formula. This formula predicts gas output based on the value of the key substrates in the forage prior to fermentation. The calculation of Fermentable Organic Dry Matter, or 'FoTs', is a key part of the formula and the FoTs is determined using actual yield and quality results from PACTS® trials.

Less Favourable Sites Grown In The Open 2018 - 2021					
Hybrid	Methane Yield*		Dry Matter %	No. Yrs Tested	No. Sites Tested
	Litres / ha	Litres / kg Dry Matter			
P7378	5,182,103	322	39.9%	3	10
avitus kws*	5,180,669	321	39.7%	2	12
autens kws*	5,150,114	317	38.9%	2	10
P7948	5,142,089	311	32.5%	4	17
P7524	5,088,076	316	35.0%	4	26
P7326	5,018,855	319	39.4%	4	33
P7034	5,012,669	320	38.8%	4	33
P7892 (C)	4,966,509	315	35.5%	4	34
P7364	4,944,729	315	35.1%	2	11
ambition*	4,852,330	321	38.9%	4	33
X75R474 (P7179**)	4,812,053	318	38.4%	1	4
glory*	4,643,009	319	39.9%	4	31
calvini kws*	4,629,779	315	42.5%	1	9
cito kws*	4,087,713	317	44.4%	2	16
cito kws*	4,087,713	317	44.4%	2	16

Less Favourable Sites Grown Under The Samco System 2014 - 2021					
Hybrid	Methane Yield*		Dry Matter %	No. Yrs Tested	No. Sites Tested
	Litres / ha	Litres / kg Dry Matter			
P8171	5,677,933	311	30.6%	5	10
P8201	5,420,132	307	31.6%	7	26
P8329	5,252,344	305	30.5%	4	9
P7948	5,239,620	312	33.9%	4	15
P8200 (C)	5,236,072	307	30.9%	8	43
P7034	5,138,271	313	37.0%	5	20
P7378	4,974,805	318	37.6%	5	10
X75R474 (P7179**)	4,930,637	322	41.9%	1	2
P7892	4,892,588	318	34.8%	8	29
P7364	4,813,212	309	33.6%	1	5
P7524	4,741,113	318	34.0%	8	24
P7326	4,641,692	316	37.8%	8	31
P7460	4,376,370	313	34.6%	1	2
P7326 (O)	3,867,537	314	29.5%	3	3

Grain trials, grown in the open 2017 - 2021

Number of Years Tested	Number of Sites	Fresh Yield (t/ha)	Grain Moisture at Harvest (%)	Hybrid	Yield (Tonnes/Hectare at 15% Moisture)		Yield Advantage / Disadvantage vs Control (%)
					Yield (t/ha)	Relative Yield Index (%)	
3	4	13.693	33.4%	P8329	10.729 t/ha	111%	11%
3	9	12.713	31.2%	P7948	10.283 t/ha	107%	7%
1	3	12.172	32.1%	P7364	9.730 t/ha	101%	1%
5	11	11.534	28.8%	P7034	9.655 t/ha	100%	0%
5	12	11.391	28.1%	P7326 (C)	9.634 t/ha	100%	0%
2	7	11.870	31.9%	P7460	9.504 t/ha	99%	-1%
3	3	10.558	29.8%	P7892	8.715 t/ha	90%	-10%

Grain Yield, Tonnes/Hectare at 15% Moisture Relative Yield Index (C = 100%)

C = Control Hybrid; * = Competitor Hybrid, ** = Trade name following official registration

PACTS® hybrid maize agronomic descriptions for 2022

Hybrid	PACTS® Maturity Description	Soil Type Preference			FAO Rating (Silage)	Early Vigour	Resistance to Lodging	Stover dry-down at Maturity	PACTS® Eyespot Resistance Scores*
		Light	Medium	Heavy					
P7326	Extra Early	←	—	→	180	Very Good	8.2	Fast	6.2
P7364**	Very Early	←	—	→	180	Very Good	8.2	Fast	-
P7378	Very Early	←	—	→	180	Very Good	7.4	Fast	4.4
P7034	Very Early	←	—	→	190	Good	8.2	Moderate	5.4
P7892	Early	←	—	→	200	Very Good	8.3	Very Fast	6.3
P7524	Early	←	—	→	200	Very Good	8.3	Moderate	7.6
P7948	Early	←	→	→	230	Good	8.3	Moderate	7.8
P7460	Intermediate	←	→	→	230	Average	8.3	Slow	-
P8201	Intermediate	←	→	→	230	Very Good	8.1	Moderate	6.5
P8200	Intermediate	←	—	→	230	Good	7.8	Moderate	8.6
P8329	Very Late	←	—	→	250	Very Good	8.2	Moderate	-
P8171	Very Late	←	—	→	250	Good	7.8	Slow	-

*Scores based on a 1 - 9 scale where 9 = high resistance; data sourced from registration trials and PACTS® trials depending upon hybrid

** Available in Ireland in 2022

Growing maize under film

The Samco System provides extra heat during the first few weeks of growth when the plant is often challenged by cold temperatures. Over the course of the growing season the system significantly increases heat accumulation which can either bring forward the harvest date or increase yield. Different hybrids produce quite different results when planted using the Samco System. Samco and Maizetech have worked closely with Corteva for many years to understand exactly how different Pioneer branded hybrids behave and perform when sown under different films. New hybrids and new films are continually tested as they become available.



Extensive trials and commercial experience have shown that certain maize hybrids are more suited to sowing under certain film types than others. Some are clearly unsuitable. Site assessments and intended planting date should determine the maturity of the hybrid to be sown. Desirable hybrid features such as high relative yield, starch content and standing ability should then be considered to identify the specific hybrid that should be planted.



P7326 – Extra Early Maturity

P7326 has been tested on 31 locations over eight years under film and proven itself to be a prime choice for growers on very marginal locations where it has produced very high starch content silage with good dry matter yields for its maturity. P7326 should also be considered as an appropriate choice on other locations where the sowing date is significantly delayed.

P7034 – Very Early Maturity

P7034 has now been tested in PACTS® trials under film on 20 locations over five years.



Whilst it is slightly slower than P7326 to break through the film it has given good dry matter yields of a very high starch content. P7034 is also a dent grain textured hybrid and is termed a Pioneer M³ (or 'M cube') hybrid. The dent type grain provides a very high level of ruminal degradable starch (>80%). P7034 should be considered by growers who value the faster rumen degradability of its starch, or simply those cultivating on marginal sites or sites where an early harvest is required.

P7892 – Very Early Maturity

This very early maturing, high starch content hybrid has proven itself to be a reliable option for Samco System growers on marginal sites and those situations where planting is delayed. P7892 is slightly later to mature than P7326 but with higher dry matter yield potential.

P7364 – Very Early Maturity - NEW

P7364 is a new hybrid for 2022 (only available in Ireland in 2022). This is a stiff strawed early maturity hybrid with a good dry matter yield. It dries down fast at maturity and would be a good choice on less favourable sites where a higher yield is sought or favourable sites where an early maturity is needed.

P7948 – Early Maturity

P7948 is a hybrid suited to good sites and will give a significant yield of silage at an earlier harvest date than P8200 or P8201. It has been tested on 15 locations over 4 years under film and has produced silage nearly 3% higher in dry matter content than P8200, but only 3% lower in dry matter yield.

P8200 – Intermediate Maturity

P8200 has been tested in PACTS® Trials under the Samco System on 43 locations over the past eight years. This hybrid has given very consistent and reliable results across very different types of seasons and sites. This tall hybrid has given very high dry matter yields of silage with good starch content. P8200 penetrates film well, dries down rapidly at maturity and is suited to most locations when planted at the normal time.

P8201 – Intermediate Maturity

P8201 has been tested on 26 locations over seven years of PACTS® Trials. This is a very large stature hybrid that penetrates film extremely well and has good vigour after emergence through the film. Very high dry matter yields of good starch content have been recorded and P8201 is a hybrid to consider for growers on favourable sites wishing to maximise the dry matter yield under film. P8201 has given rumen degradable starch at harvest of just under 80%.

P8171 – Very Late Maturity

P8171 was launched in 2019. It has been tested under film in PACTS® Trials for five years and is a very late maturing hybrid with a high dry matter yield potential. It should only be sown in the UK and Ireland on favourable sites under film where an early harvest is not required. P8171 is not suitable for late planting.

The agronomic practices required for cultivating maize under film vary significantly to those normally adopted when cultivating maize in the open. In addition to selecting a suitable hybrid it is important that appropriate advice is sought on all the other appropriate crop management techniques relevant to this method of cultivation.

"A fundamental part of the Samco System is the use of maize hybrids that we know are suited for cultivation under film" says Sam Shine of Samco. "Samco work closely with Pioneer and the PACTS® Trials to identify hybrids that respond significantly to the conditions that exist under the film and then learn how to manage them in the field."

Samuel J. Shine

For further details about the Samco System please contact Samco, Tuogh, Adare, County Limerick

Tel: 00 353 (0)61 396176

Website: www.samco.ie



Strip trials, whole plant forage, 2014 – 2021



Number of Years Tested	Number of Sites	Fresh Yield (t/ha)	Dry Matter (%)	Hybrid	Yield (Tonnes Dry Matter/Hectare)	Whole Plant Digestibility (%)	Starch Yield Converted to Grain at 15% Moisture (t/ha)	Dry Matter Yield Advantage/Disadvantage/Control (%)
5	10	59.696	30.6%	P8171	31.6% Starch, 4% Sugar, 107% Stover	69%	8.825	7%
7	26	55.872	31.6%	P8201	30.8% Starch, 5% Sugar, 104% Stover	69%	8.310	4%
4	9	56.422	30.5%	P8329	29.3% Starch, 6% Sugar, 101% Stover	67%	7.728	1%
8	43	55.089	30.9%	P8200 (C)	30.6% Starch, 4% Sugar, 100% Stover	68%	7.974	0%
4	15	49.441	33.9%	P7948	34.0% Starch, 4% Sugar, 99% Stover	69%	8.729	-1%
5	20	44.506	37.0%	P7034	35.3% Starch, 3% Sugar, 97% Stover	69%	8.900	-3%
5	10	41.527	37.6%	P7378	36.5% Starch, 4% Sugar, 92% Stover	70%	8.722	-8%
1	5	46.526	33.6%	P7364	33.8% Starch, 4% Sugar, 92% Stover	67%	8.090	-8%
8	29	44.049	34.8%	P7892	33.3% Starch, 5% Sugar, 90% Stover	71%	7.801	-10%
8	24	43.763	34.0%	P7524	33.0% Starch, 5% Sugar, 88% Stover	70%	7.515	-12%
8	31	38.906	37.8%	P7326	35.1% Starch, 4% Sugar, 86% Stover	70%	7.891	-14%

■ Starch Yield & % □ Sugar Yield & % ■ Stover Yield ■ Relative Dry Matter Yield index (C=100%)

C = Control Hybrid = 100%; ** = Trade name following official registration

Selected multiple year paired comparisons

	No. Years Tested	No. Sites	Dry Matter (%)	Yield (Tonnes Dry Matter/ha)	Yield Index (%)	Wholeplant Organic Matter Digestibility (%)	Starch (%)	Sugar (%)	Megajoules Metabolisable Energy /Kg Dry Matter	Calculated Methane Production (litres/kg Dry Matter)	Calculated Methane Production (l/ha)	Pioneer Rumen Degradable Starch (%)	Pioneer Rumen Degradable Starch Yield (Tonnes Dry Matter/ha)
P8201	6	26	31.7%	17.260	103.7%	69.4%	31.3%	4.6%	11.5	309	5,349,116	85.0%	4.586
P8200 (C)			31.0%	16.642	100.0%	68.4%	31.1%	3.8%	11.3	309	5,167,467	76.0%	3.935
P7948	4	15	33.2%	15.311	97.2%	68.3%	33.0%	3.5%	11.3	311	4,779,486	83.4%	4.211
P8200 (C)			30.3%	15.752	100.0%	67.6%	30.0%	3.6%	11.2	307	4,856,973	70.7%	3.337
P7034	5	20	36.6%	15.375	97.4%	70.6%	36.3%	2.9%	11.7	318	4,891,312	74.4%	4.154
P8200 (C)			30.3%	15.782	100.0%	68.8%	30.7%	3.9%	11.4	311	4,933,907	64.3%	3.119
P7892	7	29	34.3%	14.966	90.1%	69.9%	32.4%	4.3%	11.6	315	4,725,046	-	-
P8200 (C)			30.5%	16.615	100.0%	67.1%	29.8%	3.4%	11.1	304	5,056,768	-	-
P7364	1	5	35.1%	16.955	93.3%	73.7%	35.7%	1.5%	12.2	328	5,562,170	72.9%	4.412
P8200 (C)			31.7%	18.176	100.0%	74.0%	32.4%	1.6%	12.2	326	5,941,981	60.2%	3.551
P7326	7	31	37.3%	14.363	86.3%	70.5%	35.0%	3.6%	11.7	318	4,566,361	77.5%	3.900
P8200 (C)			30.5%	16.643	100.0%	68.3%	30.5%	3.8%	11.3	309	5,152,324	64.3%	3.263
P8171	5	10	31.5%	17.876	107.4%	69.5%	33.0%	4.1%	11.5	315	5,642,512	89.1%	5.260
P8200 (C)			31.8%	16.649	100.0%	69.0%	32.0%	4.3%	11.4	312	5,203,408	76.0%	4.052
P7948	4	14	33.4%	15.210	98.0%	69.6%	34.0%	3.7%	11.5	316	4,819,734	76.5%	3.950
P7034			36.5%	15.521	100.0%	69.8%	36.1%	2.8%	11.6	316	4,899,388	74.4%	4.166
P7364	1	5	35.1%	16.955	99.1%	73.7%	35.7%	1.5%	12.2	328	5,562,170	72.9%	4.412
P7034			37.8%	17.116	100.0%	75.3%	40.0%	1.3%	12.5	332	5,687,522	63.0%	4.310
P7326	7	20	36.8%	13.790	89.7%	70.7%	35.3%	3.5%	11.7	319	4,404,034	77.5%	3.772
P7034			36.6%	15.375	100.0%	70.6%	36.3%	2.9%	11.7	318	4,891,312	74.4%	4.154
P8201	4	11	32.3%	16.980	110.5%	68.3%	31.8%	3.9%	11.3	300	5,092,248	85.0%	4.582
P7948			33.8%	15.361	100.0%	68.3%	33.6%	3.6%	11.3	311	4,791,159	88.2%	4.556
P8171	4	5	31.5%	18.018	118.0%	68.5%	33.9%	3.5%	11.3	313	5,636,317	89.1%	5.436
P7948			33.0%	15.266	100.0%	66.2%	30.3%	4.1%	11.0	304	4,634,336	88.2%	4.073

C = Control hybrid; * = Competitor hybrid; ** = Trade name following official registration

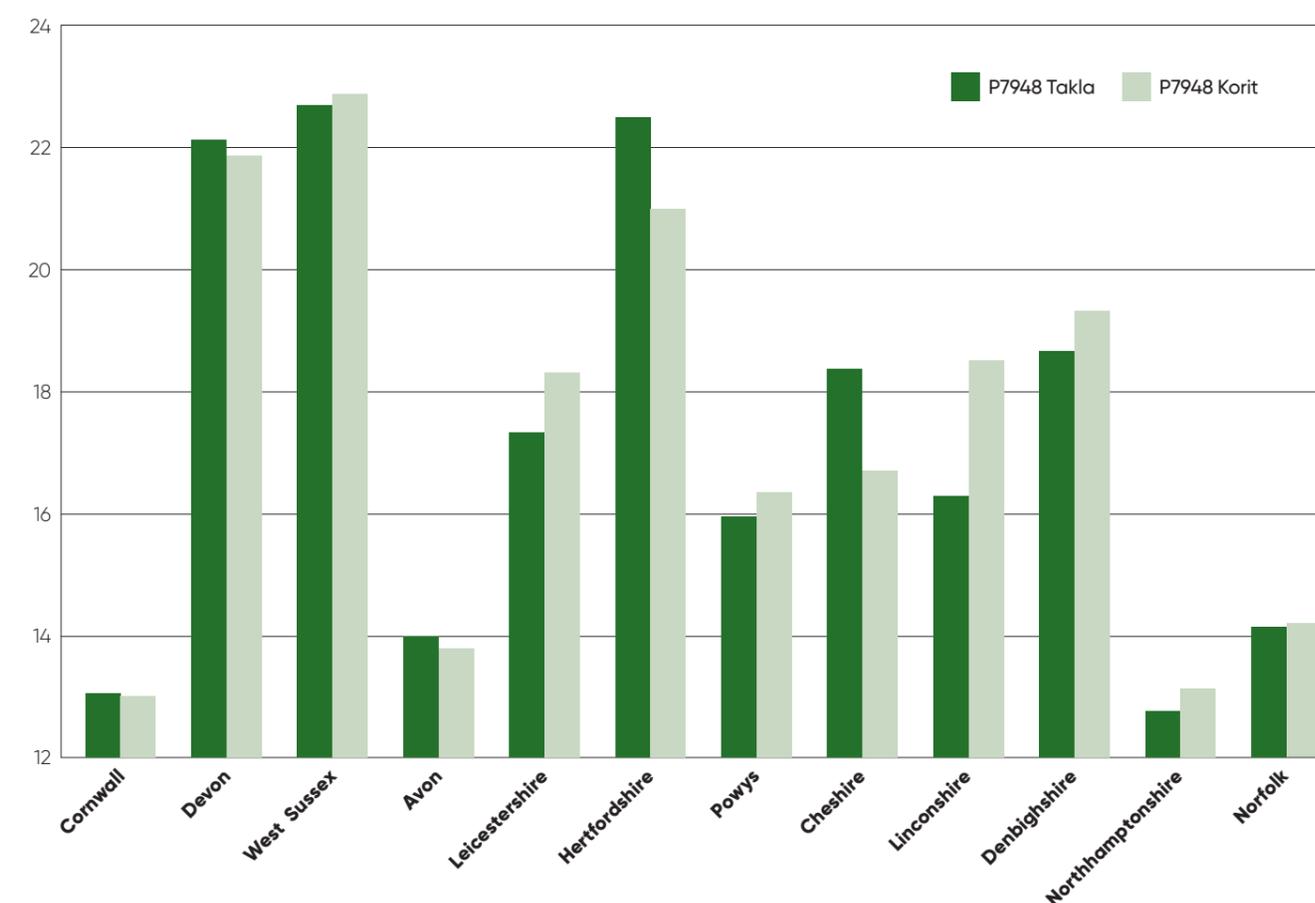
Introducing Takla seed treatment

Seed treated with Takla will be available for the first time in 2022. Takla is a new nutrient seed treatment intended to aid the establishment of Pioneer maize.

In 2021 PACTS® trials strip plots of P7948 treated with Takla were compared with strip plots of P7948 treated with Korit. The performance of the Takla treated plots can be seen in the chart and table below.

P7948 Takla treated vs. P7948 Korit treated PACTS® Trials 2021

Dry matter yield tonnes / hectare by location



P7948 (Takla & Lumibio Kelta) paired comparisons all sites multiple year summary 2018 - 2021

	Site Type	No. Years Tested	No. Sites	Dry Matter (%)	Yield (Tonnes Dry Matter/ha)	Yield Index (%)	Wholeplant Organic Matter Digestibility (%)	Starch (%)	Sugar (%)
P7948 (TAKLA & L. KELTA)	All sites	1	12	34.0%	17,144	98.6%	74.7%	35.1%	2.5%
P7948 (KORIT & L. KELTA)				33.7%	17,390	100.0%	74.1%	33.8%	2.5%



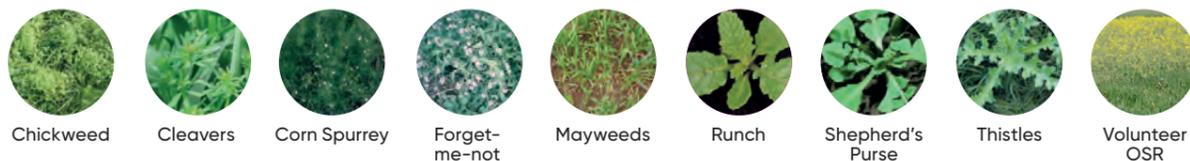
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The impact of M³ Dent genetics on faecal starch losses and milk production.



P7034 is the first Pioneer maize hybrid in the UK to have Dent genetics and meet the M³ advancement criteria. When feeding dairy or beef cattle Dent genetics provide a significant, nutritional advantage, i.e. increased ruminal starch degradability. Dent starch is high in soft-floury endosperm and is more readily broken down in the rumen than the hard, vitreous endosperm of Flint starch.

Starch that isn't broken down and digested in the rumen or hindgut will pass through the cow to be excreted in the faeces. Nutritionally, this is an expensive loss - indicating poor utilisation, nutrient losses and wasted energy. Ideally, residual starch losses should be less than 3% (Urness, Oct 2011), with losses over 5% being a cause for concern.

Studies have shown that Dent hybrids demonstrate a 2% reduction in faecal starch losses compared to typical Flint hybrids (Laflotte, et al July 2016). Each 1% reduction

in faecal starch can be equated to an extra 0.35l milk/day (Ferguson, 2003). The 2% reduction in faecal starch associated with Dent hybrids gives an additional 0.7l milk/cow/day. Based on a typical forage intake of 30kgs maize silage/cow/day, 1 tonne of maize silage would feed 33 cows/day. At 0.7 l/ day this equates to 23 litres milk/tonne of maize silage fed. Assuming a price of 32p/litre for milk (Defra, September 2021) and 23 litres of milk/tonne of maize silage, an additional £7.36 of milk/tonne can be achieved from feeding Dent starch silage. The value of this, assuming 15t maize/acre is £110.40/acre.

The nutritional benefits of feeding maize with Dent genetics are quantified by these figures. Ultimately, the reduction in faecal starch losses associated with increased ruminal starch degradability will give rise to increases in milk yield and liveweight gain (the energy required to produce 23l of milk equates to approximately 3.5kg of liveweight gain).

P7034 is the first early flowering dent grain textured Pioneer hybrid to be marketed in the UK & Ireland. PACTS results show it delivers, on average, well over 80% rumen degradable starch content at harvest.

Source: Progressive Dairy, 11th Oct 2011- Faecal starch analysis: a closer look (Jon Urness)

Source: 2015 French Dairy Trial, University of Lorraine Laflotte, A, L. Aubry, B. Mahanna and F. Owens. Proceedings 2016 JAM Meeting Abstract 15902, Salt Lake City, July 2016

Source: Dairy Performance, 29th September 2011- Getting the rest of the story on fecal starch

Dent type grain



Dent type grain showing characteristic deep kernels



P7326

Extra Early Maturity, FAO 180
Primary End Use: Forage, Biogas and Grain

P7326 was the biggest selling Forage maize hybrid in the UK again in 2021 (source: Kynetec, Amis® Seed).

FACTS® results show P7326 is clearly an obvious choice for growers who are seeking a hybrid that will reach 30% dry matter quickly and produce good yields of high starch content silage. P7326 has shown a high degree of adaptation to cultivation on less favourable locations where heat is often limiting. It is also suited to favourable locations wherever an early harvest is required. P7326 has demonstrated very good early vigour.

Hybrid Characteristics

- Fastest Pioneer hybrid to reach 30% dry matter
- Tall hybrid for such an early maturity
- Very good early vigour
- High starch content silage with good whole plant digestibility

Grown In The Open

- On both favourable and less favourable sites
- Where early vigour and rapid early growth is important
- For production of dry grain or grain for crimping on all but marginal sites

Grown Using The Samco System

- High comparative dry matter yields on the coldest sites e.g. sites in Northern Ireland and south west Scotland
- High starch yields for this maturity
- On more favourable locations when sowing is delayed

Hybrids ranked by highest dry matter content PACTS® trials, 2018-2021

Less Favourable Sites			
Hybrid	Dry Matter Content at Harvest (%)	No. of Years	No. of Sites
cito kws*	44.4	2	16
calvini kws*	42.5	1	9
P7378	39.9	3	10
glory*	39.9	4	31
P7326	39.4	4	33
ambition*	38.9	4	33
P7034	38.8	4	33
X75R474 (P7179**)	38.4	1	4
P7892 (C)	35.5	4	34
P7364	35.1	2	11
P7524	35.0	4	26
P7948	32.5	4	17



Hybrid Specific Agronomic Advice		
	Grown In The Open	Samco System
Early Vigour	Very Good	Very Good
Lodging Resistance ¹	8.2	
Eyespot Resistance Score ¹	6.2	
Stover Dry-Down Rate	Fast	Very Fast
Forage Seeding Rate ² (seeds/ha)	103,000 to 110,000	110,000
Film Penetration Ability ³	Not Applicable	Good ³

¹ Score on a 1- 9 scale where 9 = very resistant

² Assumes plant establishment losses of less than 5%

³ Film penetration varies with conditions and film. Trials conducted with Samco and Maizetech films

P7326 selected paired comparisons favourable sites

	No. Years Tested	No. Sites	Dry Matter (%)	Yield (Tonnes Dry Matter/ha)	Yield Index (%)	Wholeplant Organic Matter Digestibility (%)	Starch (%)	Sugar (%)	Megajoules Metabolisable Energy /Kg Dry Matter	Calculated Methane Production (litres/kg Dry Matter)	Calculated Methane Production (l/ha)	Pioneer Rumen Degradable Starch (%)	Pioneer Rumen Degradable Starch Yield (Tonnes Dry Matter/ha)
P7326	4	22	39.7%	16.352	100.2%	71.4%	36.8%	3.7%	11.8	321	5,259,766	73.8%	4.440
glory*			41.2%	16.313	100.0%	71.0%	36.0%	3.4%	11.8	320	5,214,006	64.2%	3.769
P7326	4	28	41.6%	16.429	96.8%	70.0%	36.6%	3.6%	11.6	316	5,196,335	74.4%	4.474
ambition*			40.9%	16.971	100.0%	70.9%	36.6%	3.6%	11.7	319	5,408,728	65.4%	4.062
P7326	1	8	45.0%	16.765	123.2%	67.1%	35.2%	3.3%	11.1	307	5,140,843	75.7%	4.461
cito kws*			45.5%	13.608	100.0%	70.6%	38.7%	2.7%	11.7	318	4,337,978	68.8%	3.624
P7326	1	4	38.0%	15.951	108.7%	75.4%	36.0%	2.4%	12.5	333	5,305,615	76.3%	4.386
calvini kws*			40.1%	14.677	100.0%	75.1%	37.6%	1.5%	12.4	331	4,858,415	68.4%	3.778
P7326	4	30	41.1%	16.436	95.3%	70.3%	36.4%	3.6%	11.6	317	5,212,120	74.4%	4.446
P7892 (C)			38.1%	17.245	100.0%	70.3%	34.6%	3.9%	11.6	316	5,458,174	72.3%	4.313
P7326	4	30	41.1%	16.436	100.0%	70.3%	36.4%	3.6%	11.6	317	5,212,120	74.1%	4.427
P7034			41.4%	16.731	101.8%	70.7%	36.4%	3.4%	11.7	318	5,304,586	82.7%	5.044

P7326 selected paired comparisons less favourable sites

	No. Years Tested	No. Sites	Dry Matter (%)	Yield (Tonnes Dry Matter/ha)	Yield Index (%)	Wholeplant Organic Matter Digestibility (%)	Starch (%)	Sugar (%)	Megajoules Metabolisable Energy /Kg Dry Matter	Calculated Methane Production (litres/kg Dry Matter)	Calculated Methane Production (l/ha)	Pioneer Rumen Degradable Starch (%)	Pioneer Rumen Degradable Starch Yield (Tonnes Dry Matter/ha)
P7326	4	30	40.1%	15.911	107.8%	71.0%	35.3%	3.8%	11.7	319	5,088,832	80.0%	4.486
glory*			40.8%	14.764	100.0%	71.2%	36.2%	2.8%	11.8	320	4,735,823	67.8%	3.620
P7326	4	32	39.5%	15.844	104.8%	70.8%	35.0%	3.8%	11.7	318	5,056,573	81.0%	4.496
ambition*			39.0%	15.115	100.0%	71.7%	36.4%	3.4%	11.9	321	4,868,688	68.5%	3.762
P7326	2	16	38.1%	16.020	119.1%	71.6%	35.1%	3.9%	11.9	321	5,146,931	81.5%	4.590
cito kws*			43.2%	13.451	100.0%	73.4%	38.4%	2.5%	12.1	321	4,323,911	74.4%	3.848
P7326	1	9	40.3%	16.432	103.6%	75.6%	38.3%	2.3%	12.5	333	5,471,986	76.7%	4.832
calvini kws*			43.4%	15.854	100.0%	75.2%	36.1%	2.1%	12.4	331	5,255,185	58.5%	3.350
P7326	4	33	39.4%	15.691	100.0%	70.9%	35.1%	3.8%	11.7	319	5,010,552	80.8%	4.455
P7034			38.9%	15.629	99.6%	71.5%	36.5%	3.5%	11.8	320	5,004,376	87.0%	4.964
P7326	4	33	39.4%	15.691	100.3%	70.9%	35.1%	3.7%	11.7	319	5,010,552	80.7%	4.450
P7892 (C)			35.5%	15.642	100.0%	70.0%	31.8%	4.3%	11.6	315	4,958,292	75.8%	3.767
P7524	4	25	35.4%	15.609	101.4%	68.6%	31.6%	5.5%	11.4	312	4,868,792	79.2%	3.903
P7326			40.0%	15.386	100.0%	69.6%	34.2%	4.1%	11.5	315	4,849,264	81.6%	4.296

C = Control Hybrid; * = Competitor Hybrid; ** = Hybrid trade name following official registration

P7034

Very Early Maturity, FAO 180
Primary End Use: Forage, Grain and Biogas



P7034 is a very early maturity hybrid with a dent grain texture. Pioneer classifies P7034 as an M³ hybrid (pronounced 'M Cube'). M³ hybrids are those that combine a very high level of rumen degradable starch with a high starch content, high stable yield and superior agronomic performance.

P7034 is the first Pioneer hybrid of this earliness that has highly rumen degradable dent type starch and has qualified for the M³ classification. It has been bred specifically for the cool maritime locations found in the UK and Ireland.

P7034 flowers early and produces silage with a very high starch content and starch yield. Its dent type starch degrades at a significantly faster rate in the rumen than the flint type starch found in the flint grain textured type hybrids that are normally grown in the UK. This is especially the case just after ensiling before

silage acids have a chance to degrade the protein that protects the starch granules in flint type hybrids.

Where possible, crops of P7034 should be clamped last and fed first. This approach is likely to aid the feeding transition from old to new crop maize silage and it fully exploits the starch degradability benefit of P7034. The starch rumen degradability advantage of dent types, compared to flint types, will lessen as silage ages but it will always persist to a certain degree.

Hybrid Characteristics

- Dent grain texture with fast ruminal starch degradability
- Very high whole plant digestibility
- Very high starch content
- Early flowering

Grown In The Open

- Widely adapted to all but the coldest maize growing areas of the UK and typical maize growing areas in Ireland
- Ensilage last and feed first

Grown Using The Samco System

- Responds positively to the early heat generated under film
- Produces silage of a very high starch content and a very high starch yield
- P7034 can be grown under film on favourable and less favourable sites. On less favourable sites it should be sown in the normal planting window



Hybrid Specific Agronomic Advice		
	Grown In The Open	Samco System
Early Vigour	Good	Good
Lodging Resistance ¹	8.2	
Eyespot Resistance Score ¹	5.4	
Stover Dry-Down Rate	Fast	Very Fast
Forage Seeding Rate ² (seeds/ha)	103,000 to 110,000	110,000
Film Penetration Ability ³	Not Applicable	Average ³

¹ Score on a 1- 9 scale where 9 = very resistant

² Assumes plant establishment losses of less than 5%

³ Film penetration varies with conditions and film. Trials conducted with Samco and Maizetech films

Tables ranked in order of decreasing rumen degradable starch yield; hybrids included were tested at a minimum of three locations in each region.

P7034

versus other selected hybrids tested for rumen degradable starch



Favourable PACTS® Sites 2018-2021							
Hybrid	Dry Matter Content (%)	Starch Content (%)	Relative Dry Matter Yield Index (C = 100%)	Rumen Degradable Starch Analyses			
				Sites Tested	Years Tested	Pioneer Relative Rumen Degradable Starch Content (%)	Pioneer Relative Rumen Degradable Starch Yield; Tonnes Dry Matter / Hectare
P7460	38.3%	34.4%	102.9%	13	2	88.1%	5.382
P7034	41.4%	36.4%	97.0%	22	4	82.3%	5.017
P8201	33.5%	33.0%	108.4%	9	3	78.5%	4.846
P8329	31.9%	31.6%	107.2%	3	1	77.3%	4.510
P7524	36.8%	32.7%	101.4%	15	4	75.7%	4.334
P7948	36.6%	33.0%	110.2%	18	3	74.9%	4.694
P7326	41.1%	36.4%	95.3%	24	4	74.5%	4.454
X75R474 (P7179**)	42.6%	37.7%	96.7%	4	1	73.5%	4.622
P7892 (C)	38.1%	34.6%	100.0%	24	4	72.1%	4.299
P7364	40.3%	34.7%	106.1%	10	2	70.7%	4.482
cito kws*	44.7%	40.5%	79.0%	7	1	69.6%	3.841
P8200	33.2%	30.7%	105.5%	3	1	68.4%	3.816
calvini kws*	44.9%	38.3%	91.9%	4	1	67.3%	4.090
gatsby*	38.9%	36.3%	98.9%	17	3	66.1%	4.087
ambition*	40.3%	36.4%	98.0%	21	4	65.1%	3.999
glory*	41.5%	35.4%	94.3%	17	3	64.0%	3.689
autens kws*	41.1%	36.3%	97.5%	13	2	63.8%	3.893
avitus kws*	40.4%	36.0%	95.9%	11	2	61.2%	3.639

Less Favourable PACTS® Sites 2018-2021							
Hybrid	Dry Matter Content (%)	Starch Content (%)	Relative Dry Matter Yield Index (C = 100%)	Rumen Degradable Starch Analyses			
				Sites Tested	Years Tested	Pioneer Relative Rumen Degradable Starch Content (%)	Pioneer Relative Rumen Degradable Starch Yield; Tonnes Dry Matter / Hectare
P7034	38.8%	36.5%	99.9%	27	4	85.5%	4.890
P7378	39.9%	36.5%	103.0%	3	3	81.7%	4.818
P7326	39.4%	35.2%	100.3%	30	4	80.1%	4.427
P7948	32.5%	29.6%	105.2%	14	3	78.3%	3.822
P7524	35.0%	32.8%	102.6%	12	4	77.7%	4.100
P7892 (C)	35.5%	31.8%	100.0%	31	4	75.2%	3.748
P7364	35.1%	32.5%	99.8%	10	2	73.4%	3.728
cito kws*	44.4%	38.6%	82.0%	13	2	70.8%	3.514
glory*	39.9%	36.0%	92.6%	27	4	67.6%	3.535
ambition*	38.9%	36.4%	96.2%	30	4	67.6%	3.707
avitus kws*	39.7%	36.7%	102.0%	11	2	67.1%	3.931
autens kws*	38.9%	34.9%	103.8%	8	1	66.6%	3.783
calvini kws*	42.5%	32.6%	93.2%	9	1	65.8%	3.130
X75R474 (P7179**)	38.4%	36.1%	96.1%	4	1	64.7%	3.515

P7034

selected paired comparisons favourable sites



	No. Years Tested	No. Sites	Dry Matter (%)	Yield (Tonnes Dry Matter/ha)	Yield Index (%)	Wholeplant Organic Matter Digestibility (%)	Starch (%)	Sugar (%)	Megajoules Metabolisable Energy /Kg Dry Matter	Calculated Methane Production (litres/kg Dry Matter)	Calculated Methane Production (l/ha)	Pioneer Rumen Degradable Starch (%)	Pioneer Rumen Degradable Starch Yield (Tonnes Dry Matter/ha)
P7034	3	22	40.4%	16.788	102.9%	72.3%	37.2%	3.4%	12.0	323	5,417,502	81.9%	5.119
glory*			41.2%	16.313	100.0%	71.0%	36.0%	3.4%	11.8	320	5,214,006	64.2%	3.769
P7034	4	28	41.9%	16.830	99.2%	70.5%	36.7%	3.5%	11.7	317	5,326,553	82.7%	5.107
ambition*			40.9%	16.971	100.0%	70.9%	36.6%	3.6%	11.7	319	5,408,728	65.6%	4.069
P7034	3	19	42.2%	17.311	98.5%	69.0%	35.5%	3.3%	11.4	312	5,405,278	83.9%	5.160
gatsby*			39.1%	17.572	100.0%	70.6%	36.4%	3.5%	11.7	318	5,579,920	65.9%	4.214
P7034	1	8	44.3%	16.544	121.6%	66.3%	34.3%	3.2%	11.0	303	5,003,930	85.2%	4.831
cito kws*			45.5%	13.608	100.0%	70.6%	38.7%	2.7%	11.7	318	4,337,978	69.0%	3.636
P7034	1	4	37.3%	14.667	99.9%	74.4%	35.9%	1.6%	12.3	329	4,816,692	82.2%	4.328
calvini kws*			40.1%	14.677	100.0%	75.1%	37.6%	1.5%	12.4	331	4,858,415	68.4%	3.778
P7034	4	30	41.4%	16.731	101.8%	70.7%	36.4%	3.4%	11.7	318	5,304,586	82.7%	5.044
P7326			41.1%	16.436	100.0%	70.3%	36.4%	3.6%	11.6	317	5,212,120	74.1%	4.427
P7034	4	30	41.4%	16.731	97.0%	70.7%	36.4%	3.4%	11.7	318	5,304,586	82.7%	5.044
P7892 (C)			38.1%	17.245	100.0%	70.3%	34.6%	3.9%	11.6	316	5,458,174	72.5%	4.323

P7034

selected paired comparisons less favourable sites



	No. Years Tested	No. Sites	Dry Matter (%)	Yield (Tonnes Dry Matter/ha)	Yield Index (%)	Wholeplant Organic Matter Digestibility (%)	Starch (%)	Sugar (%)	Megajoules Metabolisable Energy /Kg Dry Matter	Calculated Methane Production (litres/kg Dry Matter)	Calculated Methane Production (l/ha)	Pioneer Rumen Degradable Starch (%)	Pioneer Rumen Degradable Starch Yield (Tonnes Dry Matter/ha)
P7034	4	30	39.6%	15.824	107.2%	71.4%	36.3%	3.5%	11.8	320	5,063,858	86.9%	4.995
glory*			40.8%	14.764	100.0%	71.2%	36.2%	2.9%	11.8	320	4,735,823	67.5%	3.605
P7034	4	32	38.9%	15.777	104.4%	71.3%	36.2%	3.4%	11.8	320	5,044,333	86.6%	4.944
ambition*			39.0%	15.115	100.0%	71.7%	36.4%	3.4%	11.9	321	4,868,688	67.7%	3.718
P7034	2	16	37.8%	15.557	115.7%	72.1%	36.3%	3.6%	11.9	322	4,999,612	85.1%	4.805
cito kws*			43.2%	13.451	100.0%	73.4%	38.4%	2.5%	12.1	321	4,323,911	71.1%	3.674
P7034	1	9	40.3%	15.456	97.5%	75.4%	38.4%	2.4%	12.5	332	5,133,472	76.2%	4.523
calvini kws*			43.4%	15.854	100.0%	75.2%	36.1%	2.1%	12.4	331	5,255,185	58.8%	3.368
P7034	4	33	38.9%	15.629	99.6%	71.5%	36.5%	3.5%	11.8	320	5,004,376	87.0%	4.964
P7326			39.4%	15.691	100.0%	70.9%	35.1%	3.8%	11.7	319	5,010,552	80.8%	4.455
P7034	4	33	38.9%	15.629	99.9%	71.5%	36.5%	3.5%	11.8	320	5,004,376	86.6%	4.940
P7892 (C)			35.5%	15.642	100.0%	70.0%	31.8%	4.4%	11.6	315	4,958,292	75.6%	3.755

C = Control Hybrid; * = Competitor Hybrid

These results confirm the dent type hybrid P7034 is both fully adapted to typical UK conditions and has produced high dry matter content silage with a very high content of highly ruminal degradable starch.

P7364 - NEW

(available in Ireland in 2022)

Early Maturity, FAO 200

Primary End Use: Forage and Biogas

P7364 is a new hybrid for 2022 (P7364 is still completing registration trials in the UK and is not due to be sold in the UK until 2024).

P7364 is a tall, very early maturity, hybrid with very good early vigour and very good standing ability. It is likely to be a good choice for planting under film in exposed locations and on favourable sites in the open. P7364 has flint textured grain.

Hybrid Characteristics

- Tall
- Very good early vigour
- High yield for this maturity

Grown In The Open

- On favourable locations in the normal planting period

Grown Using The Samco System

- On some less favourable and favourable sites in Ireland
- On favourable locations that are exposed



P7364

selected paired comparisons favourable sites

	No. Years Tested	No. Sites	Dry Matter (%)	Yield (Tonnes Dry Matter/ha)	Yield Index (%)	Wholeplant Organic Matter Digestibility (%)	Starch (%)	Sugar (%)	Megajoules Metabolisable Energy /Kg Dry Matter	Calculated Methane Production (litres/kg Dry Matter)	Calculated Methane Production (l/ha)	Pioneer Rumen Degradable Starch (%)	Pioneer Rumen Degradable Starch Yield (Tonnes Dry Matter/ha)
P7364	2	20	37.4%	18.030	112.4%	71.7%	34.5%	2.9%	11.9	321	5,781,876	69.1%	4.298
ambition*			39.7%	16.037	100.0%	73.2%	37.4%	2.7%	12.1	326	5,225,190	63.9%	3.835
P7364	2	11	37.4%	18.789	109.2%	69.8%	32.7%	2.6%	11.5	314	5,899,881	70.2%	4.318
gatsby*			37.8%	17.211	100.0%	71.2%	36.0%	2.7%	11.8	319	5,474,314	64.5%	3.993
P7364	2	11	37.4%	18.801	106.1%	70.4%	33.5%	2.7%	11.7	317	5,949,514	70.3%	4.431
P7892 (C)			35.3%	17.713	100.0%	71.0%	33.5%	3.4%	11.7	318	5,633,904	71.9%	4.265
P7364	2	11	37.4%	18.801	111.6%	70.4%	33.5%	2.7%	11.7	317	5,949,514	70.3%	4.431
P7326			38.9%	16.843	100.0%	71.1%	35.6%	2.8%	11.8	320	5,386,817	73.1%	4.381
P7364	2	11	37.4%	18.801	115.3%	70.4%	33.5%	2.7%	11.7	317	5,949,514	70.8%	4.465
P7034			39.7%	16.306	100.0%	69.3%	34.3%	2.2%	11.5	313	5,083,042	80.1%	4.474

Hybrid Specific Agronomic Advice

	Grown In The Open	Samco System
Early Vigour	Very Good	Very Good
Lodging Resistance ¹	8.2	
Eyespot Resistance Score ¹	-	
Stover Dry-Down Rate	Fast	Fast
Forage Seeding Rate ² (seeds/ha)	93,000 – 103,000	98,000 – 103,000
Film Penetration Ability ³	Not Applicable	Average

¹ Score on a 1- 9 scale where 9 = very resistant

² Assumes plant establishment losses of less than 5%

³ Film penetration varies with conditions and film. Trials conducted with Samco and Maizetech films

P7892

Early Maturity, FAO 200

Primary End Use: Forage and Biogas

P7892 is an early maturity and well proven hybrid. It is the designated Control hybrid for the PACTS® trials due to the consistency it has shown on many different types of locations. P7892 has very good early vigour and no major agronomic weaknesses.

Growers planting in the open and looking for high yields with good reliability often choose P7892. Those growing under film in cold locations, or planting late, have also found it to be a successful choice.

Hybrid Characteristics

- Large stature hybrid
- Very good early vigour
- Very fast stover dry down at maturity

Grown In The Open

- Suitable for favourable sites or less favourable sites with light soil

Grown Using The Samco System

- In the least favourable locations e.g. Northern Ireland, South West Scotland and West Wales providing it is planted during the normal sowing period
- On other warmer sites when planting is delayed



Hybrid Specific Agronomic Advice		
	Grown In The Open	Samco System
Early Vigour	Very Good	Very Good
Lodging Resistance ¹	8.3	
Eyespot Resistance Score ¹	6.3	
Stover Dry-Down Rate	Very Fast	Very Fast
Forage Seeding Rate ² (seeds/ha)	103,000 - 110,000	110,000
Film Penetration Ability ³	Not Applicable	Good

¹ Score on a 1- 9 scale where 9 = very resistant

² Assumes plant establishment losses of less than 5%

³ Film penetration varies with conditions and film. Trials conducted with Samco and Maizetech films

P7892

selected paired comparisons favourable sites

	No. Years Tested	No. Sites	Dry Matter (%)	Yield (Tonnes Dry Matter/ha)	Yield Index (%)	Wholeplant Organic Matter Digestibility (%)	Starch (%)	Sugar (%)	Megajoules Metabolisable Energy /Kg Dry Matter	Calculated Methane Production (litres/kg Dry Matter)	Calculated Methane Production (l/ha)	Pioneer Rumen Degradable Starch (%)	Pioneer Rumen Degradable Starch Yield (Tonnes Dry Matter/ha)
P7892 (C)	4	28	38.6%	17.322	102.1%	70.0%	34.8%	3.9%	11.6	316	5,467,802	72.5%	4.366
ambition*			40.9%	16.971	100.0%	70.9%	36.6%	3.6%	11.7	319	5,408,728	65.4%	4.062
P7892 (C)	3	19	38.2%	17.762	101.1%	69.8%	34.7%	3.8%	11.6	315	5,599,740	72.6%	4.473
gatsby*			39.1%	17.572	100.0%	70.6%	36.4%	3.5%	11.7	318	5,579,920	66.1%	4.229
P7892 (C)	4	30	38.1%	17.245	100.0%	70.3%	34.6%	3.9%	11.6	316	5,458,174	72.3%	4.313
P7326			41.1%	16.436	95.3%	70.3%	36.4%	3.6%	11.6	317	5,212,120	74.4%	4.446
P7892 (C)	4	30	38.1%	17.245	103.1%	70.3%	34.6%	3.9%	11.6	316	5,458,174	72.5%	4.323
P7034			41.4%	16.731	100.0%	70.7%	36.4%	3.4%	11.7	318	5,304,586	82.7%	5.044
P7892 (C)	4	24	38.3%	17.607	90.8%	70.2%	35.0%	3.8%	11.6	317	5,573,547	71.8%	4.426
P7948			36.8%	19.397	100.0%	69.2%	33.4%	3.9%	11.5	312	6,045,837	74.7%	4.840

P7892

selected paired comparisons Samco System sites

	No. Years Tested	No. Sites	Dry Matter (%)	Yield (Tonnes Dry Matter/ha)	Yield Index (%)	Wholeplant Organic Matter Digestibility (%)	Starch (%)	Sugar (%)	Megajoules Metabolisable Energy /Kg Dry Matter	Calculated Methane Production (litres/kg Dry Matter)	Calculated Methane Production (l/ha)	Pioneer Rumen Degradable Starch (%)	Pioneer Rumen Degradable Starch Yield (Tonnes Dry Matter/ha)
P7892	8	29	34.3%	14.966	90.1%	69.9%	32.4%	4.3%	11.6	315	4,725,046	-	-
P8200 (C)			30.5%	16.615	100.0%	67.1%	29.8%	3.4%	11.1	304	5,056,768	-	-
P7892	7	19	34.2%	15.261	90.8%	70.4%	33.0%	4.2%	11.7	317	4,852,188	-	-
P8201			31.5%	16.809	100.0%	68.9%	30.9%	4.0%	11.4	306	5,142,829	-	-
P7892	5	17	34.2%	14.573	94.5%	70.5%	33.8%	4.4%	11.7	318	4,653,927	-	-
P7034			36.7%	15.421	100.0%	70.5%	36.8%	2.9%	11.7	318	4,898,885	-	-
P7892	4	12	34.6%	14.609	94.2%	69.8%	34.2%	4.0%	11.6	317	4,636,242	-	-
P7948			34.4%	15.501	100.0%	70.0%	35.8%	3.4%	11.6	317	4,933,383	-	-

C = Control Hybrid; * = Competitor Hybrid

P7524

Early Maturity, FAO 200

Primary End Use: Forage and Biogas

P7524 is a striking early maturity hybrid which combines very good early vigour with a tall growth habit. P7524 has given very high dry matter yields of good starch content and has proven to be an enduringly popular choice.



It will suit growers seeking to produce a large quantity of early to mature silage, and also those aiming to maximise biogas production. P7524 has a notable level of resistance to Eyespot (*Aureobasidium zeae*).

Hybrid Characteristics

- Tall, large stature
- Very good early vigour
- Good comparative resistance to Eyespot (*Aureobasidium zeae*)

Grown In The Open

- On good to favourable sites where higher dry matter yields are sought

Grown Using The Samco System

- On less favourable sites in the UK
- On good sites in southern and midland counties of Ireland, along with favourable, sheltered sites in more northerly counties

Hybrid Specific Agronomic Advice

	Grown In The Open	Samco System
Early Vigour	Very Good	Very Good
Lodging Resistance ¹	8.3	
Eyespot Resistance Score ¹	7.6	
Stover Dry-Down Rate	Moderate	Fast
Forage Seeding Rate ² (seeds/ha)	93,000 – 103,000	98,000 – 103,000
Film Penetration Ability ³	Not Applicable	Good

¹ Score on a 1- 9 scale where 9 = very resistant

² Assumes plant establishment losses of less than 5%

³ Film penetration varies with conditions and film. Trials conducted with Samco and Maizetech films

P7524 selected paired comparisons favourable sites

	No. Years Tested	No. Sites	Dry Matter (%)	Yield (Tonnes Dry Matter/ha)	Yield Index (%)	Wholeplant Organic Matter Digestibility (%)	Starch (%)	Sugar (%)	Megajoules Metabolisable Energy /Kg Dry Matter	Calculated Methane Production (litres/kg Dry Matter)	Calculated Methane Production (l/ha)	Pioneer Rumen Degradable Starch (%)	Pioneer Rumen Degradable Starch Yield (Tonnes Dry Matter/ha)
P7524	4	26	37.4%	17.537	103.5%	69.1%	33.1%	4.9%	11.4	313	5,496,495	73.8%	4.284
ambition*			40.9%	16.948	100.0%	71.1%	36.7%	3.6%	11.8	319	5,410,704	65.0%	4.048
P7524	3	17	37.9%	18.200	104.0%	68.9%	33.1%	5.0%	11.4	313	5,702,650	74.9%	4.510
gatsby*			39.2%	17.504	100.0%	70.6%	36.5%	3.7%	11.7	318	5,562,478	65.2%	4.168
P7524	4	27	37.0%	17.348	101.4%	69.2%	32.9%	4.9%	11.5	313	5,441,593	74.0%	4.229
P7892 (C)			38.2%	17.108	100.0%	70.5%	34.8%	3.9%	11.7	317	5,425,340	70.0%	4.166
P7524	4	27	37.0%	17.348	104.3%	69.2%	32.9%	4.9%	11.5	313	5,441,593	73.6%	4.208
P7034			41.5%	16.637	100.0%	71.0%	36.6%	3.5%	11.7	318	5,287,201	81.2%	4.940

C = Control Hybrid; * = Competitor Hybrid



P7524

Large stature hybrid with very good early vigour. High dry matter yields for this maturity.

P7948

Early Maturity, FAO 230
Primary End Use: Forage, Biogas and Grain

P7948 is a multi-purpose hybrid that has given high yields of high-quality forage suitable for livestock and biogas production, along with high yields of grain when combined. It is suitable for sowing on favourable sites in the open, and favourable locations under film providing it is sown within the normal planting period.

P7948 has been tested on 24 favourable forage PACTS® sites sown in the open over four years and has given exceptional yields for its maturity. The dry matter yield of P7948 measured over this period was 10.2% higher than the Control hybrid P7892 with a dry matter content only 1.5% lower.

P7948 combines very good standing power with very good resistance to eyespot and its plant stature is particularly large when grown in the open. P7948 has been tested under film on 15 sites over four years and it has given a high silage yield, only 3% below P8200, but with a dry matter content 2.9% higher.

P7948 holds top place in PACTS® Trials for predicted gas production on favourable sites in the open and it holds second position for grain yield in the PACTS® multiple year grain results summary.

Hybrid Characteristics

- Large stature hybrid
- Very good standing ability
- Very good resistance to eyespot and fusarium

Grown In The Open

- P7948 is suitable for cultivation on favourable sites

Grown Using The Samco System

- P7948 can be sown on favourable sites providing it is sown in the normal planting period
- P7948 can be sown on less favourable sites, except for those in more northerly counties in the UK & Ireland and where sowing is delayed



Hybrid Specific Agronomic Advice		
	Grown In The Open	Samco System
Early Vigour	Good	Good
Lodging Resistance ¹	8.3	
Eyespot Resistance Score ¹	7.8	
Stover Dry-Down Rate	Moderate	Good
Forage Seeding Rate ² (seeds/ha)	98,000 to 103,000	103,000
Film Penetration Ability ³	Not Applicable	Good

¹ Score on a 1- 9 scale where 9 = very resistant

² Assumes plant establishment losses of less than 5%

³ Film penetration varies with conditions and film. Trials conducted with Samco and Maizetech films

P7948

selected paired comparisons favourable sites

	No. Years Tested	No. Sites	Dry Matter (%)	Yield (Tonnes Dry Matter/ha)	Yield Index (%)	Wholeplant Organic Matter Digestibility (%)	Starch (%)	Sugar (%)	Megajoules Metabolisable Energy /Kg Dry Matter	Calculated Methane Production (litres/kg Dry Matter)	Calculated Methane Production (l/ha)	Pioneer Rumen Degradable Starch (%)	Pioneer Rumen Degradable Starch Yield (Tonnes Dry Matter/ha)
P7948	4	22	37.5%	19.575	113.7%	68.8%	33.6%	3.9%	11.4	311	6,080,378	75.3%	4.960
ambition*			41.1%	17.215	100.0%	70.5%	36.4%	3.6%	11.7	318	5,472,350	65.1%	4.082
P7948	3	19	36.9%	19.929	113.4%	69.0%	33.4%	4.0%	11.4	311	6,198,964	75.4%	5.020
gatsby*			39.1%	17.572	100.0%	70.6%	36.4%	3.5%	11.7	318	5,579,920	67.3%	4.302
P7948	4	24	36.8%	19.397	110.2%	69.2%	33.4%	3.9%	11.5	312	6,045,837	74.7%	4.840
P7892 (C)			38.3%	17.607	100.0%	70.2%	35.0%	3.8%	11.6	317	5,573,547	71.8%	4.426
P7524	4	21	37.4%	17.859	92.9%	69.0%	33.0%	4.8%	11.4	313	5,603,221	73.5%	4.331
P7948			37.0%	19.232	100.0%	69.2%	33.5%	3.9%	11.5	312	5,993,964	73.6%	4.743
P8200	3	17	34.8%	18.913	94.7%	65.6%	31.2%	4.2%	10.9	301	5,696,089	65.7%	3.873
P7948			38.9%	19.966	100.0%	67.8%	33.8%	4.2%	11.2	308	6,144,015	74.5%	5.033
P8201	4	17	34.7%	19.300	96.7%	68.4%	33.4%	4.8%	11.3	311	6,009,702	76.7%	4.941
P7948			38.3%	19.954	100.0%	68.1%	33.3%	4.2%	11.3	308	6,155,763	73.8%	4.914

P7948

selected paired comparisons Samco System sites

	No. Years Tested	No. Sites	Dry Matter (%)	Yield (Tonnes Dry Matter/ha)	Yield Index (%)	Wholeplant Organic Matter Digestibility (%)	Starch (%)	Sugar (%)	Megajoules Metabolisable Energy /Kg Dry Matter	Calculated Methane Production (litres/kg Dry Matter)	Calculated Methane Production (l/ha)	Pioneer Rumen Degradable Starch (%)	Pioneer Rumen Degradable Starch Yield (Tonnes Dry Matter/ha)
P7948	4	15	33.2%	15.311	97.2%	68.3%	33.0%	3.5%	11.3	311	4,779,486	83.4%	4.211
P8200 (C)			30.3%	15.752	100.0%	67.6%	30.0%	3.6%	11.2	307	4,856,973	70.7%	3.337
P7948	4	11	33.8%	15.361	90.5%	68.3%	33.6%	3.6%	11.3	311	4,791,159	88.2%	4.556
P8201			32.3%	16.980	100.0%	68.3%	31.8%	3.9%	11.3	300	5,092,248	85.0%	4.582
P7524	4	7	34.7%	14.128	90.9%	68.8%	33.7%	4.5%	11.4	314	4,454,827	-	-
P7948			35.3%	15.545	100.0%	69.4%	35.3%	3.2%	11.5	314	4,901,727	-	-
P7892	4	12	34.6%	14.609	94.2%	69.8%	34.2%	4.0%	11.6	317	4,636,242	-	-
P7948			34.4%	15.501	100.0%	70.0%	35.8%	3.4%	11.6	317	4,933,383	-	-

C = Control Hybrid; * = Competitor Hybrid

P8200

Intermediate Maturity, FAO 230

Primary End Use: Forage

P8200 is a tall, large stature, intermediate maturity hybrid ideally suited to cultivation on a wide range of sites under film. It is also suitable for sowing on favourable sites in the open.

P8200 has given very high dry matter yields of silage with good starch content. A key feature of P8200 is that the stover dries down quickly once it reaches physiological maturity. P8200 has shown notable performance consistency in the UK and Ireland over the last 5 years.

Hybrid Characteristics

- Tall, large stature hybrid
- Often double cobs when grown under film

Grown In The Open

- On favourable locations

Grown Using The Samco System

- On all but the least favourable sites in UK & Ireland
- Switch to an earlier hybrid if planting is delayed past second week in May

Hybrid Specific Agronomic Advice

	Grown In The Open	Samco System
Early Vigour	Good	Good
Lodging Resistance ¹		7.8
Eyespot Resistance Score ¹		8.6
Stover Dry-Down Rate	Moderate	Fast
Forage Seeding Rate ² (seeds/ha)	98,000	98,000 – 103,000
Film Penetration Ability ³	Not Applicable	Good

¹ Score on a 1 - 9 scale where 9 = very resistant

² Assumes plant establishment losses of less than 5%

³ Film penetration varies with conditions and film. Trials conducted with Samco and Maizetech films

P8200 selected paired comparisons Samco System sites

	No. Years Tested	No. Sites	Dry Matter (%)	Yield (Tonnes Dry Matter/ha)	Yield Index (%)	Wholeplant Organic Matter Digestibility (%)	Starch (%)	Sugar (%)	Megajoules Metabolisable Energy /Kg Dry Matter	Calculated Methane Production (litres/kg Dry Matter)	Calculated Methane Production (l/ha)	Pioneer Rumen Degradable Starch (%)	Pioneer Rumen Degradable Starch Yield (Tonnes Dry Matter/ha)
P8201	7	26	31.7%	17.260	103.7%	69.4%	31.3%	4.6%	11.5	309	5,349,116	85.0%	4.586
P8200 (C)			31.0%	16.642	100.0%	68.4%	31.1%	3.8%	11.3	309	5,167,467	76.0%	3.935
P7524	7	21	34.4%	14.630	87.6%	69.0%	31.8%	5.6%	11.4	313	4,583,104	-	-
P8200 (C)			30.8%	16.700	100.0%	66.4%	29.5%	4.0%	11.0	302	5,032,969	-	-
P7892	7	26	34.5%	14.908	90.8%	69.5%	32.0%	4.6%	11.5	314	4,687,242	-	-
P8200 (C)			30.4%	16.418	100.0%	66.4%	29.8%	3.5%	11.0	302	4,958,576	-	-
P7948	3	11	33.4%	14.549	95.5%	66.1%	31.1%	4.1%	10.9	304	4,414,082	88.2%	3.991
P8200 (C)			30.3%	15.230	100.0%	65.6%	29.9%	4.2%	10.9	302	4,604,896	76.0%	3.457
P7326	7	26	37.5%	14.144	86.5%	69.9%	35.0%	4.0%	11.6	316	4,471,870	79.1%	3.923
P8200 (C)			30.2%	16.349	100.0%	67.2%	30.1%	4.3%	11.1	306	5,000,466	68.3%	3.365
P8171	4	9	31.4%	17.560	109.5%	69.0%	32.6%	4.3%	11.4	313	5,505,758	89.1%	5.101
P8200 (C)			31.2%	16.041	100.0%	68.1%	31.0%	4.6%	11.3	309	4,947,212	76.0%	3.776

C = Control Hybrid; * = Competitor Hybrid



P8200

P8200 has shown good adaptation to favourable sites when grown in the open and a wide range of sites when sown using the SAMCO system.

P8201

Intermediate Maturity, FAO 230
Primary End Use: Forage and Biogas

P8201 has given extremely high dry matter yields when grown under film on good to favourable sites in the UK and Ireland. It has also given very high yields when grown on the most favourable sites in the open in England.

This very tall large stature hybrid produces silage of a good starch content. P8201 produces starch with good rumen degradability and generates high total yields of rumen degradable starch. P8201 penetrates film easily.

Hybrid Characteristics

- Very tall, large stature, forage hybrid
- Very good early vigour and good standing power
- Very high dry matter yields, good starch contents for such a yield

Grown In The Open

- Only on the most favourable sites in the UK and Ireland

Grown Using The Samco System

- Suitable for good to favourable locations under film
- Plant in the normal sowing period

Hybrid Specific Agronomic Advice

	Grown In The Open	Samco System
Early Vigour	Very Good	Very Good
Lodging Resistance ¹	8.1	
Eyespot Resistance Score ¹	6.5	
Stover Dry-Down Rate	Moderate	Fast
Forage Seeding Rate ² (seeds/ha)	98,000	98,000 – 103,000
Film Penetration Ability ³	Not Applicable	Very Good

¹ Score on a 1- 9 scale where 9 = very resistant

² Assumes plant establishment losses of less than 5%

³ Film penetration varies with conditions and film. Trials conducted with Samco and Maizetech films

P8201 selected paired comparisons Samco System sites

	No. Years Tested	No. Sites	Dry Matter (%)	Yield (Tonnes Dry Matter/ha)	Yield Index (%)	Wholeplant Organic Matter Digestibility (%)	Starch (%)	Sugar (%)	Megajoules Metabolisable Energy /Kg Dry Matter	Calculated Methane Production (litres/kg Dry Matter)	Calculated Methane Production (l/ha)	Pioneer Rumen Degradable Starch (%)	Pioneer Rumen Degradable Starch Yield (Tonnes Dry Matter/ha)
P8200 (C)	7	26	31.0%	16.642	100.0%	68.4%	31.1%	3.8%	11.3	309	5,167,467	76.0%	3.935
P8201			31.7%	17.260	103.7%	69.4%	31.3%	4.6%	11.5	309	5,349,116	85.0%	4.586
P7034	5	15	36.2%	14.863	87.4%	70.4%	35.6%	3.1%	11.7	317	4,726,225	85.8%	4.537
P8201			31.9%	17.001	100.0%	69.6%	31.9%	4.2%	11.5	307	5,237,500	77.3%	4.195
P7948	4	11	33.8%	15.361	90.5%	68.3%	33.6%	3.6%	11.3	311	4,791,159	88.2%	4.556
P8201			32.3%	16.980	100.0%	68.3%	31.8%	3.9%	11.3	300	5,092,248	85.0%	4.582
P7524	7	13	34.5%	14.708	85.3%	70.9%	33.3%	4.8%	11.7	320	4,709,546	-	-
P8201			33.0%	17.237	100.0%	70.9%	33.5%	4.0%	11.7	318	5,506,623	-	-
P7892	7	19	34.2%	15.261	90.8%	70.4%	33.0%	4.2%	11.7	317	4,852,188	-	-
P8201			31.5%	16.809	100.0%	68.9%	30.9%	4.0%	11.4	306	5,142,829	-	-
P8171	5	9	31.6%	18.323	101.6%	69.5%	33.1%	4.2%	11.5	316	5,788,788	89.1%	5.397
P8201			32.8%	18.040	100.0%	69.6%	32.7%	4.7%	11.5	315	5,700,636	85.0%	5.006

C = Control Hybrid; * = Competitor Hybrid

P8201 selected paired comparisons favourable sites

	No. Years Tested	No. Sites	Dry Matter (%)	Yield (Tonnes Dry Matter/ha)	Yield Index (%)	Wholeplant Organic Matter Digestibility (%)	Starch (%)	Sugar (%)	Megajoules Metabolisable Energy /Kg Dry Matter	Calculated Methane Production (litres/kg Dry Matter)	Calculated Methane Production (l/ha)	Pioneer Rumen Degradable Starch (%)	Pioneer Rumen Degradable Starch Yield (Tonnes Dry Matter/ha)
P7524	4	22	38.1%	17.736	93.1%	68.0%	32.6%	5.5%	11.2	309	5,498,736	75.7%	4.375
P8201			34.5%	19.056	100.0%	69.1%	33.2%	4.8%	11.4	312	5,956,753	76.7%	4.854
P8201	4	17	34.7%	19.300	96.7%	68.4%	33.4%	4.8%	11.3	311	6,009,702	76.7%	4.941
P7948			38.3%	19.954	100.0%	68.1%	33.3%	4.2%	11.3	308	6,155,763	73.8%	4.914
P8201	4	22	34.5%	19.056	110.4%	69.1%	33.2%	4.8%	11.4	312	5,956,753	76.1%	4.817
P7034			42.2%	17.255	100.0%	70.3%	36.3%	3.8%	11.6	316	5,447,774	84.1%	5.270
P8201	4	22	34.5%	19.056	109.2%	69.1%	33.2%	4.8%	11.4	312	5,956,753	76.7%	4.854
P7892 (C)			38.9%	17.450	100.0%	69.6%	34.4%	4.3%	11.5	314	5,484,862	70.5%	4.226
P8200	4	29	33.4%	18.470	96.6%	66.3%	30.6%	4.2%	11.0	301	5,582,060	65.7%	3.714
P8201			34.0%	19.123	100.0%	68.2%	32.3%	4.7%	11.3	308	5,918,316	76.0%	4.694

C = Control Hybrid; * = Competitor Hybrid



P8201

Very high dry matter yields, good starch content and rumen degradability. For very favourable sites or planting using the Samco System.

P8171

Very Late Maturity, FAO 250

Primary End Use: Forage and Biogas

P8171 is a very late maturing hybrid with a very high yield potential. P8171 should be grown only under the most favourable sites in the open where an early harvest is not required. P8171 can be grown under film on favourable sites.

Hybrid Characteristics

- Very tall, large stature forage hybrid
- Very high dry matter yields

Grown In The Open

- Only on the most favourable sites in the UK

Grown Using The Samco System

- Suitable for favourable locations under film
- Do not sow if planting has been delayed

Hybrid Specific Agronomic Advice

	Grown In The Open	Samco System
Early Vigour	Good	Good
Lodging Resistance ¹	7.8	
Eyespot Resistance Score ¹	Not Available	
Stover Dry-Down Rate	Slow	Moderate
Forage Seeding Rate ² (seeds/ha)	98,000	98,000
Film Penetration Ability ³	Not Applicable	Good

¹ Score on a 1- 9 scale where 9 = very resistant

² Assumes plant establishment losses of less than 5%

³ Film penetration varies with conditions and film. Trials conducted with Samco and Maizetech films

P8171 selected paired comparisons Samco System sites

	No. Years Tested	No. Sites	Dry Matter (%)	Yield (Tonnes Dry Matter/ha)	Yield Index (%)	Wholeplant Organic Matter Digestibility (%)	Starch (%)	Sugar (%)	Megajoules Metabolisable Energy /Kg Dry Matter	Calculated Methane Production (litres/kg Dry Matter)	Calculated Methane Production (l/ha)	Pioneer Rumen Degradable Starch (%)	Pioneer Rumen Degradable Starch Yield (Tonnes Dry Matter/ha)
P8171	5	10	31.5%	17.876	107.4%	69.5%	33.0%	4.1%	11.5	315	5,642,512	89.1%	5.260
P8200 (C)			31.8%	16.649	100.0%	69.0%	32.0%	4.3%	11.4	312	5,203,408	76.0%	4.052
P8171	5	9	31.6%	18.323	101.6%	69.5%	33.1%	4.2%	11.5	316	5,788,788	89.1%	5.397
P8201			32.8%	18.040	100.0%	69.6%	32.7%	4.7%	11.5	315	5,700,636	85.0%	5.006
P8171	5	8	31.9%	17.901	115.7%	70.8%	34.3%	4.1%	11.7	320	5,731,824	81.5%	5.003
P7034			38.0%	15.474	100.0%	72.3%	37.8%	3.8%	12.0	324	5,005,150	85.8%	5.019
P8171	4	5	31.5%	18.018	118.0%	68.5%	33.9%	3.5%	11.3	313	5,636,317	89.1%	5.436
P7948			33.0%	15.266	100.0%	66.2%	30.3%	4.1%	11.0	304	4,634,336	88.2%	4.073

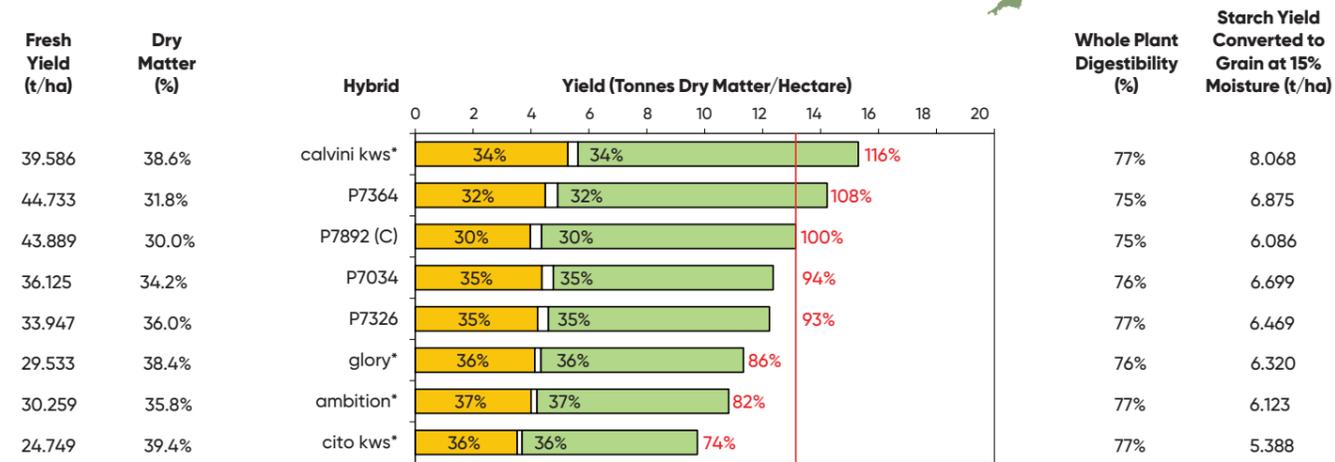
C = Control Hybrid; * = Competitor Hybrid



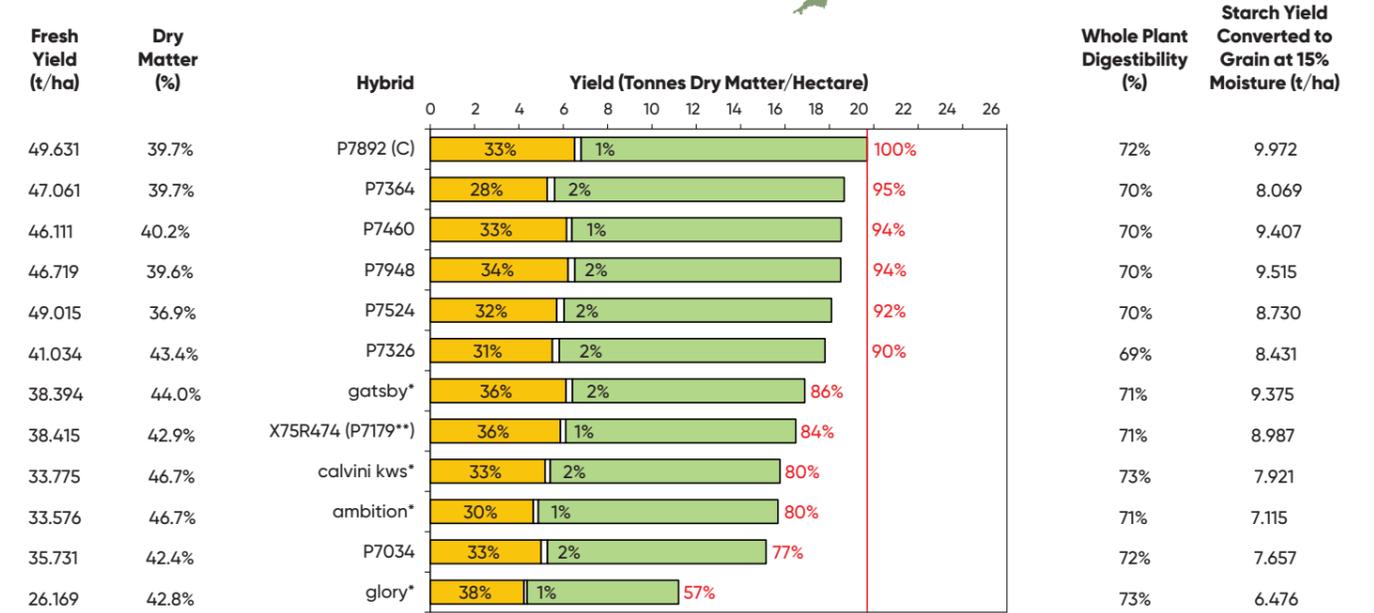
P8171

Big yielding for the most favourable locations in the open when grown under film.

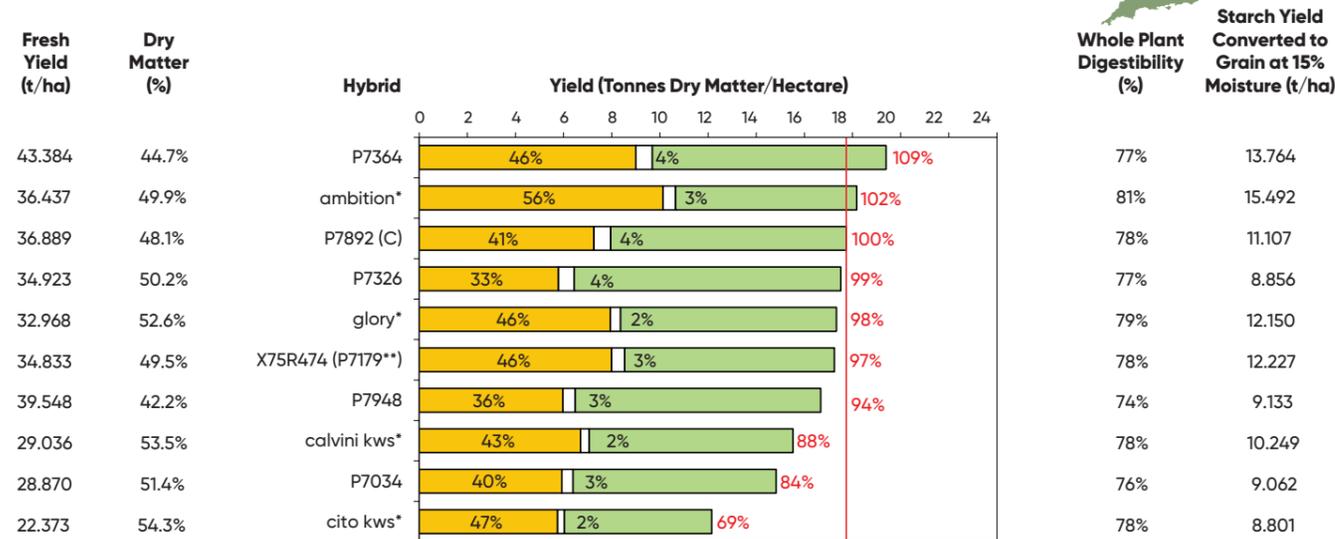
Keith Blenkiron, North Yorkshire



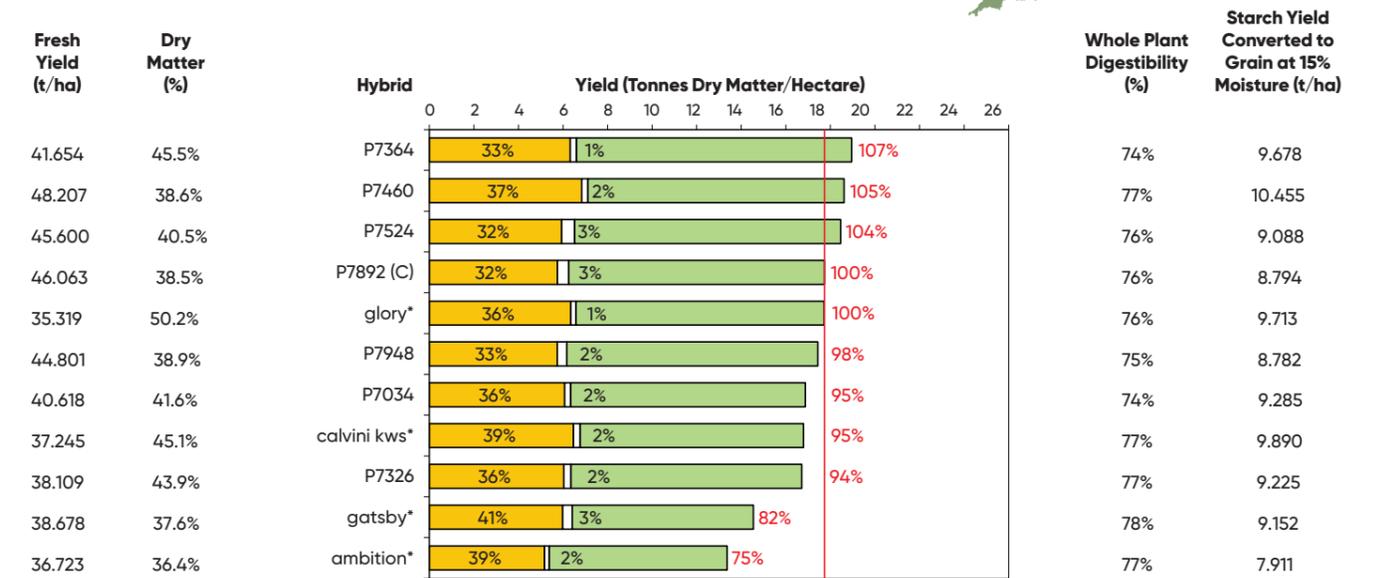
Tim Russon, Lincolnshire



Clayton Farm Partnership, Cheshire



Severn Trent, Nottinghamshire



■ Starch Yield & % ■ Sugar Yield & % ■ Stover Yield ■ Relative Dry Matter Yield index (C=100%)

C = Control Hybrid; * = Competitor Hybrid, ** = Hybrid trade name following official registration

■ Starch Yield & % ■ Sugar Yield & % ■ Stover Yield ■ Relative Dry Matter Yield index (C=100%)

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Glyn Jones, Denbighshire



Fresh Yield (t/ha)	Dry Matter (%)	Hybrid	Yield (Tonnes Dry Matter/Hectare)	Whole Plant Digestibility (%)	Starch Yield Converted to Grain at 15% Moisture (t/ha)
63.571	30.9%	P7364	37% Starch, 2% Sugar, 61% Stover	75%	11.104
63.786	30.3%	P7948	33% Starch, 2% Sugar, 65% Stover	74%	9.826
60.711	30.8%	P7892 (C)	33% Starch, 3% Sugar, 64% Stover	75%	9.442
55.202	33.2%	P7326	40% Starch, 2% Sugar, 58% Stover	77%	11.103
46.751	38.5%	glory*	41% Starch, 2% Sugar, 57% Stover	76%	11.297
45.890	38.8%	calvini kws*	36% Starch, 2% Sugar, 62% Stover	75%	9.728
50.861	34.1%	P7034	39% Starch, 2% Sugar, 59% Stover	76%	10.335
45.231	37.3%	ambition*	37% Starch, 2% Sugar, 61% Stover	74%	9.531
37.023	42.3%	cito kws*	38% Starch, 2% Sugar, 60% Stover	76%	9.010

Neville Kirkham, Leicestershire



Fresh Yield (t/ha)	Dry Matter (%)	Hybrid	Yield (Tonnes Dry Matter/Hectare)	Whole Plant Digestibility (%)	Starch Yield Converted to Grain at 15% Moisture (t/ha)
54.258	36.4%	P7892 (C)	38% Starch, 4% Sugar, 58% Stover	77%	11.547
49.821	36.7%	P7948	38% Starch, 5% Sugar, 57% Stover	78%	10.651
48.112	38.0%	P7364	35% Starch, 3% Sugar, 62% Stover	78%	9.918
46.826	36.2%	P7326	41% Starch, 3% Sugar, 56% Stover	76%	10.711
35.483	45.2%	cito kws*	41% Starch, 2% Sugar, 57% Stover	77%	10.143
41.448	38.5%	P7034	41% Starch, 3% Sugar, 56% Stover	76%	10.126
38.277	40.5%	glory*	46% Starch, 3% Sugar, 51% Stover	80%	10.866
42.987	35.7%	calvini*	31% Starch, 4% Sugar, 65% Stover	75%	7.382
40.089	38.2%	ambition*	39% Starch, 4% Sugar, 57% Stover	77%	9.179

Gareth Powell, Powys



Fresh Yield (t/ha)	Dry Matter (%)	Hybrid	Yield (Tonnes Dry Matter/Hectare)	Whole Plant Digestibility (%)	Starch Yield Converted to Grain at 15% Moisture (t/ha)
37.904	46.5%	calvini kws*	40% Starch, 1% Sugar, 59% Stover	77%	10.675
43.630	40.4%	P7326	43% Starch, 2% Sugar, 55% Stover	77%	11.657
49.600	34.8%	P7892 (C)	37% Starch, 2% Sugar, 61% Stover	76%	9.649
40.184	42.8%	X75R474 (P7179**)	44% Starch, 1% Sugar, 55% Stover	77%	11.559
50.457	32.3%	P7948	35% Starch, 2% Sugar, 63% Stover	75%	8.819
40.929	39.4%	P7034	44% Starch, 2% Sugar, 54% Stover	76%	10.900
47.874	33.5%	P7364	35% Starch, 2% Sugar, 63% Stover	74%	8.566
37.326	40.4%	ambition*	42% Starch, 1% Sugar, 57% Stover	79%	9.624
34.277	40.1%	glory*	42% Starch, 1% Sugar, 57% Stover	77%	8.744
30.232	38.8%	cito kws*	36% Starch, 1% Sugar, 63% Stover	75%	6.539

Simon Dann, Norfolk



Fresh Yield (t/ha)	Dry Matter (%)	Hybrid	Yield (Tonnes Dry Matter/Hectare)	Whole Plant Digestibility (%)	Starch Yield Converted to Grain at 15% Moisture (t/ha)
34.266	44.9%	calvini kws*	32% Starch, 1% Sugar, 67% Stover	73%	7.594
34.488	44.5%	P7034	37% Starch, 2% Sugar, 61% Stover	74%	8.580
39.526	38.7%	ambition*	41% Starch, 1% Sugar, 58% Stover	75%	9.590
40.834	36.9%	P7460	30% Starch, 2% Sugar, 68% Stover	73%	7.012
37.192	39.8%	gatsby*	45% Starch, 1% Sugar, 54% Stover	77%	10.160
40.201	36.5%	P7364	40% Starch, 2% Sugar, 58% Stover	76%	9.029
38.968	37.5%	glory*	31% Starch, 3% Sugar, 66% Stover	74%	6.960
40.090	36.1%	P7524	31% Starch, 3% Sugar, 66% Stover	72%	6.871
31.885	44.8%	P7326	38% Starch, 2% Sugar, 60% Stover	74%	8.204
38.088	37.2%	P7948	30% Starch, 3% Sugar, 67% Stover	74%	6.604
37.894	36.2%	P7892 (C)	35% Starch, 2% Sugar, 63% Stover	75%	7.314

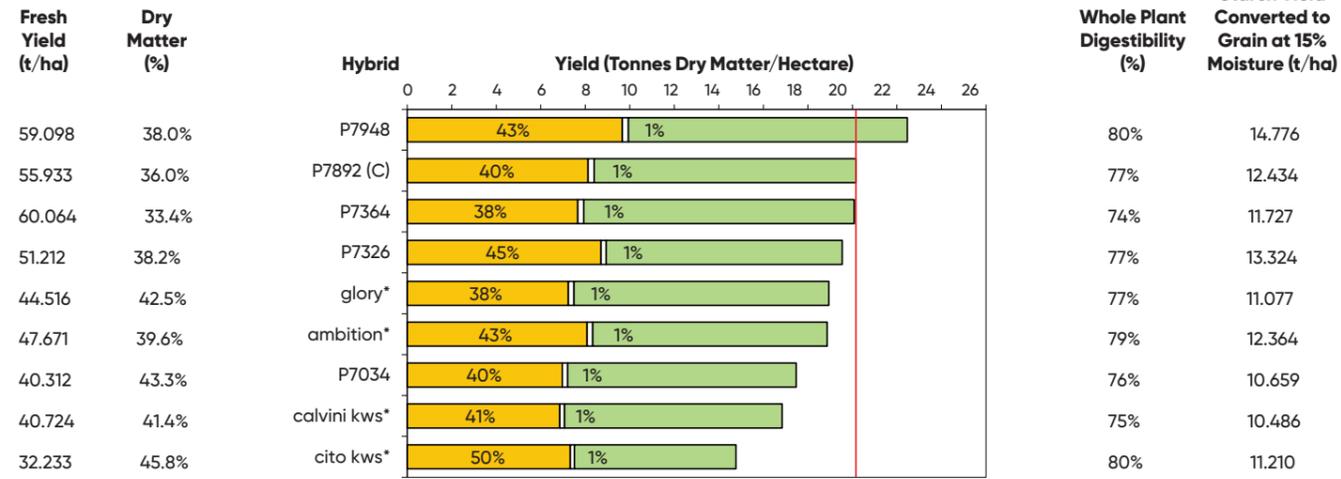
■ Starch Yield & % □ Sugar Yield & % ■ Stover Yield ■ Relative Dry Matter Yield index (C=100%)

C = Control Hybrid; * = Competitor Hybrid; ** = Hybrid trade name following official registration

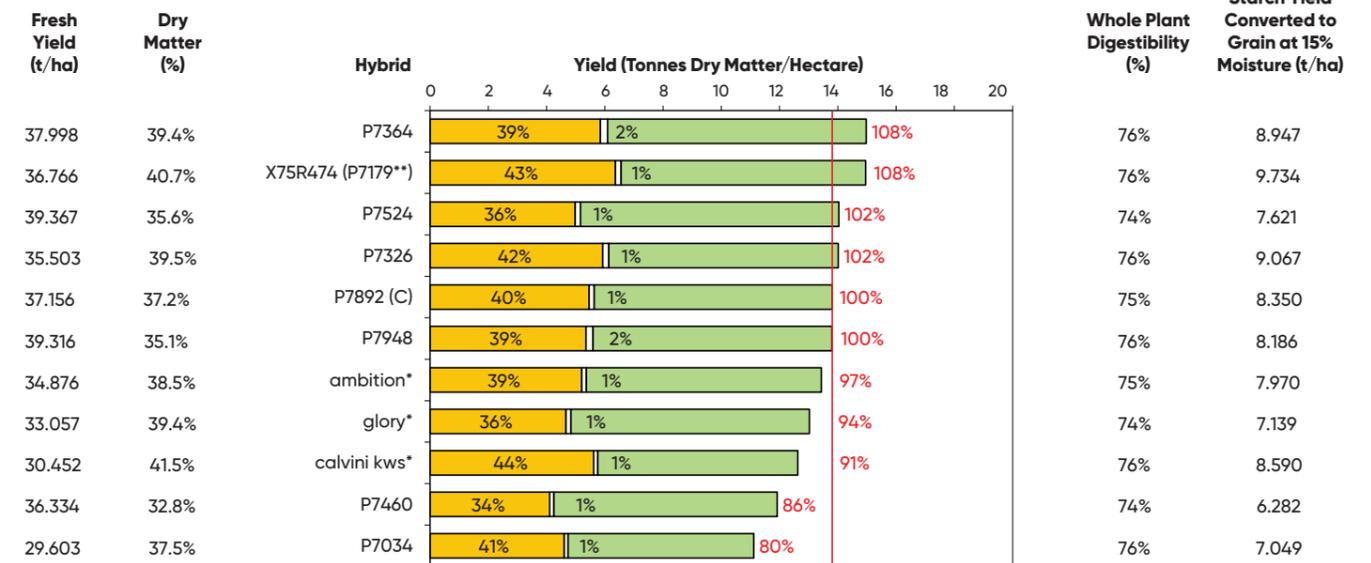
■ Starch Yield & % □ Sugar Yield & % ■ Stover Yield ■ Relative Dry Matter Yield index (C=100%)

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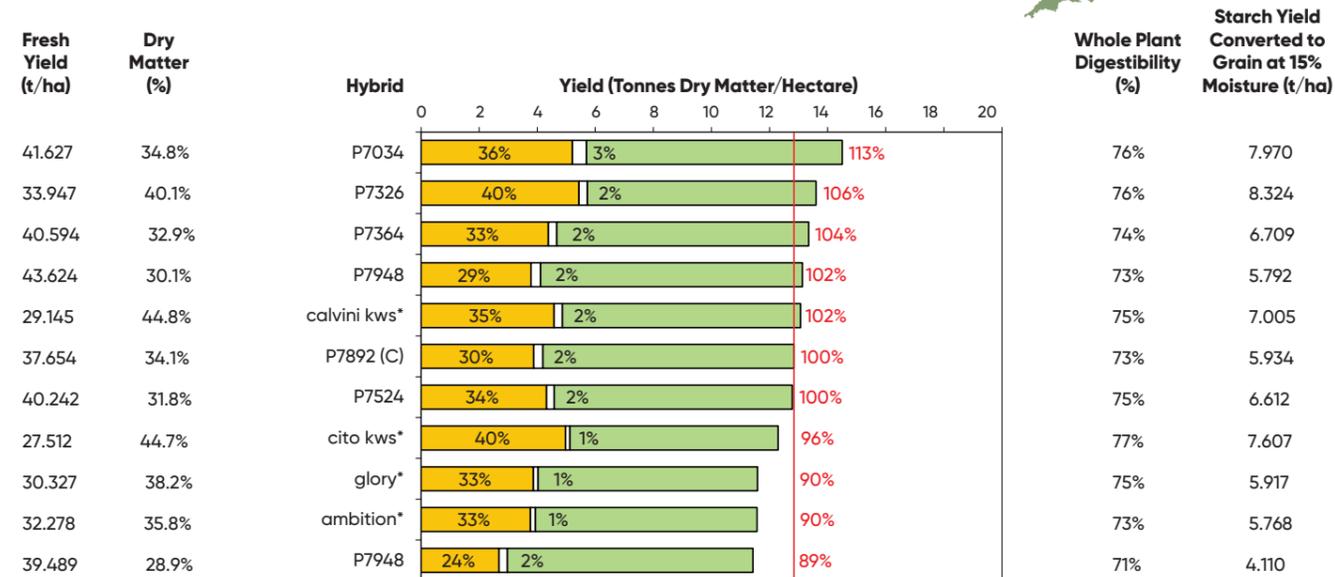
David Garlick, Herefordshire



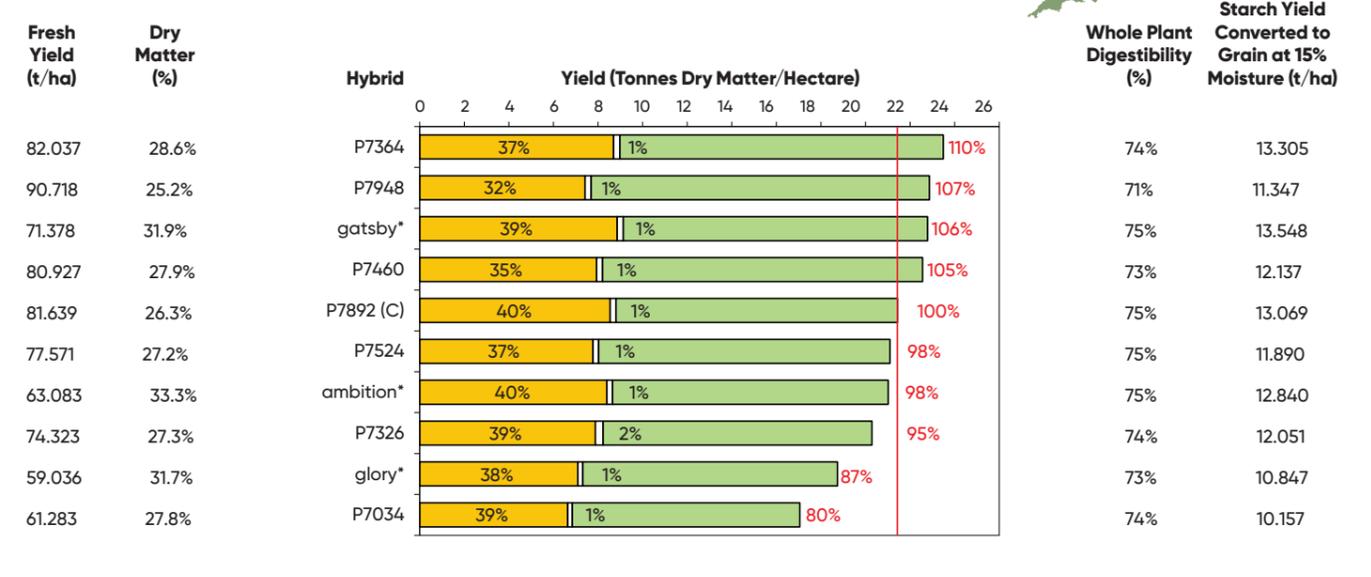
Kingspool Holsteins, Avon



Mark Goatley, Northamptonshire



Joanna Binnington, West Sussex



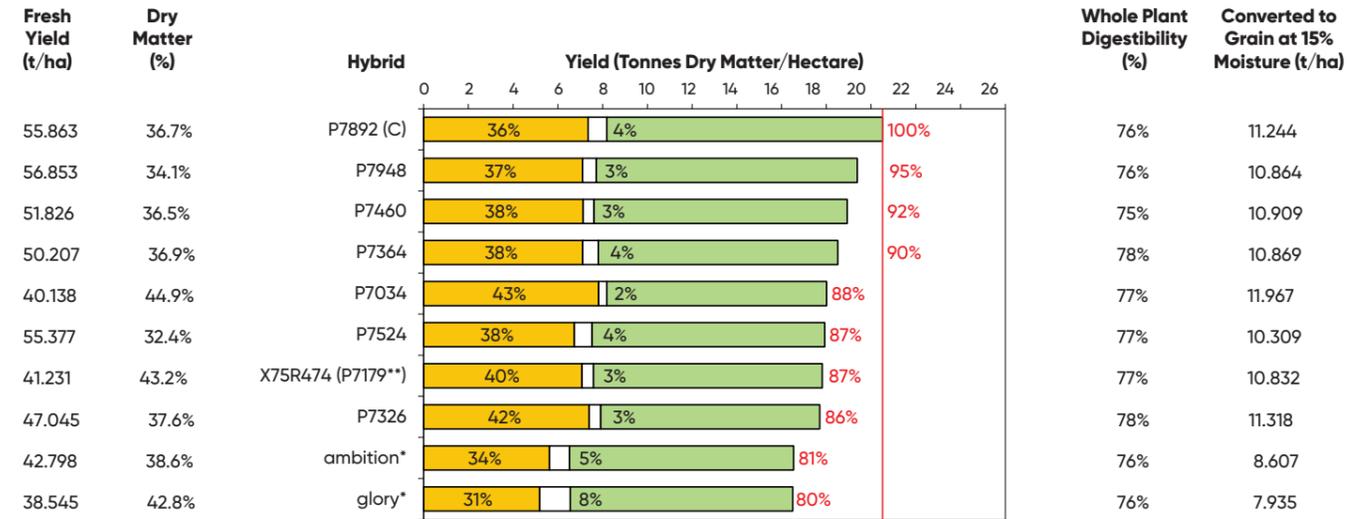
■ Starch Yield & %
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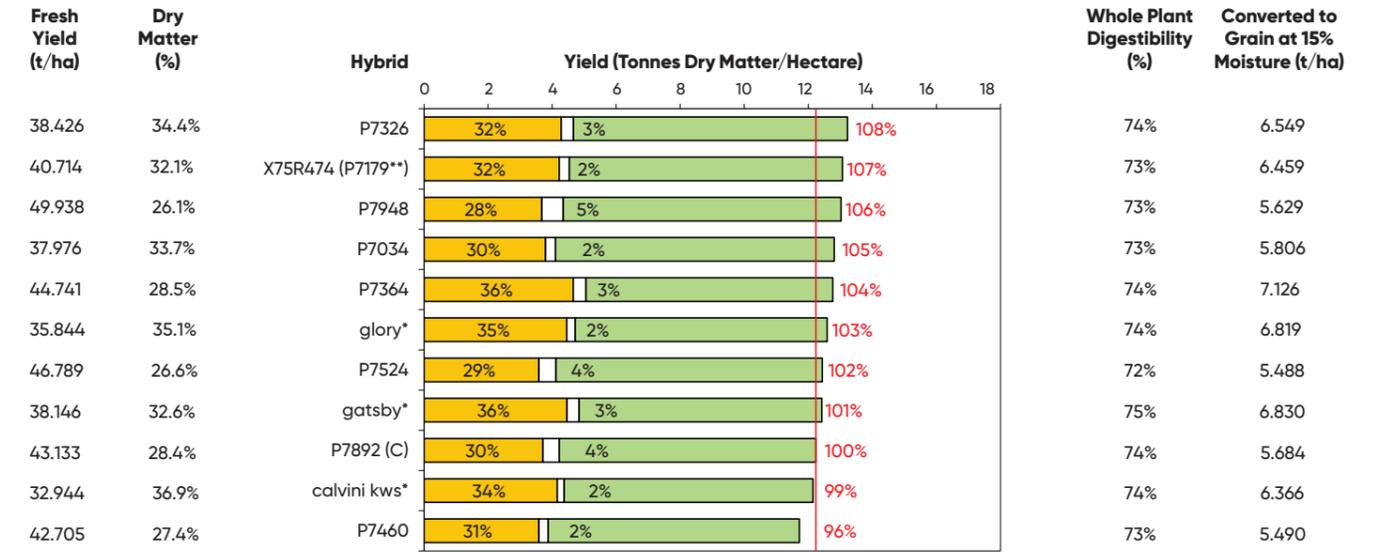
■ Starch Yield & %
 Sugar Yield & %
 ■ Stover Yield
 ■ Relative Dry Matter Yield index (C=100%)

C = Control Hybrid; * = Competitor Hybrid, ** = Hybrid trade name following official registration

Spencer Mogridge, Dorset



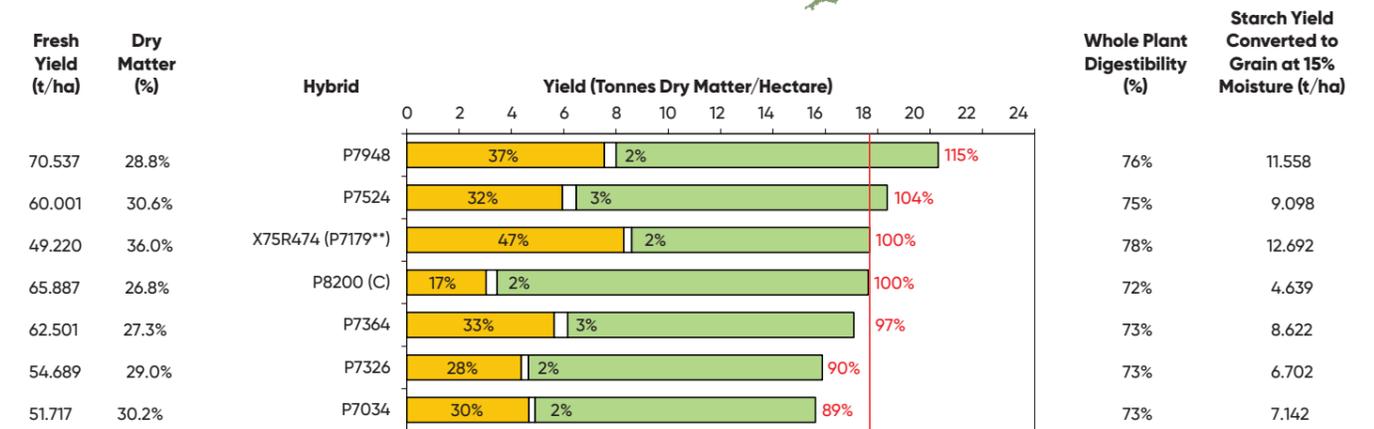
Irwin Morrow, Cornwall



Arnold Dare, Devon



Stephen Little, Cumbria



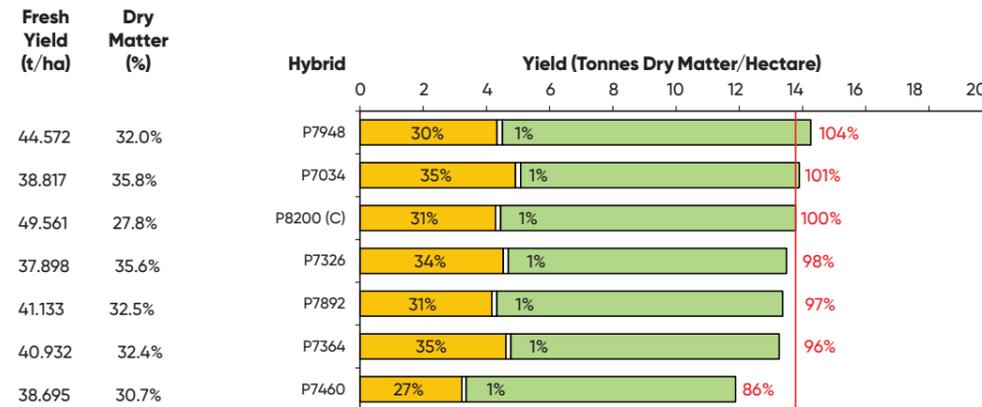
■ Starch Yield & % ■ Sugar Yield & % ■ Stover Yield ■ Relative Dry Matter Yield index (C=100%)

C = Control Hybrid; * = Competitor Hybrid, ** = Hybrid trade name following official registration

■ Starch Yield & % ■ Sugar Yield & % ■ Stover Yield ■ Relative Dry Matter Yield index (C=100%)

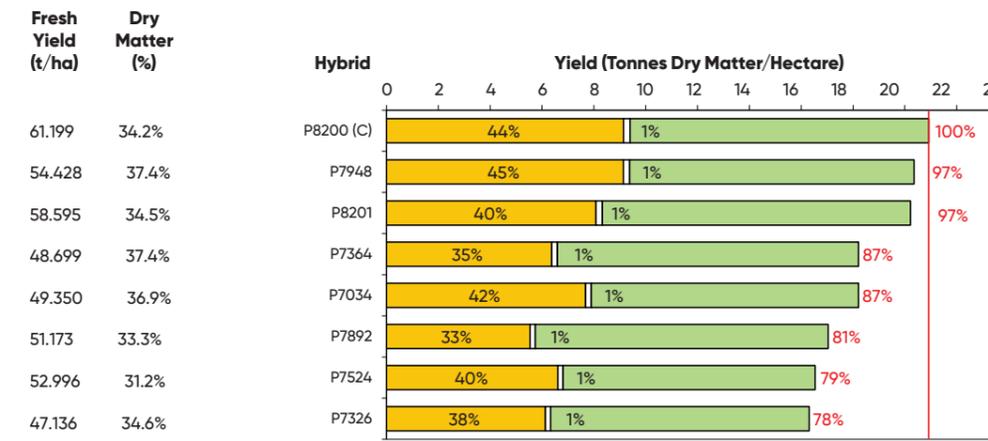
C = Control Hybrid; * = Competitor Hybrid, ** = Hybrid trade name following official registration

Richard Phillips, Dyfed



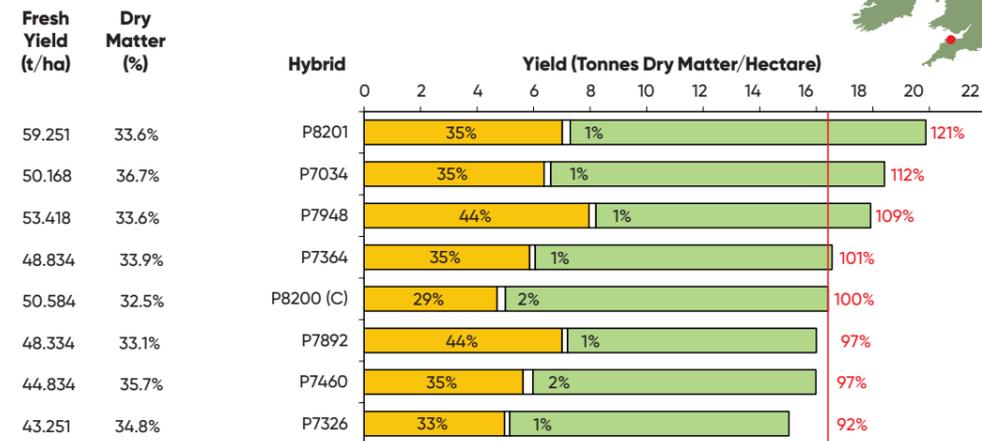
Whole Plant Digestibility (%)	Starch Yield Converted to Grain at 15% Moisture (t/ha)
71%	6.631
73%	7.524
73%	6.553
72%	6.933
72%	6.379
73%	7.058
71%	4.924

Bailey Bros, Co, Wexford



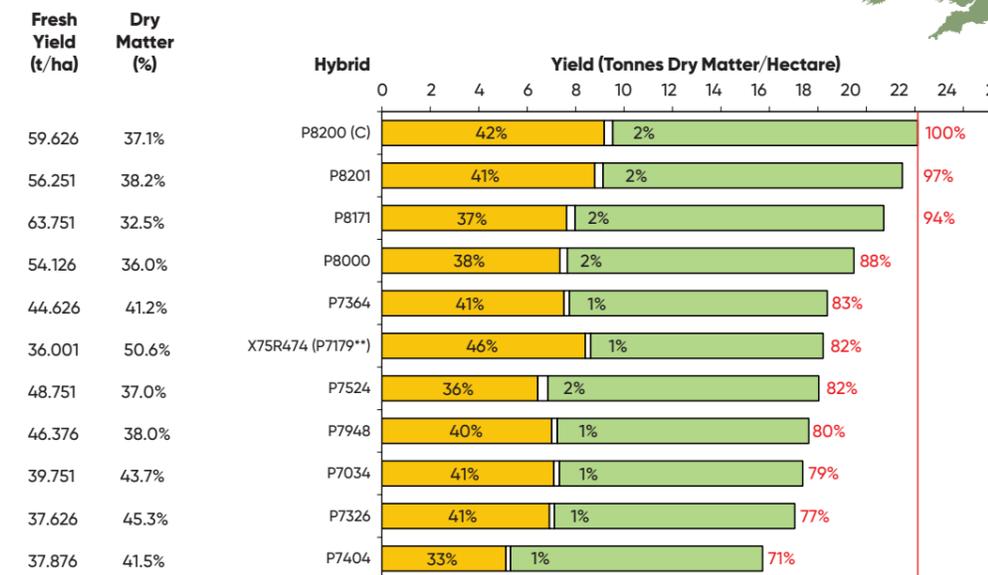
Whole Plant Digestibility (%)	Starch Yield Converted to Grain at 15% Moisture (t/ha)
76%	13.988
77%	13.978
75%	12.367
71%	9.749
76%	11.753
72%	8.470
75%	10.115
74%	9.379

RM & GB Fowler, North Devon



Whole Plant Digestibility (%)	Starch Yield Converted to Grain at 15% Moisture (t/ha)
74%	10.732
73%	9.743
77%	12.170
74%	8.963
72%	7.205
76%	10.717
73%	8.605
73%	7.608

Samuel J. Shine, Co. Limerick



Whole Plant Digestibility (%)	Starch Yield Converted to Grain at 15% Moisture (t/ha)
77%	14.040
76%	13.441
75%	11.661
76%	11.235
76%	11.501
77%	12.843
75%	9.848
76%	10.727
76%	10.866
75%	10.583
72%	7.837

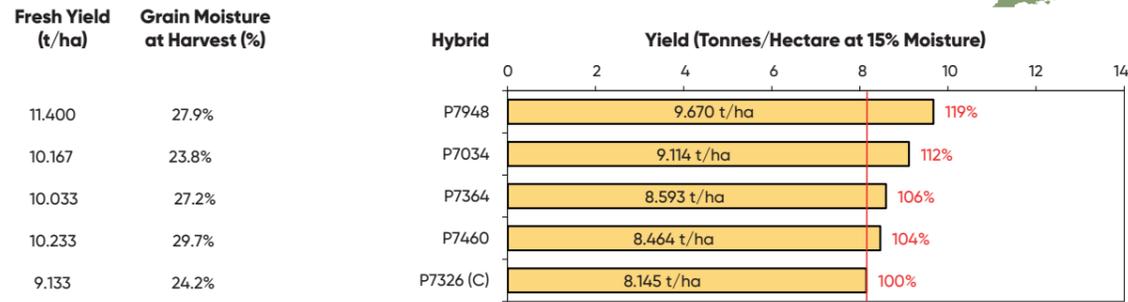
■ Starch Yield & %
 ■ Sugar Yield & %
 ■ Stover Yield
 ■ Relative Dry Matter Yield index (C=100%)

C = Control Hybrid; * = Competitor Hybrid, ** = Hybrid trade name following official registration

■ Starch Yield & %
 ■ Sugar Yield & %
 ■ Stover Yield
 ■ Relative Dry Matter Yield index (C=100%)

C = Control Hybrid; O = Grown in the open; * = Competitor Hybrid, ** = Trade name following official registration

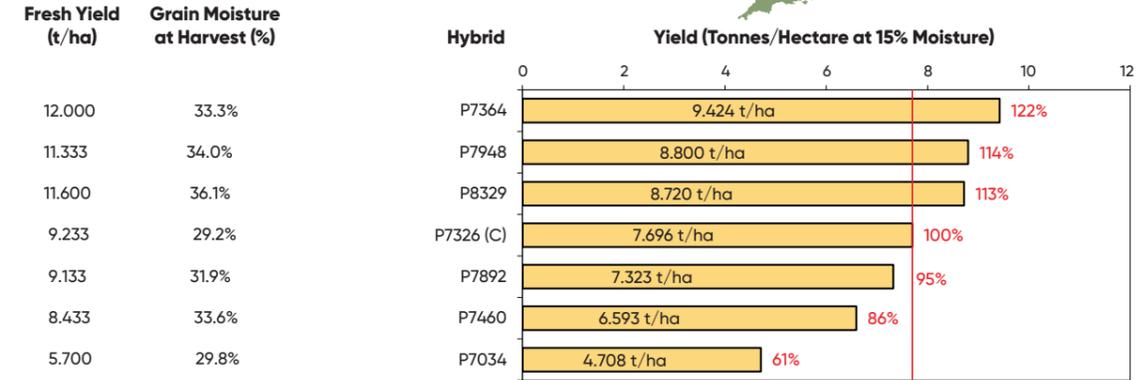
Russell Toothill, South Yorkshire



Yield Advantage / Disadvantage vs Control (%)

19%
12%
6%
4%
0%

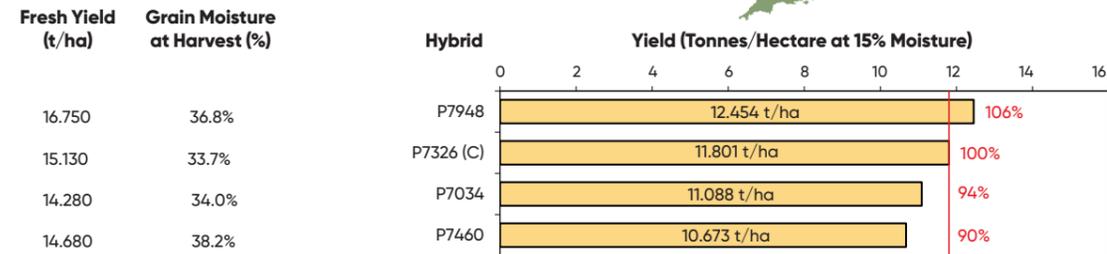
Alan Cook, Hampshire



Yield Advantage / Disadvantage vs Control (%)

22%
14%
13%
0%
-5%
-14%
-39%

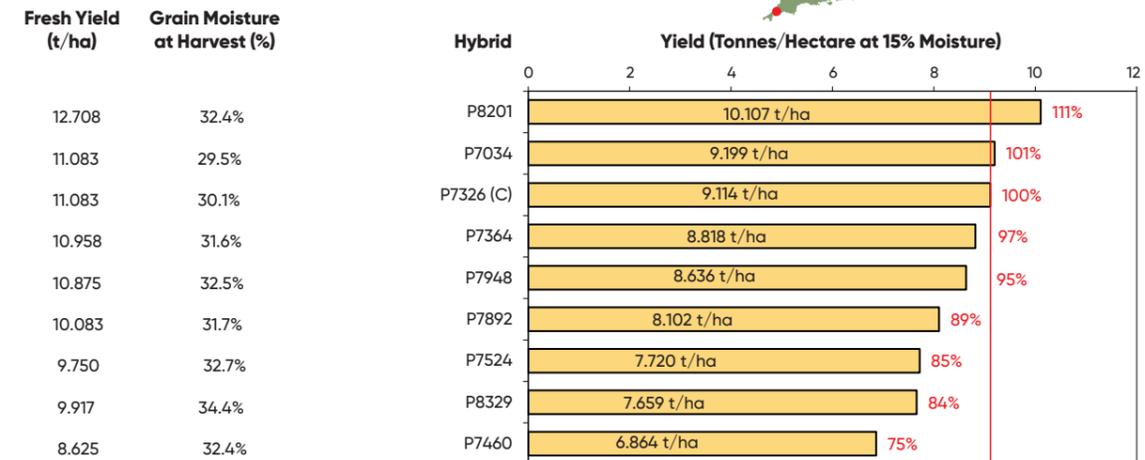
Wormell Farms, Essex



Yield Advantage / Disadvantage vs Control (%)

6%
0%
-6%
-10%

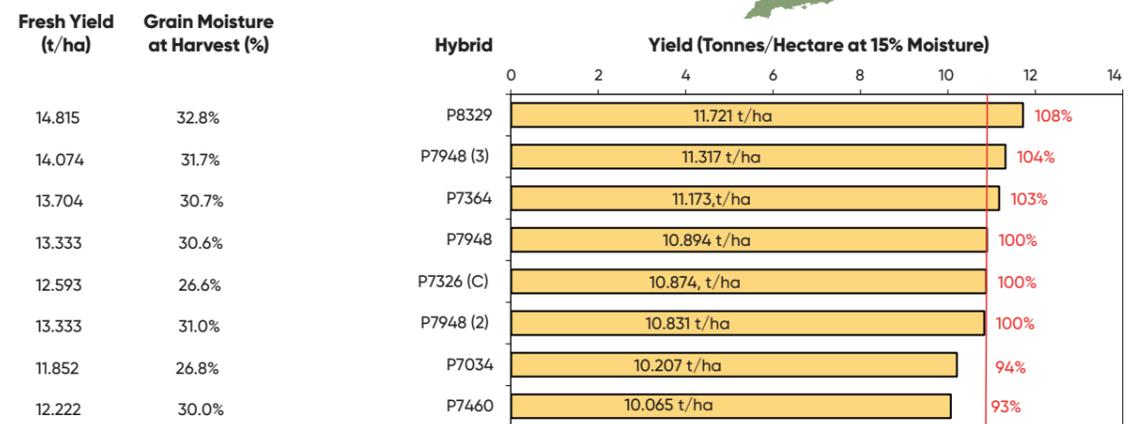
Mark Pethick, Cornwall



Yield Advantage / Disadvantage vs Control (%)

11%
1%
0%
-3%
-5%
-11%
-15%
-16%
-25%

Tim Farthing, Wiltshire



Yield Advantage / Disadvantage vs Control (%)

8%
4%
3%
0%
0%
0%
-6%
-7%

Grain Yield, Tonnes/Hectare at 15% Moisture Relative Yield Index (C = 100%)

C = Control Hybrid; * = Competitor Hybrid, ** = Trade name following official registration

Grain Yield, Tonnes/Hectare at 15% Moisture Relative Yield Index (C = 100%)

C = Control Hybrid; * = Competitor Hybrid, ** = Trade name following official registration

INDIVIDUAL SITE AGRONOMY DETAILS

NAME >	IRWIN MORROW	ARNOLD DARE	JOANNA BINNINGTON	SPENCER MOGRIDGE
TOWN	TRURO	AXMINSTER	PULBOROUGH	STURMINSTER NEWTON
COUNTY & COUNTRY	CORNWALL, GB	DEVON, GB	EAST SUSSEX, GB	DORSET, GB
SITE CLASSIFICATION	FAVOURABLE	FAVOURABLE	FAVOURABLE	FAVOURABLE
TRIAL TYPE	FORAGE, OPEN	FORAGE, OPEN	FORAGE, OPEN	FORAGE, OPEN
YIELD OF CONTROL HYBRID **	12.241	20.074	21.430	20.513
SOIL TYPE	MEDIUM LOAM	MEDIUM LOAM	GREENSAND	CLAY LOAM
ASPECT/SLOPE (DEGREES)	10 NORTH	5 EAST	FLAT	LEVEL
ALTITUDE (METRES)	70	50	50	55
ANNUAL RAINFALL (MM)	1000	800	825	650
PREVIOUS CROPPING 2020	GRASS	STUBBLE TURNIPS	MAIZE	MAIZE
SOIL pH	5.9	6.1	6.6	7.2
SOIL PHOSPHATE (P) INDEX	3	4	6	4
SOIL POTASSIUM (K) INDEX	2+	4	3	3
SOIL MAGNESIUM (MG) INDEX	3	3	3	3
SLURRY TYPE & VOLUME (L/HA)	CATTLE / 33,345	CATTLE / 11,000	25,000	CATTLE / 25000
MANURE TYPE & QUANTITY (T/HA)	CATTLE / 395	CATTLE / 25	CATTLE SLURRY	-
FERT 1 - TYPE/RATE (KG/HA)/DATE	DAP / 197 / 28-04	UREA / 125 / 22-04	DAP / 75 / 04-05	34.5 N / 100 / 25-05
FERT 2 - TYPE/RATE (KG/HA)/DATE	-	-	34.5 AN / 100 / 06-06	EQUILIBRIUM FOLIAR / 03-06
FERT 3 - TYPE/RATE (KG/HA)/DATE	-	-	FOLIAR FEED / 15-06	-
SPRAY 1 - NAME/RATE/DATE	DINIRO / 4.0 / 07-06	NICRO PRO / 0.5 / 14-06	BARRACUDA / 0.74 / 15-06	BARRACUDA / 0.74 L / 03-06
SPRAY 2 - NAME/RATE/DATE	CALLISTO / 7.0 / 07-06	CAMIX / 1.25 / 14-06	GYO / 0.74 / 15-06	GYO / 0.74 L / 03-06
SPRAY 3 - NAME/RATE/DATE	ZINC / 5.0 / 07-06	DIVA / 0.5 / 14-06	ENTAIL / 0.14 / 15-06	ENTAIL / 0.14 L / 03-06
SUB SOILED/PLOUGHED DATE	- / 12-04	18-04 / 18-04	/ 29-04	- / 20-04
SOWING DATE/HARVEST DATE	28-04 / 11-10	22-04 / 15-10	04-05 / 26-09	19-04 / 01-10
SEEDING RATE - SEEDS/HA	100,000	100,000	103,000	103,000
CROP CONDITION AT HARVEST	60% GREEN / 40% STRAW	50% GREEN / 50% STRAW	60% GREEN - 40% STRAW	50% GREEN / 50% STRAW
COMMENTS ABOUT TRIAL	GOOD CLEAN TRIAL	HIGH YIELDING TRIAL	-	CONSISTENT
NAME >	KINGSPool HOLSTEINS	GARETH POWELL	CLAYTON PARTNERSHIP	GLYN JONES
TOWN	BRISTOL	OSWESTRY	MALPAS	ST ASAPH, RHYLL
COUNTY & COUNTRY	AVON, GB	POWYS, GB	CHESHIRE, GB	DENBIGHSHIRE, GB
SITE CLASSIFICATION	FAVOURABLE	LESS FAVOURABLE	LESS FAVOURABLE	LESS FAVOURABLE
TRIAL TYPE	FORAGE, OPEN	FORAGE, OPEN	FORAGE, OPEN	FORAGE, OPEN
YIELD OF CONTROL HYBRID **	13.807	17.256	17.739	18.719
SOIL TYPE	MEDIUM LOAM	LOAM OVER GRAVEL	MEDIUM LOAM	SANDY LOAM
ASPECT & SLOPE (DEGREES)	LEVEL	LEVEL	LEVEL	FLAT
ALTITUDE (METRES)	60	85	65	15
ANNUAL RAINFALL (MM)	800	840	800	900
PREVIOUS CROPPING 2020	WINTER WHEAT	-	MAIZE	MAIZE
SOIL pH	7.2	5.1	7.0	7.0
SOIL PHOSPHATE (P) INDEX	3	4	4	4
SOIL POTASSIUM (K) INDEX	1	4	2+	2+
SOIL MAGNESIUM (MG) INDEX	2	3	1	2
SLURRY TYPE & VOLUME (L/HA)	CATTLE / 57,000	DIGESTATE / 42,000 / 14-05	-	CATTLE / 10,000
MANURE TYPE & QUANTITY (T/HA)	-	-	-	DIGESTATE / 20
FERT 1 - TYPE/RATE (KG/HA)/DATE	DAP / 150 / 26-04	DAP / 75 /	LIQUID / 140--140 / 22-04	UMOSTART / 6.0 / 27-04
FERT 2 - TYPE/RATE (KG/HA)/DATE	-	-	8N-3P-7K-15S / 02-05	-
FERT 3 - TYPE/RATE (KG/HA)/DATE	-	-	-	-
SPRAY 1 - NAME/RATE/DATE	PROGRAM / 3 L / 02-06	WING P / 2.56 / 15-05	PENDIMETHALIN / 4.0/03-05	NICO PRO / 0.75 / 15-06
SPRAY 2 - NAME/RATE/DATE	DANEVA / 1 L / 02-06	EVOLYA / 1.25 / 01-07	PHOS LIBERATOR/15.0/03-05	MERISTO / 1.0 / 27-05
SPRAY 3 - NAME/RATE/DATE	PRIMERO / 1 L / 02-06	CLAYTON KIBO / 12G / 01-07	ELUMIS / 1.0 L / 10-06	HEADLAND MICRONUTRIENT / 10 / 27-05
SUB SOILED/PLOUGHED DATE	02-04 / 07-04	05 05	- / 12-04	-
SOWING DATE/HARVEST DATE	26-04 / 12-10	14-05 / 21-10	02-05 / 03-11	27-04 / 11-10
SEEDING RATE - SEEDS/HA	104,000	105,000	105,000	105,000
CROP CONDITION AT HARVEST	25% GREEN / 75% STRAW	-	-	-
COMMENTS ABOUT TRIAL	CLEAN	-	-	-
NAME >	TIM RUSSON	NEVILLE KIRKHAM	RICHARD PHILLIPS	SEVERN TRENT FARMS
TOWN	LINCOLN	LOUGHBOROUGH	CLARBESTON ROAD	NOTTINGHAM
COUNTY & COUNTRY	LINCOLNSHIRE, GB	LEICESTERSHIRE, GB	DYFED, GB	NOTTS, GB
SITE CLASSIFICATION	LESS FAVOURABLE	LESS FAVOURABLE	LESS FAVOURABLE	FAVOURABLE
TRIAL TYPE	FORAGE, OPEN	FORAGE, OPEN	FORAGE, FILM	FORAGE, OPEN
YIELD OF CONTROL HYBRID **	19.708	19.764	13.778	17.737
SOIL TYPE	SANDY LOAM	MEDIUM LOAM	MEDIUM LOAM	SANDY LOAM
ASPECT & SLOPE (DEGREES)	-	-	LEVEL	FLAT
ALTITUDE (METRES)	10	60	80	20
ANNUAL RAINFALL (MM)	635	630	1300	525
PREVIOUS CROPPING 2020	MAIZE	-	MAIZE	MAIZE
SOIL pH	7.5	6.7	5.7	6.9
SOIL PHOSPHATE (P) INDEX	4	4	2	8
SOIL POTASSIUM (K) INDEX	7	3	2+	2+
SOIL MAGNESIUM (MG) INDEX	3	4	3	5
SLURRY TYPE & VOLUME (L/HA)	-	CATTLE / 20,000	CATTLE / 27,000	DIGESTATE / 39M3
MANURE TYPE & QUANTITY (T/HA)	-	CATTLE / 20	CATTLE / 25	-
FERT 1 - TYPE/RATE (KG/HA)/DATE	-	-	UREA / 125 / 24-04	-
FERT 2 - TYPE/RATE (KG/HA)/DATE	-	-	-	-
FERT 3 - TYPE/RATE (KG/HA)/DATE	-	-	-	-
SPRAY 1 - NAME/RATE/DATE	-	-	STOMP AQUA / 1 L / 27-04	STOMP AQUA / / 21-04
SPRAY 2 - NAME/RATE/DATE	-	-	WING-P / 4 L / 27-04	CALLISTO & ENTAIL / 26-05
SPRAY 3 - NAME/RATE/DATE	-	-	SLITHER / 0.1 L / 27-04	-
SUB SOILED/PLOUGHED DATE	23/04	- / 05-04	06-04 / 06-04	20-3 / 20-03
SOWING DATE/HARVEST DATE	26-04 / 21-10	07-05 / 12-10	27-04 / 13-10	20-04 / 21-09
SEEDING RATE - SEEDS/HA	105,000	105,000	104,000	105,000
CROP CONDITION AT HARVEST	-	-	90% STRAW / 10% GREEN	-
COMMENTS ABOUT TRIAL	-	-	CLEAN / CONSISTENT	-

n/a = not applicable; n/k = not known
 ** Tonnes/Hectare of Forage Dry Matter OR Tonnes/Hectare of Grain at 15% Moisture - according to the trial type

INDIVIDUAL SITE AGRONOMY DETAILS

DAVID GARLICK	MARK GOATLEY	SIMON DANN	KEITH BLENKIRON	STEPHEN LITTLE
BROMYARD	ROTHERSTHORPE	TUDDENHAM	NORTHALLERTON	PENRITH
HEREFORDSHIRE, GB	NORTHANTS, GB	NORFOLK, GB	YORKSHIRE, GB	CUMBRIA, GB
LESS FAVOURABLE	LESS FAVOURABLE	LESS FAVOURABLE	LESS FAVOURABLE	LESS FAVOURABLE, FILM
FORAGE, OPEN	FORAGE, OPEN	FORAGE, OPEN	FORAGE, OPEN	FORAGE, FILM
20.153	12.848	13.710	13.145	17.365
MEDIUM LOAM	CLAY LOAM	SANDY CLAY LOAM	SANDY LOAM	SILT
-	NORTH / 5 DEGREES	NONE	SOUTH / 3	FLAT
160	129	50	46	9
710	639	711	660	950
W. BARLEY/STURNIPS	SPRING BARLEY	WINTER WHEAT	MAIZE	MAIZE
6.7	5.9	7.6	6.3	6.1
3	1	3	4	4
2+	2+	3	2+	4
2	2	2	4	3
-	-	-	DIGESTATE / 30M3	CATTLE / 55,000 / SPLIT
CATTLE / 30 / POULTRY / 5	-	CATTLE / 75	-	STRAW BEDDING / 30 /
DAP / 100 / 22-04	DAP / 117 / 02-06	DAP / 60 / 02-06	-	HLAND COMPLEX/5/02-07
-	MOP / 234 / 02-06	AN34.5 / 250 / 18-05	-	-
-	33.5 AN / 285 /	-	-	-
KALTOR / 0.25 / 02-06	GLYPHOSATE / 3/PRE 02-06	MERISTO / 0.75 / 29-06	NICO PRO / 0.85 / 15-06	DIME / 4 / 16-4
DANEVA / 0.25 / 02-06	CHLORISTE / 1.309 /	ENTAIL / 0.125 / 29-06	MERISTO / 1.2 / 15-06	MOST MICRO / 1 / 16-4
ACTIVATOR 90 / 0.25 / 02-06	-	-	-	PHOS LIB / 5 / 17-4
-	-	/ SUMO 10-04	/ 28-04	/ 10-01
22-04 / 23-10	02-06 / 21-10	02-06 / 27-10	07-05 / 14-10	17-04 / 21-09
-	-	-	92,000	100,000
-	-	-	GREEN/YELLOW	GREEN
-	-	-	-	-
BAILEY BROS	SAMUEL J. SHINE	MARK PETHICK	ALAN COOK	TIM FARTHING
CRANFORD	LIMERICK	CALLINGTON	SOUTHAMPTON	MELKSHAM
CO. WEXFORD, ROI	CO. LIMERICK, ROI	CORNWALL, GB	HAMPSHIRE, GB	WILTSHIRE, GB
LESS FAVOURABLE	LESS FAVOURABLE	LESS FAVOURABLE	FAVOURABLE	FAVOURABLE
FORAGE, FILM	FORAGE, FILM	GRAIN, FILM	GRAIN, OPEN	GRAIN, OPEN
20.930	22.121	9.114	7.696	10.874
LIGHT LOAM	CLAY	MEDIUM LOAM	CLAY LOAM	SANDY LOAM
SOUTH	FLAT	LEVEL	LEVEL	LEVEL
120	9	105	60	60
1,000	1,200	1,250	900	800
FODDER BEET	MAIZE	WINTER WHEAT	WINTER WHEAT	MAIZE
6.7	6.9	6.2	5.9	5.8
3	3	2	2	3
3	2	3	2-	4
-	-	2	3	2
-	CATTLE / 100,000	-	-	-
-	-	-	-	-
13-6-20 / 1000 / PRE SOW	0-7-30 / 500 / PRE SOW	CROPKARE / 865 / 20-04	MOP / 185 / 26-04	DAP / 100 / 14-04
27AN / 185 / PRE SOW	UREA / 400 / PRE SOW	N / 370 / 20-04	26%N / 373 L / 27-04	40N 14 S / 330 / 14-04
-	-	-	DAP / 140 / 04-05	K / 240 / 14-04
WING P / 4 / 05-05	WINGP / 4/PREEM	WING P / 4 L / 25-04	PENDIMETHALIN / 3 L / 06-05	HURLER / 0.5 L / 31-05
STOMP AQUA / 1 / 05-05	STOMP AQUA / 1 / PRE EM	-	DUAL GOLD / 1 L / 06-05	CALLISTO / 0.5 L / 31-05
-	-	-	FORNET / 0.5L / 18-06	NIKO / 0.25 L / 31-05
/ 28-04	/ 10-04	- / 22-04	25-04 / -	- / 18-04
05-05 / 25-01	27-04 / 11-10	25-04 / 05-11	04-05 / 15-11	01-05 / 19-11
100,000	100,000	104,000	102,000	100,000
-	-	STRAWLIKE	STRAWLIKE	STRAWLIKE
-	-	CLEAN AND UNIFORM	CLEAN / SOME BRACKLING	CLEAN / STANDING WELL
PR WORMELL FARMS	RUSSELL TOOTHILL	RM & GB FOWLER		
COLCHESTER	DONCASTER	BARNSTAPLE		
ESSEX, GB	S. YORKSHIRE, GB	DEVON, GB		
FAVOURABLE	LESS FAVOURABLE	LESS FAVOURABLE		
GRAIN, OPEN	GRAIN, OPEN	FORAGE, FILM		
11.801	8.154	16.414		
HEAVY CLAY	SAND	CLAY LOAM		
SLIGHT NORTH FACING	LEVEL	5 DEGREES EAST		
10	20	90		
547	635	825		
WINTER WHEAT	W BARLEY / STTURNIPS	GRASS		
6.8	6.7	6.3		
3	4	2		
3	4	1		
5	3	3		
-	-	CATTLE / 20,000		
SEWAGE SLUDGE / 15	-	-		
MOP / 225 / 23-03	DIGESTATE / 30,000 /	CAN+S / 200 / 12-04		
DAP / 140 / 11-05	-	MOP / 100 / 12-04		
NSS/500/13-05/AN/330/16-06	-	-		
WING P / 3.5 / 24-05	STOMP / 2.5 /	WING P / 4 L / 15-04		
GLYPHOSATE / 3.0 / 24-05	FORNET / 0.75	PEAK / 9.7 G / 21-06		
NICO PRO / 1.0 / 18-06	MERISTO / 0.74	MERISTO / 1 L / 21-06		
23-08	-	NICO PRO / 1 L / 21-06		
11-05 / 26-10	13-05 / 21-11	15-04 / 24-06		
95,000	80,000	100,000		
DRY / CLEAR	-	GREEN		
-	-	CLEAN / CONSISTENT		

n/a = not applicable; n/k = not known
 ** Tonnes/Hectare of Forage Dry Matter OR Tonnes/Hectare of Grain at 15% Moisture - according to the trial type



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