



PlantMalt

Product guide



Real ingredients, Real benefits...

Here at Muntons we're proud to be a family-owned business specialising in producing premium malted ingredients for many of the leading food and drink brands around the world.

Our unique and innovative approach brings a range of ingredients optimised for the plant-based industry, supplying clean label ingredients made from 100% sustainable malt.

For over 100 years we have been dedicated to a customer centric approach, sharing our knowledge of malt directly with food manufacturers to develop hundreds of products to maximise their recipes.

Why choose Muntons?

- pg.3 Malt - a clean label ingredient
- pg.5 100% sustainable malt

Find your ideal solution...

PlantMalt

- pg.9 Cut-grain 30
- pg.11 Mill-roast 1250
- pg.13 Kiln-stout 250
- pg.15 Slow-cooked 800
- Pg.17 Slow-cooked 1000
- Pg.19 Filter-roast 3
- Pg.20 Ingredients summary
- Pg.21 Our customer first approach

Most of us eat something with malt in every day...

So what is malt?

Malt is a unique ingredient. Typically derived from barley or wheat, the time-honoured process of malting unlocks the sugars, enzymes and amino acids present in the grain. The malt brings a unique flavour and wide range of benefits to many different food products.

Our grains are sprouted, kilned, and then carefully processed into the specialist ingredients we offer today.

It's a clean label, plant based ingredient made from 100% natural barley and wheat, and produced through a time-honoured natural malting process.

The unique malt flavour from our high-quality ingredients is a result of a Maillard reaction; a result of the reaction between the reducing sugars and plant based amino acids. We develop our malted grains to enhance individual characteristics that give the delicious malty flavour and colour that manufacturers around the world know and love.



= Plant Malt



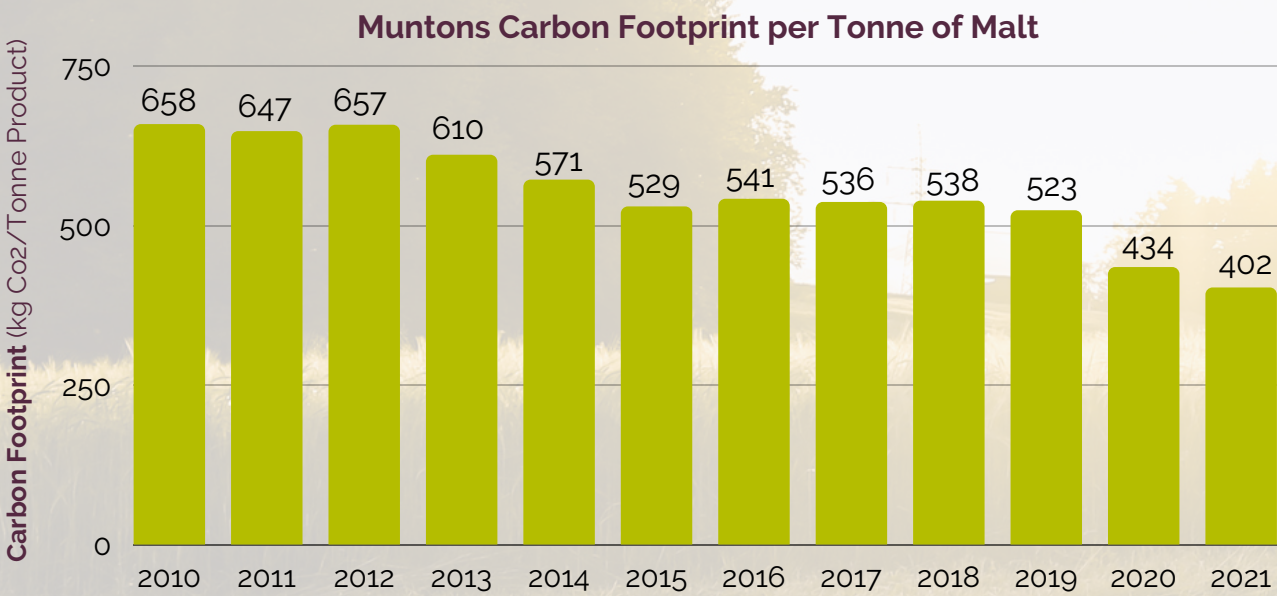
We are one of the greenest maltsters in the world,

we can prove it too

Our innovation mindset isn't just restricted to our ingredients...

Malting is an energy intensive process, and we are ahead of our competition when it comes to decreasing the carbon footprint of malt. We created the first malting barley carbon calculator that provided the data and knowledge to meaningfully impact our supply chain. Focusing on the areas that would make the most significant difference to Green House Gas Emissions.

To date the carbon footprint per tonne of our malting barley has seen a 45% decrease in Co2E since 2010. We anticipate a further substantial decrease as the new energy centre at Stowmarket comes fully on stream in 2022.



We're committed to passing on this benefit to our customers...

We can help link carbon data with our ingredients, giving you full transparency of the contribution towards your final product.

Discover all of our credentials in our latest sustainability report:



Our sustainability targets & achievements

Greenhouse gas emissions	Science Based Target 2010-2050 Scope 1&2 - 45% reduction Scope 3 - 30% reduction	Scope 1 & 2 29% On track for >50% in 2022 Scope 3 32%	AHEAD OF TARGET AHEAD OF TARGET
Waste	0% non-hazardous waste to landfill	0% to landfill achieved	ACHIEVED IN FULL
Water use	< 4.8m /tonne for malting < 7.0m /tonne total products	4.3m /tonne for malting 5.9m /tonne total products	ACHIEVED TARGET ACHIEVED TARGET
Suppliers ethical data exchange (SEDEX)	Management score above average with target of 4.0/5.0	4.3./5.0	ACHIEVED IN FULL
Climate positive agriculture	To reduce scope 3 carbon emissions from growing of malted barley by 30% by 2030	First crops of malting barley in our regenerative agriculture programme certified as carbon negative.	ON TARGET

We're proud to do business the right way...



Find your ideal plant-based solution...

PlantMalt

Muntons produce a comprehensive range of grain malts and further process these into malted ingredients for the plant-based world. We provide manufacturers with clean label, GMO free product that are produced using 100% sustainable malt.

Milled ingredients

pg.9 Cut-grain 30



pg.10 Mill-roast 1250



Liquid ingredients

pg.11 Klln-stout 250 pg.12 Filter-roast 3 pg.13 Slow-cooked 800



Dried ingredients

pg.14 Slow-cooked 1000



PlantMalt

Cut-grain 30

Designed to retain moisture when in application, Cut-grain 30 will provide a 'juicy' succulence to meat-free applications, alongside a speckled fat appearance and an improved 'bite'.



Applications



Burger

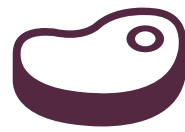


Sausage

Benefits



Improve taste



Enhance texture



Provide succulence

Natural ingredient, natural process

Our malted grains are steamed to soften, then rolled to a specified thickness before being micronized (toasted). The micronizing process gives a good texture, develops a toasted flavour, and deactivates any enzymes within the grain.

The grains can be coarsely cut and sieved, giving a cut grain with minimal dust.

Production information:

Appearance	Coarse particles varying in colour from creamy to dark brown.
Odour	Pleasant and characteristic of wheat malt.
Texture	Crunchy.
Taste	Characteristic malted cereal flavour.

Pack size 25kg sack

Ingredient declaration Malted **Wheat**
Allergen information Contains gluten

Plant-based burger

Control



Cut-grain 30

Plant-based Sausage

Control



Cut-grain 30

PlantMalt

Mill-roast 1250



A clean label, cost effective source of colour providing a premium red 'meat' appearance and texture. Savoury flavours can also be enhanced when dosed at the appropriate levels.

Applications



Burger



Deli-beef slices

Benefits



Improve taste



Enhance texture



Provide succulence



Enhanced aroma

Authentic roasted and smoky notes

Our malt flours are produced by milling roasted malted barley (black malt) resulting in a strong roasted, smoky flavour and aroma.

Production information:

Appearance	Dark brown flour.
Odour	Characteristic of highly roasted cereal
Taste	Characteristically roasted with a slight bitterness.

Pack size 25kg sack

Ingredient declaration 'Barley Malt Flour' or 'Roasted Barley Malt Flour'
Allergen information Contains gluten

Plant-based burger

Control



Mill-roast 1250

Plant-based Deli-beef



Mill-roast 1250

PlantMalt

Kiln-stout 250

A viscous liquid produced by enzyme assisted hot water extraction of malted barley. The liquid is then blended with hop extract where the naturally occurring glutamates offer clean label flavour and textural enhancement.



Applications



Deli-beef
slices

Benefits



Improve
taste



Enhance
texture

A production process similar to brewing

We add water into a mash vessel and heat to an optimum temperature profile for starch and protein conversion. The non-soluble matter is then filtered out and the remaining liquid is evaporated under vacuum to enable the use of low temperatures, avoiding colour and flavour changes.

Production information:

Appearance	Very dark brown syrup.
Odour	Pleasant with a slight hop aroma.
Taste	Sweet, malty, slightly roasted and bitter.

Pack size 25kg Jerry Can

Ingredient declaration Hopped Malt Extract (Malted **Barley**, Water, Hop Extract).
Allergen information Contains gluten

Plant-based Deli-beef



Kiln-stout 250

PlantMalt

Filter-roast 3

Roasted malted barley produces a liquid of mid-viscosity, undergoing enzyme assisted hot water extraction, followed by ultra-filtration and evaporation.



Applications



Burger



Deli-beef
slices

Benefits



Unique
flavours

A controlled process of water and heat

The production process involves enzyme assisted hot water extraction of malted barley, followed by filtration, concentration under vacuum evaporation and controlled high temperature processing.

Production information:

Appearance	Intense dark brown liquid.
Odour	Low (slightly roasted).
Taste	Low (slightly roasted).

Pack size 25kg Jerry Can

Ingredient declaration Roast **Barley** Malt Extract
Allergen information Contains gluten

Plant-based burger

Control



Filter-roast 3

Plant-based Deli-beef

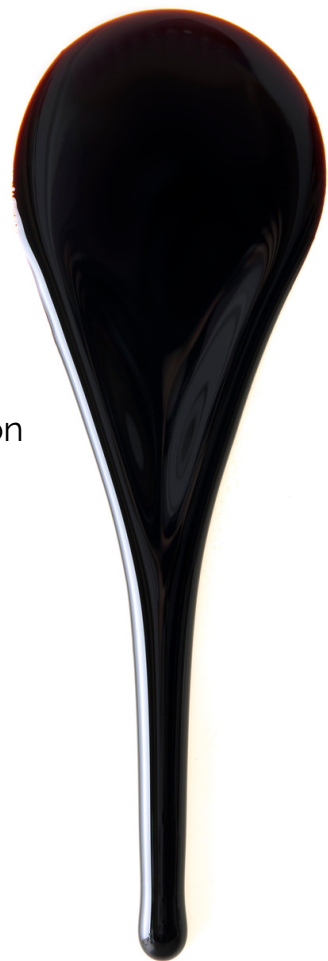


Filter-roast 3

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Slow-cooked 800

Barley syrup which has been highly intensified in colour and flavour by utilising the Maillard reaction to complex nitrogenous compounds.



Applications



Burger

Benefits



Improve
taste



Enhance
texture

Plant-based burger

Control



Slow-cooked 800

Slow-cooked to preserve it's unique taste

We add malted grains and water into a mash vessel and heat to an optimum temperature profile for starch and protein conversion. Non-soluble matter is then filtered out and the remaining liquid is evaporated under vacuum to enable the use of low temperatures, avoiding colour and flavour changes.

Production information:

Appearance	Very reddish-brown syrup
Odour	Characteristic strong roasted/licuorice/treacle
Taste	Sweet with characteristic strong licuorice/treacle and fruity flavours
Pack size	25kg Jerry Can

Ingredient declaration	Barley Malt Extract
Allergen information	Contains gluten

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Slow-cooked 1000

A non-diastatic, dried extract of barley and malted barley, in the form of a finely milled, free flowing hygroscopic powder that improves the depth of flavour and texture.



Applications



Burger



Deli-beef slices

Benefits



Improve taste



Enhance texture

Vacuum dried

The production process involves enzymatic hot water extraction of barley and malted barley, followed by filtration, vacuum evaporation and controlled high temperature processing. The resultant syrup is then vacuum band dried and milled.

Production information:

Appearance Dark brown powder
Taste Sweet with a characteristically malty, fruity and slightly acidic flavour

Pack size 25kg Sack

Ingredient declaration Barley and Malt Extract.
Allergen information Contains gluten

Plant-based Deli-beef



Slow-cooked 1000

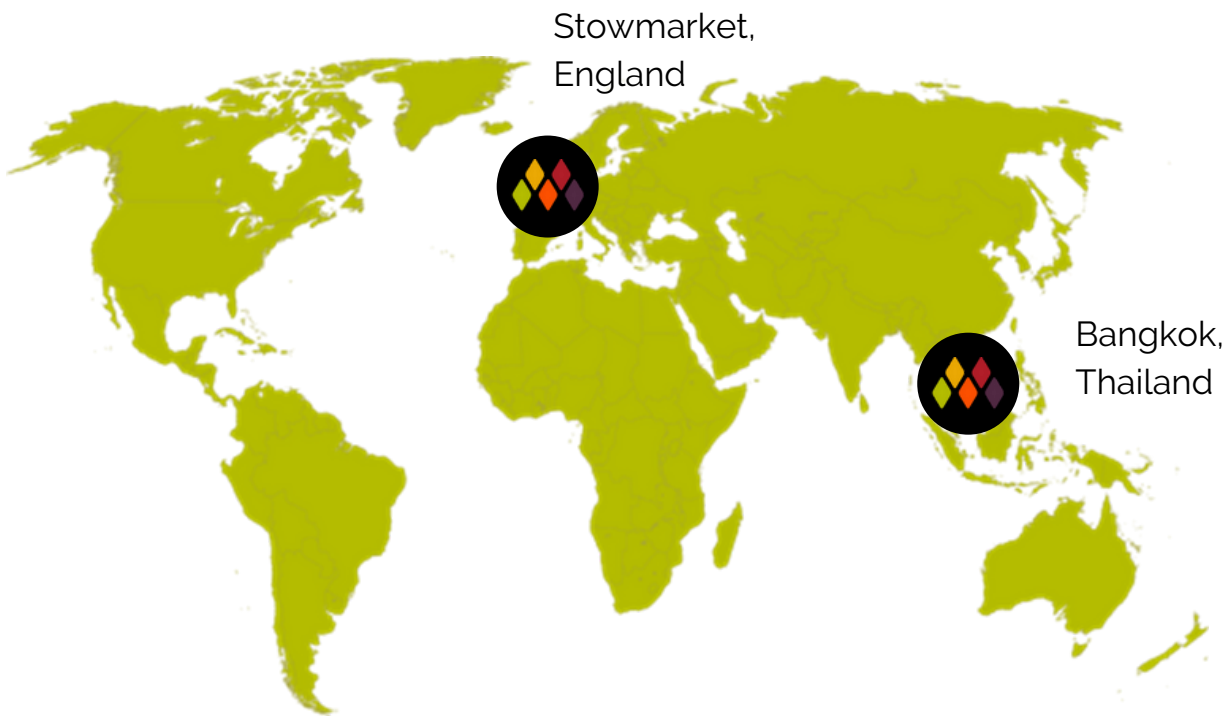
Real ingredients, real benefits

Our dedicated ingredients for plant-based products has been tested in our innovation centres to provide specific benefits to a range of applications.

	Proven Applications	Benefits
PlantMalt Cut-grain 30 Steamed grains are cooked and coarsely chopped to provide a good texture with toasted flavours.	 Burger  Sausage	 Improve taste  Enhance texture  Retains moisture
PlantMalt Filter-roast 3 A very dark liquid that provides a deep colour profile ideal for replicating cooked red meat with minimal flavour impact.	 Meatballs	 Improve taste
PlantMalt Mill-roast 1250 Dark black, powdered ingredient with strong roasted and smoky flavour and aromas.	 Burger  Beef slice	 Improve taste  Enhance aroma
PlantMalt Slow-cooked 800 Red/brown liquid ingredient with treacle and fruity flavours.	 Burger	 Improve taste  Enhance texture
PlantMalt Kiln-stout 250 Dark liquid ingredient, which is sweet, malty and slightly roasted in flavour with background bitter notes.	 Beef slice	 Improve taste  Enhance texture
PlantMalt Slow-cooked 1000 Red/brown powdered ingredient with a complex, sweet and savoury flavour profile.	 Beef slice	 Improve taste  Enhance texture

We can support your NPD needs

We have innovation centres in England and Thailand devoted to helping our customers succeed.



Let's work together...

For over 100 years we have been working directly with manufacturers on bespoke NPD. In 2019, we helped launch over **100** products working directly with some of the best loved food & drink brands in the world. It's our preferred way of working, and we would love to help with your specific NPD needs.

Discover your plant-based solution



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