Protected food, drink or agricultural product name

Product specification for ‘Welsh Heather Honey/ Mêl Grug Cymru’

A protected geographical indication (PGI)

Responsible country: Great Britain

GB number: F0105

This document sets out the elements of the product specification for information purposes.

2. Competent authority

Name: G.I. Team, Department for the Environment, Food and Rural Affairs

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3. Applicant group

Name: Welsh Honey Cluster

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Composition: Producers/processors (10)

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Type of product (as in Annex XI Implementing Regulation 668/2014)

Class 1.4 Other products of animal origin, honey

1. Product name(s)

'Welsh Heather Honey/Mêl Grug Cymru'

6. Description

‘Welsh Heather Honey/Mêl Grug Cymru’ is unadulterated 100% natural honey produced by the Western Honey Bee *Apis Mellifera*, foraging and collecting nectar from the heather moorlands in Wales. Most ‘Welsh Heather Honey/Mêl Grug Cymru’ can be sourced from either Ling heather (*Calluna Vulgaris*) or Bell Heather (*Erica Cinera)*. However, Ling Heather is the heather most prolific in Wales.

‘Welsh Heather Honey/Mêl Grug Cymru’ is additive free and can be sourced from a single apiary or more than one apiary. To produce ‘Welsh Heather Honey/Mêl Grug Cymru’ all bee hives (or apiaries) must be located in Wales (the 'production area’) and the nectar making up the honey should be foraged from Welsh heather moorlands. The production area is the area in which bee keepers set up their apiaries in order to produce ‘Welsh Heather Honey/Mêl Grug Cymru’.

Other operations such as the simple mechanical (physical) processes of extraction and packing of ‘Welsh Heather Honey/Mêl Grug Cymru’ which do not alter the chemical or organoleptic characteristics of the honey, may take place at suitable (food registered) premises located within or outside of Wales, so long as the honey source(s) is wholly traceable to the geographical area of origin.

‘Welsh Heather Honey/Mêl Grug Cymru’ is an unpasteurised product, (pasteurisation of honey is typically between 63- 65 degrees centigrade for 30 minutes), This ensures that all enzymes resulting from the natural origin of the honey, are retained and not lost and the characteristics conferred by the Welsh Heather nectar remain present in the final end product. ‘Welsh Heather Honey/Mêl Grug Cymru’ is only heated (to a max of 45 degrees C) to help relocate honey (if required) from storage containers to ‘bottling’.

Only minimal filtration is allowed (ending with 200-micron mesh prior to bottling), this enables the majority of the pollen grains to remain in the final product and contributes to a higher protein content compared to commercially more processed honeys. The frequent occurrence of air bubbles in ‘Welsh Heather Honey/Mêl Grug Cymru’ is an indication of the ‘natural’ unprocessed nature of the product.

‘Welsh Heather Honey/Mêl Grug Cymru’ is usually produced in the summer between the months of July and September but the length of the season can vary significantly and is very dependent upon weather conditions. The window period for obtaining heather honey can in some seasons be very short (several days) and can result in only small volumes of highly valued quality honey being obtained. The inconsistencies of cropping and the difficulties of obtaining ‘Welsh Heather Honey/Mêl Grug Cymru’ can make it a rare and premium product which requires specific skills.

The Welsh heather (upon which the bees forage and collect their nectar) influences and contributes to the characteristics in the final product. ‘Welsh Heather Honey/ Mêl Grug Cymru’ is thixotropic in nature and not as clear and transparent as other honey.

Chemical characteristics:

All 'Welsh Heather Honey/Mêl Grug Cymru' should meet the criteria specified in The Honey (Wales) Regulations (2015) and should be tested against those regulations if there is a risk of adulteration.

Welsh Heather Honey/Mêl Grug Cymru' shall conform to the definition of "blossom" / "nectar" honey as defined by the above regulations which states honeys obtained from the nectar of plants.

Criteria	Amount
Moisture content	Not more than 23%
HMF	Not more than 40mg/kg
Diastase activity Schade scale	Not less than 8
Free acid	Not more than 50 milliequivalents acid per kg
Water insoluble content	Pressed honey not more than 0.5g/100g or none pressed honey which is not more than 0.1g/100g
Fructose and Glucose content (sum of both)	Not less than 60g/100g
Sucrose content	Not more than 5g/100g

Physical characteristics

Structure/texture: - 'Welsh Heather Honey/Mêl Grug Cymru' is thixotropic, this means it has a 'gel like' consistency, is very slow to set, on stirring it liquefies and then 're-gels'.

Pollen characteristics

To produce 'Welsh Heather Honey/Mêl Grug Cymru' all bee hives (or apiaries) must be located in Wales and the nectar making up the honey should be foraged from Welsh heather moorlands.

'Welsh Heather Honey/Mêl Grug Cymru' has a predominance of Ling heather *Calluna Vulgaris* pollen, (which is found in greater abundance in Wales than Bell Heather (*Erica Cinera)*. However, pure mono-floral heather honey is rare, as heather nectar is often mixed with nectars from other moorland species such as rose bay willow herb, blackberry and gorse.

Organoleptic characteristics

Welsh Heather Honey/Mêl Grug Cymru'	Description

Colour	Reddish orange to dark amber Rich autumnal orange colour Bright appearance but not clear,
Structure/Texture	Rich thick honey usually containing suspended air bubbles Thixotropic – gel like and firm but will become temporarily
	liquid if stirred or agitated. Smooth, soft consistency, can exhibit crystallisation or can be uncrystallised.
Aroma	Aroma similar to heather.
Flavour	Intense sweetness with a touch of bitterness which lifts the intensity of the sweetness. 'Butter filled toffee' 'sweet burnt caramel' A complexity of flavours

Due to heather' honey's inherent thixotropic properties which makes it difficult to extract, 'Welsh Heather Honey/Mêl Grug Cymru' is frequently presented as cut comb in honey.

The 'Welsh Heather Honey/Mêl Grug Cymru' PGI application relates only to 'Welsh Heather Honey/Mêl Grug Cymru' which meets the product specification. It does not include other types of honey which have been blended or mixed.

7. Geographical area

To produce 'Welsh Heather Honey/Mêl Grug Cymru' all bee hives (or apiaries) must be located in Wales on/or near Welsh heather moorlands to ensure that the nectar making up the honey is foraged predominantly from Welsh heather.

8. Proof of origin

All 'Welsh Heather Honey/Mêl Grug Cymru' can be fully traced back to the apiary from where the honey was collected.

All 'Welsh Heather Honey/Mêl Grug Cymru' food processing premises must be registered with their local Environmental Health Officer or similar and must comply with food hygiene and processing regulations. Postcode location of processing facilities must be recorded.

All 'Welsh Heather Honey/Mêl Grug Cymru' should meet the criteria specified in The Honey (Wales) Regulations 2015 and should be tested against those regulations if there is a risk of adulteration.

‘Welsh Heather Honey/Mêl Grug Cymru’ shall conform to the definition of “blossom” / “nectar” honey as defined by the above regulations, which states that “blossom honey” and “nectar honey” means honey obtained from the nectar of plants.

All producers must be members of National Bee Base and all hives/apiaries registered and kept up to date on the National Bee Base register.

For traceability of ‘Welsh Heather Honey/Mêl Grug Cymru’, the following information is recorded: -

- OS Grid reference to accurately record the location of apiary site
- Number of supers (honey boxes) harvested from the site and date
- All movements of honey (for example from each Apiary Site to the processing premise etc) must be recorded
- Photographic and geographical data are required to be kept and made available for inspection purposes for all site visits. Photos should include evidence of hive locations and flora and fauna in surrounding feeding area.
- Recording of weight of honey obtained from each Apiary site.
- Records kept of number of hives and supers at each site including type of hive used.
- Batch numbers and sizes showing location of harvest to assist in traceability purposes must be recorded.
- Bottling of all honey (Note: ‘Bottling’ means the end container in which the honey leaves the processing centre – this could be in jars, plastic retail containers, retail or wholesale buckets, or food-grade barrels).
- Honey that leaves the processing premises may be sold retail or wholesale. If wholesale, the wholesaler will record and identify the honey which it bottles into retail containers.

9. Method of production

To produce ‘Welsh Heather Honey/Mêl Grug Cymru’, all bee hives (or apiaries) must be located in Wales, as stated within the defined geographical area, and the nectar making up the honey must be foraged predominantly from Welsh heather moorlands. This can be determined by the organoleptic characteristics of the honey.

Other operations such as the simple mechanical (physical) processes of extraction and packing of ‘Welsh Heather Honey/Mêl Grug Cymru’, which do not alter the chemical or organoleptic characteristics of the honey, may take place at suitable (Food registered)

premises located within or outside of Wales, so long as the honey source(s) is wholly traceable to the geographical area of origin.

To ensure a crop of 'Welsh Heather Honey/Mêl Grug Cymru', siting the hives and timing when the bees are moved by the producer is critical. Bees are usually moved to the moors at the end of July so that the bees are in situ for when the heather starts flowering early to mid-August. The bees are then collected mid-end of September when temperatures drop and it is too cool for abiotic bee foraging activity and honey production.

Preparation of supers: - Honey is only harvested from 'supers' of comb. Supers containing other summer honey are removed from hives prior to relocating the hives to heather (or prior to the heather nectar flow) and replaced.

Management of the colony

Feeding

'Welsh Heather Honey/Mêl Grug Cymru' is produced from the bees feeding on natural heather nectar sources from within the designated geographical area during the Welsh Heather Honey/Mêl Grug Cymru' harvesting season.

Supplementary feeding - bees should not be supplementary fed except under exceptional circumstances and then only on welfare grounds.

During the production season - bees should not be supplementary fed while honey supers are in place so as to avoid the potential for cross-contamination of the honey. If supplementary feeding for welfare grounds is required, there must be no access to the honey supers for the bees during the period of feeding. The honey supers must either be sealed off or removed from the hive.

Records should also be kept of any supplementary feeding if it occurs during the honey production season including the reason.

***Over the Winter period where honey is not being produced**, bees can be fed sugar syrup and / or associated products, such as pollen substitutes on welfare grounds*

Supplementary 'feeds' (and/or associated products) do not need to originate from within the geographical designated area.

When supplementary feeding occurs over the winter period checks shall be conducted to ensure any syrup stored by the bees around their winter nest has been used up entirely prior to adding honey supers in the spring, in readiness for the next crop, to ensure that no feed ends up in the honey production.

Pest and Disease management

Honey bees are affected by a range of pests and diseases. This can necessitate the administration of medicinal and chemical treatments on welfare grounds, taking into account appropriate scientific guidance and legal requirements.

All treated hives must observe the withdrawal period of any medicinal and/or chemical treatment before it can be marketed as ‘Welsh Heather Honey/Mêl Grug Cymru’.

Processing; -

Removal of frames and uncapping.

Bees cap honey cells with wax, when the majority of the honey cells are capped, the honey frames are removed from the hive and transported to the processing facility. The honey is then uncapped, by scraping the caps from both sides of the honey frame onto a capping tray.

The exception is comb honey which is simply cut from the frame and does not include ‘uncapping’

Extraction of the honey by pressing.

Due to the higher density of heather honey, (and the fact that heather honey is thixotropic), ‘Welsh Heather Honey/Mêl Grug Cymru’ producers often choose to extract by pressing as well as centrifugally. The honey is placed in a press and the pressure results in the honey flowing from the comb.

Filtration

Only minimal filtration is allowed (ending with 200-micron mesh prior to bottling), enabling the majority of the pollen grains to remain, in the final product. This contributes to a higher protein content compared to commercially more processed highly filtered honeys.

Honey settling

The honey may be allowed to settle in a honey settling tank where any impurities can rise to the surface and can be skimmed off prior to bottling.

Bottling/presentation

Bottling’ means the end container in which the honey leaves the processing centre – this could be in jars, plastic retail containers, retail or wholesale buckets, or food-grade barrels).

At point of sale,

‘Welsh Heather Honey/Mêl Grug Cymru’ can be presented in crystallised and uncrystallised form. ‘Welsh Heather Honey/Mêl Grug Cymru’ is frequently presented as chunk honey or cut comb.

10. Link with the geographical area

Welsh Heather Honey/Mêl Grug Cymru’ is produced from bees foraging and collecting nectar from heather moorlands located in Wales. The qualities, and reputation of ‘Welsh Heather Honey/Mêl Grug Cymru’ is directly attributable to its geographical origin.

This PGI application is based on the following three key factors: -

a) The type, and age of Welsh heather has a direct effect on the yield and organoleptic characteristics of ‘Welsh Heather Honey/Mêl Grug Cymru’.

b) ‘Welsh Heather Honey/Mêl Grug Cymru’ is a marginal crop and the difficulties associated with producing the product requires specific skills, developed by producers.

c) Reputation, which recognises that ‘Welsh Heather Honey/Mêl Grug Cymru’ is a distinct product.

It is this combination of both natural factors and human factors which define the characteristics of ‘Welsh Heather Honey/Mêl Grug Cymru’.

Welsh Heather

Heather grows widely on the nutrient poor acidic soils found on heaths in Wales. ‘Welsh Heather Honey/Mêl Grug Cymru’ is produced from heather on both upland and lowland heaths.

In Wales there are approx. 7000ha’s of Welsh lowland heaths which represent 10% of the estimated lowland heaths in the UK. Strongholds of lowland heath habitat in Wales are notably Pembrokeshire, Gwynedd, Anglesey and The Gower peninsular.

In Wales, on upland heaths, the heather tends to be located at higher altitudes (than for example in Scotland) because the lower altitudes are predominantly utilised for forestry and enclosed fields. The higher the altitude, though, the more unpredictable the weather conditions and the more marginal the production as bee foraging abiotic activity is closely related to air temperature.

Most ‘Welsh Heather Honey/Mêl Grug Cymru’ is sourced from a predominance of Ling heather (*Calluna Vulgaris*). Ling heather is more prolific in Wales and flowers later than the Bell Heather (*Erica Cinera)* which is less common in Wales. Honey produced from Ling heather has a more distinctive flavour and aroma exhibiting a strong caramel flavour.

Pure mono-floral heather honey is rare, as the nectar from heather is often mixed with nectars from other moorland species such as rose bay willow herb, blackberry and gorse.

Most areas of Welsh heather moorlands are currently managed as part of agrienvironmental schemes by grazing or by controlled burning. This encourages young heather which produces more nectar available to the bees leading to a greater honey yield.

Identifying how the moorland is managed, is a factor for ‘Welsh Heather Honey/Mêl Grug Cymru’ producers when considering where to locate their hives.

Human Factors

The production of ‘Welsh Heather Honey/Mêl Grug Cymru’ is marginal in nature and obtaining a crop of honey can be fraught with difficulties due to changing climatical Welsh conditions. This requires specific skills from the producers as outlined below,

Wales’s unpredictable weather affects the heather growing season which affects timing of honey harvests and yields. The highest yields are achieved when there is wet weather in May and June which stimulates heather growth and then fine weather in August to encourages the bees’ abiotic activity. However, changing Atlantic weather patterns can lead to unpredictable bee activity and an interruption of bees bringing pollen and nectar back to hives.

Although heather can potentially produce a honey crop very quickly (no other flower (except possibly oil seed rape or borage can produce a crop so quickly), yields are unpredictable and if weather conditions are particularly unfavourable there may not be any honey at all.

Welsh honey producers are skilled at working within the variable and unpredictable Welsh climate where the start, end and sequencing of events throughout the season can be very unpredictable. This necessitates the honey maker having a sophisticated understanding and knowledge of bee behaviour, their feeding patterns and how climate changes can affect this activity. Welsh honey makers are adept at scrutinising met office data and predicting weather forecasts and often have to change management techniques quickly to respond to changing weather conditions. Most activities take place with the caveat “weather permitting”. This is exacerbated with Welsh Heather Honey/Mêl Grug Cymru’ makers whose hives are located at higher altitudes on heather moorlands where adverse weather conditions are a frequent occurrence. Achieving a heather honey harvest is notoriously “hit and miss”. Success depends on the weather, the strength of the bee colony and the quality of heather which depends on the management of the heather moorland.

Producing heather honey also requires its own specific skills, several associated with migratory bee keeping: -

- Skill in knowing both how to transport bees, and the optimum time to move them. The aim is to time the introduction of the hive, and actual harvesting of the comb to coincide with when the ling heather is in bloom. Bees are usually moved to the moors at the end of July so that the bees are in situ for when the heather starts flowering early to mid-August. The bees are then collected mid-end of September when temperatures drop and it is too cool for honey production.
- Skill in deciding where to site the hives. How the moorland is managed, is a factor for ‘Welsh Heather Honey/Mêl Grug Cymru’ makers to consider when deciding where to site their hives. For example, hives sited on managed heather moorland where grazing or controlled burning is practiced encouraging young heather which produces more nectar leading to potentially a greater honey yield.
- Knowledge of managing bee colonies with hives located on moorlands which are typically a long distance from the honey maker’s home. The honey maker has to be

able to predict environmental conditions on the heather moors and be able to anticipate if conditions change, and if colonies may need feeding.

- Choosing of strong colonies that will survive the altitude and colder heather environments. Most bees cannot typically survive if hives are at altitudes above 250m
- Ensuring hives are in good conditions to survive higher altitudes and more incremental weather conditions
- Taking actions to minimise the effect of bad-tempered bees which can occur when changeable weather conditions can switch off rapid flow of nectar.
- Skill of extracting heather honey by pressing as well as by centrifugal extraction due to its thixotropic nature.

Although producing 'Welsh Heather Honey/ Mêl Grug Cymru' is very unpredictable and requires considerable skill and effort it can still produce a harvest of distinctive honey commanding a premium price.

The Welsh climate and Wales' nutrient poor acidic moorland soils are ideal for the prolific growth of heather, particularly ling heather.

Managing the moorland allows young heather to flourish and produce an abundance of flowers. Siting the hives on/or near these well-managed moorlands during the heather flowering season, provides copiousness of heather nectar available to the bees.

The high concentration of ling heather nectar gives 'Welsh Heather Honey/ Mêl Grug Cymru' its distinctive strong caramel flavour, heather aroma and thixotropic qualities.

History

Although Wales is regarded as providing a marginal honey producing environment, the production of Welsh honey (including 'Welsh Heather Honey/Mêl Grug Cymru') has historically been very important. Laws relating to Welsh beekeeping and honey making were set out in the Laws of Hywel Dda which date back to the 10th century, demonstrating the historical importance of all types of Welsh honey production including 'Welsh Heather Honey/Mêl Grug Cymru'

In the days of Edward I, 'Welsh Heather Honey/Mêl Grug Cymru' from the Conwy Valley was renowned with the King sending two men from Rhuddlan to Aber Conwy for the honey.

The Welsh Beekeeping Association organises a national event annually at the Royal Welsh Show in Builth Wells. All honey entries including 'Welsh Heather Honey/Mêl Grug Cymru' have to be produced in Wales and honey makers have to be members of the Welsh Beekeeping Association

The Welsh Honey Cluster brings together business minded beekeepers who produce all types of Welsh honey (including 'Welsh Heather Honey/Mêl Grug Cymru') and is dedicated to raising the profile and production of all types of Welsh honey. The Cluster has 17 members and is the applicant for this GI application.

Reputation

'Welsh Heather Honey/Mêl Grug Cymru' reputation of being a quality product is recognised by the food industry both within and outside Wales.

On awarding Gwenyn Gruffydd 'Welsh Heather Honey/Mêl Grug Cymru' a Great Taste Award 2 stars in 2023 the judges commented:

"Rich thick honey with an enticing floral aroma. This honey is wonderfully complex – floral notes- sweet burnt caramel-rich heather notes- this honey really sings of the environment these hardworking bees have been"

"A granular mouthfeel melts on the palate releasing delicious butter filled toffee flavour. We enjoyed the heather bitterness which drew us away from the sweetness so well. A complex and very pleasing honey with many layers of flavour and a lingering toasty finish

11. Inspection body

Name: The City & County of Swansea

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The inspection body conforms to the principles of ISO 17065 standard.

12. Labelling

ENDS