

# PRODUCT SPECIFICATION

## 'The Vale of Clwyd Denbigh Plum'

PDO (X)      PGI ( )

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

### 1 RESPONSIBLE DEPARTMENT IN THE MEMBER STATE

Area 1A

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### 2 GROUP

Name: The Denbigh Plum Group

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Tel.: 07896312905

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Email: [valeofclwyddenbighplum@gmail.com](mailto:valeofclwyddenbighplum@gmail.com)

Composition: Producers/processors (20) Other (x )

### 3 TYPE OF PRODUCT

Class: 1.6 Fruit, vegetables and cereals fresh or processed

### 4 SPECIFICATION

#### 4.1 Name:

"The Vale of Clwyd Denbigh Plum"

#### 4.2 Description:

'The Vale of Clwyd Denbigh Plum' *Prunus domestica Linnaeus* "**Denbigh Plum**" is the name given to the Denbigh plum grown in the designated geographical area of

the Vale of Clwyd in Denbighshire in North Wales from where the plum originates. The Denbigh plum is the only plum variety native to Wales.

'The Vale of Clwyd Denbigh Plum' has the following characteristics depending upon whether the plum is required for **culinary** purposes and harvested mid-August before they are ripe or required as a **dessert** plum when the plum is allowed to remain and ripen on the tree and harvested in late August early September.

### **Culinary**

- Plum firm to touch
- Orange-red in colour with yellow patches when the plum begins to ripen.
- Wax bloom starting to show
- Flesh is firm and of a rich yellow with greenish amber tint
- Flesh clings to stone
- Size 45mm to 65 mm stalk end to tip
- 40mm to 55mm crossway diameter

### **Dessert**

- Plum starting to soften when gently squeezed
- Size 45mm to 65 mm stalk end to tip
- 40mm to 55mm crossway diameter
- Shape – Spherical or slightly elliptical.
- Colour – Rich red shading towards purple, strewn with golden speckles. Fruit naturally becomes darker as the fruit ages.
- Plums covered with a wax bloom (visible whitish bloom) which develops the longer they remain on the tree.
- Naturally soft and juicy flesh which is a rich yellow in colour with greenish amber tint
- Flesh - only partially adheres to the stone.
- Mean number of fruit per kg 9-15 (mean 12)
- Brix test (measure of sweetness) 16-19.

With dessert plums, the skin is soft and delicate and should be exempt from bruising. This requires handling the ripened fruit with great care.

The dessert plums have a long growing season which gives the plum more time to fully develop its depth of flavour which is sub acid and sweet. It is this depth of flavour and sweetness which makes 'The Vale of Clwyd Denbigh Plum' unique.

When cooked the depth of flavour intensifies and the natural sweetness of the plum is enhanced. The texture of the fruit melts in the mouth if eaten when warm.

Most of 'The Vale of Clwyd Denbigh Plums' are sold as dessert plums fresh in local markets.

### **4.3 Geographical area:**

'The Vale of Clwyd Denbigh Plum' is grown in the designated geographical area of the Vale of Clwyd in Denbighshire North Wales which encompasses the following wards;-

- Aberwheeler,

- Bodfari,
- Cefn Meiriadog,
- Clocaenog,
- Cyffylliog,
- Denbigh,
- Efenechtyd,
- Henllan,
- Llanbedr Dyffryn Clwyd,
- Llandyrnog,
- Llanelidan,
- Llanfair Dyffryn Clwyd,
- Llangynhafal,
- Llanrhaeadr yng Nghinmeirch,
- Llanynys,
- Nantglyn,
- Rhuddlan
- Ruthin,
- St Asaph,
- Trefnant ,
- Tremeirchion Cwm
- Waen.

And the ward of LLansannan.

#### **4.4 Proof of origin:**

All 'The Vale of Clwyd Denbigh Plum' growers are encouraged to join The Denbigh Plum Group and must obtain their harvested fruit from either individual Denbigh Plum trees, or from newly planted orchards grafted from known specimens originating from the designated area. Both individual trees and/or orchards and plums must meet the specification as agreed by The Denbigh Plum Group. 'The Vale of Clwyd Denbigh Plum' must NOT be derived from trees grown from seed, only cloning of trees that meet the specification is allowed. As pollination cannot be controlled, trees grown from seed contain genetic variation and therefore cannot be guaranteed to grow to "type".

'The Vale of Clwyd Denbigh Plum' must be grown within the designated area of the Vale of Clwyd – as identified by orchard/or individual tree OS grid reference.

At all stages in the production of 'The Vale of Clwyd Denbigh Plum', producers are required to keep records to provide a complete audit trail and traceability from grower to final consumer. This procedure ensures that each batch of plums can be traced back to the grower from where it came.

Each grower is responsible for the care and maintenance of the trees which includes keeping records for traceability purposes.

Growers operate a coding practice where batches of plums are coded/labelled. This identification remains with the stock throughout the supply chain. The following information is provided;-

- Orchard Code –age/source of tree
- Orchard location – OS Grid Reference
- Date of Harvest
- Picker ID
- Bin Code

#### **4.5 Method of production:**

'The Vale of Clwyd Denbigh Plums' are grown in the lime rich, free draining, medium textured deep soils of the area which are fertile and naturally provide the trees with the nutrients they require.

Trees can be obtained either from grafting or budding by commercial tree nurseries or from local origin. Trees grown from seed will not qualify as trees that can produce 'The Vale of Clwyd Denbigh Plum'.

Old single plum trees have the traditional standard or lollipop type with first branches at 1.5m to facilitate sheep grazing underneath. Modern more intensively run orchards have trees that are more likely to be about 2 metres high so that fruit can be picked from the ground and maintained on a centre leader principal where the cropping area is around hip height.

Trees start to yield fruit approximately 3 years after planting. A yield of around 15 tonnes/ha of 'The Vale of Clwyd Denbigh Plum' can be expected from a modern orchard of around 570 trees per hectare. (26kg/tree). Older trees with a wider spacing have been known in some years to double this yield. Yields from traditional orchards are similar, but can be irregular. Traditional orchards have around 250 trees per hectare but are often on small areas frequently in close proximity to the farm house.

#### **Shelter**

The majority of the Vale is naturally sheltered and would not require artificial wind breaks, however, they may be planted if required specifically if influenced by the coast, where the trees need protection against onshore exposure from the sea

#### **Pruning**

Pruning should be carried out to meet the requirements of the orchard and could vary from the traditional standard tree possibly under grazed with sheep or poultry or in a more intensive centre leader type of orchard. Pruning is designed to give fruit much earlier in the orchard life and will provide better and more consistent yields,

Pruning of trees (if required) should be carried out manually usually in May when the sap is rising. The Denbigh Plum Group have a training programme in operation for the specific grafting and pruning of the 'The Vale of Clwyd Denbigh Plum' tree.

## **Pollination**

As the 'The Vale of Clwyd Denbigh Plum' is not a self-pollinator, pollinators are encouraged in the vicinity. As pollinators need to be marketable, the use of established varieties including Victoria, Marjorie's seedling, Czar, Sanctus Hubertus and occasionally Damson are used.

## **Pest and Disease management**

The benign physical and climatic conditions of the Vale of Clwyd enables the majority of 'The Vale of Clwyd Denbigh Plum' to be grown with minimal human intervention and without the use of pesticides, fungicides or soil additives etc. However, good practice requires routine checks to be carried out for pests and diseases (such as the Plum Moth and Brown Rot), and for trees to be sprayed if required.

## **Manuring and spraying**

Good Agricultural Practice requires routine checks to be carried out for soil nutrients, such as Nitrogen, Phosphorous and Potassium and trees to be sprayed if required. The soils of the Vale of Clwyd are by nature fertile and it is recommended soil analysis is taken every two years and deficiencies rectified according to the DEFRA publication RB209. Overfeeding tends to make trees over vegetative on fertile soils, to the detriment of fruit production.

Inorganic or Organic manure can be applied to trees in the autumn and in spring at blossoming time if required. To avoid excesses, applications need to take onto account fertiliser content of manures being applied and the inherently fertile soils present in the Vale of Clwyd.

## **Harvesting**

Harvesting is carried out manually, normally taking place 2-3 times over a 10-14 day period during August and September. The exact time of harvesting depends on a range of factors such as weather, tree age, location in the Vale of Clwyd and the intended market purpose of the fruit i.e. culinary or dessert. The ideal time to harvest dessert plums are when the fruit is just starting to soften when gently squeezed.

Harvesting must take place in dry weather, as plums decay almost at once if picked when wet. As 'The Vale of Clwyd Denbigh Plum' have soft delicate skin which are very prone to damage and bruising, they have to be carefully picked by hand by their stems to avoid bruising. Fruit pickers are trained to use the utmost care and to handle the fruit as little as possible. This is reflected by a whitish bloom often still visible and remaining on freshly picked fruit

## **Storage**

If short-term cold storage is required (approx. 10 days) the plums are stored at a temperature of 2-5 degrees centigrade in on farm cold storage. Before storing each plum is inspected and any injured, bruised or over-ripe fruit is disposed of to prevent

the possibility of the spread of decay to sound fruit which can then spoil an entire stock.

Growers operate a coding practice where batches of plums are coded/labelled. This unique identification remains with the stock throughout the supply chain.

#### **4.6 Link:**

The Denbigh Plum originates in the Vale of Clwyd and is the only plum variety native to Wales. The unique environmental and geographical factors in the Vale of Clwyd provide the perfect conditions for these plums to thrive.

### **Geography and topography**

The Vale of Clwyd is a river valley region in North Wales which extends 20 miles inland into Denbighshire from the coast of the Irish Sea at Rhyl. This valley is a “u-shaped” rift valley which was deepened by glaciers creating a wide flat valley floor with an altitude of 30 metres on the valley floor and rising to an altitude of 100 metres at the head of the valley. The valley floor is between 2-5 kms wide. The lowland valley is largely sheltered by surrounding hills including the Clwydian range on the eastern side which runs in a transverse direction from south-east to north-west and is only exposed to the north wind where it opens outward at the coast. The hills provide shelter from the prevailing westerly winds and often cold easterlies. This relatively sheltered environment is essential for plum production as it helps reduce damage to both the blossom and the developing plum.

The Vale of Clwyd represents the most extensive area of Grade 1 and Grade 2 land in Wales according to the Agricultural Land Classification (ALC). The ALC classification takes into consideration characteristics such as climate, site and soil. As Grade 1 and 2 land, The Vale of Clwyd is defined as “excellent” or “very good” quality agricultural land. This land is capable of producing consistently high yields of Vale of Clwyd Denbigh Plums.

The land has some of the most naturally fertile soils in the UK providing all the nutrients that the plumtrees and plums require. The soils present in the Vale have the ability to retain nutrients such as potassium, magnesium and calcium, which are key nutrient requirements for these plums.

The free draining medium textured deep soils, (which are naturally occurring in the Vale of Clwyd), encourage the development of strong root architecture which is vital for the plum trees and the production of quality “Vale of Clwyd Denbigh Plums”

The limestone geology underlying the new soft red Triassic sandstone in the area produces lime rich soils with high pH. Most fruit such as strawberries and raspberries do better on slightly acidic soils, however these plums thrive on the high pH limestone derived soils which are prevalent in the area.

### **Climatic conditions**

The Vale of Clwyd benefits from its own microclimate which favours the growth of these plums. The Vale of Clwyd has a moderate temperate climate which is warm,

mild and damp. The Vale of Clwyd (which is exposed to the sea from the North) is affected by the moderating influence of the Gulf Stream and records show that some of the highest winter temperatures in the UK have been recorded in this area.

The close proximity of water from the sea and the river Clwyd that runs through the valley not only moderates extreme temperatures but also provides a source of natural irrigation which in combination with the natural high water table in the Vale of Clwyd, satisfies the high moisture requirements of the deep rooted plum trees preventing the need for artificial irrigation.

The Vale of Clwyd Denbigh Plums flowers in April and is very susceptible to spring radiation frosts which can have a deleterious effect on blossom. The influence of the nearby gulfstream provides a microclimate to the Vale of Clwyd that provides a moderating influence and reduces the frost risk. Over the last 20 years historical climatic data show the probability of frost free days in the Vale of Clwyd during the blossoming period (end April to May) is very high. In addition the cool moderate temperatures from the gulfstream extends the flowering period which enables greater pollination.

Climate is intrinsically linked to the length of the growing season. In the Vale of Clwyd the climate is cooler in comparison to other plum growing areas. The cooler climate provides 'The Vale of Clwyd Denbigh Plum' with a long growing season enabling the plum to slowly mature. This gives the plum more time to fully develop both its flavour and sweetness. It is this depth of flavour and sweetness which contributes to 'The Vale of Clwyd Denbigh Plum's' distinctiveness.

The warm damp climatic conditions in the Vale of Clwyd would normally provide conditions which would predispose soft fruit to fungal diseases such as Silver Leaf and Brown Rot. However, Denbigh plums have, unlike most other plum varieties a natural resistance to these diseases and so despite the damp climatic conditions remain remarkably disease free. Although The Vale of Clwyd has a moist damp climate it remains drier than elsewhere in Wales as it is located in the rain shadow of the Snowdonia Mountains which form the backbone of North Wales. It has an annual average rainfall of less than 75cms with most of the rainfall occurring in December.

'The Vale of Clwyd Denbigh Plum' has managed not only to survive but to thrive in the natural conditions found in this area with minimal human intervention. Some long abandoned and neglected trees have been rediscovered thriving in isolated locations yet without human intervention or pesticides because all the nutrients they require can be received from the inherent resources provided from the Vale of Clwyd.

This sheltered flat fertile lime rich area's unique microclimate with its moderate temperatures natural irrigation system and probability of frost free days during the plum blossoming period, provides the ideal growing conditions for 'The Vale of Clwyd Denbigh Plum' and contributes to their specific and unique characteristics.

### **Tradition and reputation**

The Denbigh Plum variety predates the rise of the Nursery Trade which coincided with the arrival of the railways and newspapers at the start of the 19<sup>th</sup> century. It also predates the 18<sup>th</sup> century Country House craze for fruit cultivation when varieties from the continent notably France were introduced into British walled gardens.

In medieval times, a Carmelite friary with plum orchards, was established on the outskirts of Denbigh around 1270-80. This orchard was also mentioned during the reformation, in which a survey revealed ‘a fair orchard a little garden’ on site. A Grade II listed property is now on the site of the original friary and the house still has a large plum orchard today with old and young Denbigh Plum trees.

There have been references to the fertile land in the Vale of Clwyd throughout history and the region has a long association with the production of soft fruit and plum growing.

A translation of part of the Welsh poem “Pennill” in 1808 stated;-

*“Through Mona’s plain the harp resounds  
The Vale of Clwyd with fruit abounds”*

Although the actual age of ‘The Vale of Clwyd Denbigh Plum’ is unknown it is clear from historical evidence that the same Denbigh Plum variety has been grown on the designated area for centuries and was well established in gardens across the Vale of Clwyd by the 1850s. It was then that the Vale of Clwyd Horticultural Society held their first annual show at Denbigh

A poem describing the array of fruit and other produce grown in the Vale of Clwyd was suspended on a tree at the Vale of Clwyd Horticultural Show in 1851

*“The view was delightful-the flowers were rare  
And fruits of all sorts and descriptions were there,  
From the apple, that fruit to the world so pernicious  
To the pine and the grape with their flavours delicious  
Plums apricots, peaches and nectarines sweet.  
On due order take place to heighten the treat.”*

The Vale of Clwyd Horticultural show from the 1850’s became famous and there are numerous references to Denbigh plums or Denbigh seedling plums from the Vale of Clwyd being exhibited at what became a very prestigious show in newspaper articles and ‘The Garden’, which was a very popular horticultural journal at that time. These are some examples:

Source	Comment
North Wales Chronicle 6 <sup>th</sup> Sept 1856	“Plums were praiseworthy, especially the Denbigh plum which was highly commended.” and also ‘the Denbigh plum appeared in rich perfection’.
TheWrexhamAdvertiser,Denbighshire,Flintshire,Shropshire,Cheshire and North Wales Register 17 <sup>th</sup> Sept 1864	“Messrs Roberts of Denbigh exhibited a basket of the Denbigh seedling plum. They were not for competition and were not only admired but very highly spoken of by competent judges. We believe the

	plants can only be obtained of Messrs Roberts to be relied upon as the genuine Denbigh kind: the origin and history of its cultivation being somewhat local in character”
North Wales Chronicle 29 August 1868	Mr Roberts Denbigh “exhibited a fine lot....His fine specimens of Denbigh seedling plums were unsurpassed”
The Garden Aug 1 <sup>st</sup> 1885	Denbigh Seedling Plum “unequaled as a plum for preserving and excellent as a desert”
Caernarfon and Denbigh Herald 17 <sup>th</sup> Jan 1874	Advert for Denbigh Plum seedlings from a Mr J E Roberts a seeds man

At the Vale of Clwyd Horticultural Society’s first annual show at Denbigh in 1850, the “plum category” mentions Denbigh Plums by actual name, with the category listed as;- “The seven best green, yellow and Denbigh Plums” and Mrs Clough, from Castle House Denbigh in 1854 is awarded a special prize for her Denbigh Seedling Plums.

The reputation of the Vale of Clwyd Show went from being of local to national interest when the railways made North Wales more accessible and brought even more visitors to the famous show. The railways also enabled the plums to be sold further afield as prior to the arrival of the railways soft fruit and plums produced in the area were only able to be sold in towns and villages in the local area such as Ruthin, Denbigh and St Asaph, all within a 20 mile radius. .

By the late 1890’s, Denbighshire was the largest county area of small fruit In Wales. The Agricultural Returns, 1893 show that in Denbighshire there were 533 Market gardens, 23 Nursery grounds and 235 orchards.

Today evidence that this area was once involved in the production of fruit, namely plums can still be found in local street and house names in Denbigh such as “Bryn Eirin” meaning “Plum Hill” and “Rhyd yr Eirin” meaning “Ford by the plums”. Grove Road in Denbigh has long been associated with market gardens. A property in Grove Road has been in the same family for over a hundred years and has an extremely old ‘The Vale of Clwyd Denbigh Plum’ orchard which still produces plums for the commercial market.

There is a knowledge and skill base for growing ‘The Vale of Clwyd Denbigh Plum’ in the designated area that has developed over time. Specific human skills associated with the growing of this fruit which have been passed down from one generation to the next include;-

- Planting and establishment of the plum trees – trees spacing/type of tree
- Pruning and tree management – whether pruning is necessary and if so how to prune to help improve consistent crop yields and quality.

- When to harvest - each grower uses their own knowledge and experience to determine when exactly the plums reach the stage considered ideal for picking. The exact time of harvest will depend on factors such as season, age of tree and exact location in the designated area.
- Handling the fruit - Pickers are trained in fruit handling to ensure that every care is taken to handle the fruit as little as possible due to their particular soft and delicate skin which is reflected in the visible whitish bloom which protects the fruits.

The Denbigh Plum Group have a training programme in operation for the specific grafting, pruning and harvest management of 'The Vale of Clwyd Denbigh Plum' tree.

Although historically the production of 'The Vale of Clwyd Denbigh Plum' had largely died out, in recent years, there has been a resurgence of interest led by The Denbigh Plum Group. There are currently 30 'The Vale of Clwyd Denbigh Plum' orchards in the designated area and 10 producers identified by The Denbigh Plum Group. However, as part of a community led planting project and other landowners expressing their intention to plant additional orchards, it is hoped to increase this number to 50 orchards in the next 5 years. Since 2009 'The Vale of Clwyd Denbigh Plum' have been celebrated annually in October when Denbigh town hosts the very popular 'The Vale of Clwyd Denbigh Plum Feast' which is attended by over 2000 visitors. The festival recognises the pride the town of Denbigh and the Vale of Clwyd has in having the only native plum variety in Wales and the whole town of Denbigh becomes involved with the event attracting visitors from throughout the UK. The Vale of Clwyd Denbigh Plum Feast is a key food tourism event in the North Wales calendar.

At the feast, plum producers and processors have the opportunity to show case both the fresh fruit, and the array of products whereby 'The Vale of Clwyd Denbigh Plum' is used as an ingredient. These local food producers/processors using 'The Vale of Clwyd Denbigh Plum' as an ingredient in their products not only helps raise the profile of the plum by bringing it to the attention of a wider market, but also ensure year round availability. Visitors also learn about the heritage of the local fruit and pick up some tips from top Chefs at cookery demonstrations.

"Our produce is amazing and that's why I'm taking part in The Vale of Clwyd Denbigh Plum Feast – It's a native fruit from a corner of North Wales and it's vital to preserve those signature foods". – Top chef, Aled Williams

Bryn Williams the famous Welsh celebrity Chef has also become the patron of 'The Vale of Clwyd Denbigh Plum' and The Denbigh Plum Group. Bryn Williams features the plum in his recipe book "the Love of Veg"

'The Vale of Clwyd Denbigh Plum' is recognised throughout Wales and the rest of the UK for its excellence and is actively sourced by local catering establishments. The plum has also been nominated by the Slow Food Movement for an Ark of Taste award.

#### **4.7 Inspection body:**

Name: Regulatory & Housing Services

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**The inspection body conforms to the principles of EN 45011 standard.**

#### **4.8 Labelling:**