

OTHER ACTS

EUROPEAN COMMISSION

Publication of an application pursuant to Article 50(2)(a) of Regulation (EU) No 1151/2012 of the European Parliament and of the Council on quality schemes for agricultural products and foodstuffs

(2015/C 223/08)

This publication confers the right to oppose the application pursuant to Article 51 of Regulation (EU) No 1151/2012 of the European Parliament and of the Council ⁽¹⁾.

SINGLE DOCUMENT

'VARAŽDINSKO ZELJE'**EU No HR-PDO-0005-01132 – 25.06.2013****PDO (X) PGI ()****1. Name(s)**

'Varaždinsko zelje'

2. Member State or Third Country

Croatia

3. Description of the agricultural product or foodstuff**3.1. Product type**

Class 1.6. Fruit, vegetables and cereals, fresh or processed

3.2. Description of the product to which the name in 1 applies

'Varaždinsko zelje' is a vegetable derived from the autochthonous conservation variety of Varaždin cabbage (*Brassica oleracea* var. *capitata* f. *alba*). The cabbage head is flat, the leaves are compact in the upper part and somewhat looser in the lower part, depending on growing conditions. The leaves are tightly wrapped around the head and cover over two thirds of the surface. When the cabbage is mature and ready for harvesting, the edges of the outer leaves will usually begin to curl upward. The leaf blades are thin and have prominent veins. The main vein, especially on the outer leaves, has a thick base. The edge of the leaves is unbroken. The leaves are of light olive colour. It has a bitter taste, with sharp notes, and a pungent smell of fresh cabbage. The minimum dry matter content is 8 %, whereas the minimum sugar content is 40 g/kg. The inside leaves of a mature head are yellowish-white. The cabbage core is particularly long and can extend up to two thirds of the height of the head. The core is actually a stem with shortened internodes and a head-shaped bud. The root of 'Varaždinsko zelje' is very strong and the stem is quite pronounced. Although a late variety that tolerates cold well, it can also be grown as spring cabbage. Due to its specific shape and the elasticity of its leaves 'Varaždinsko zelje' is traditionally used to prepare local home-made specialities.

3.3. Feed (for products of animal origin only) and raw materials (for processed products only)

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3.4. Specific steps in production that must take place in the identified geographical area

The production of 'Varaždinsko zelje', from seedlings to harvest, is conducted within the geographic area specified in point 4.

3.5. Specific rules concerning slicing, grating, packaging, etc. of the product the registered name refers to

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⁽¹⁾ OJ L 343, 14.12.2012, p. 1.

3.6. *Specific rules concerning labelling of the product the registered name refers to*

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4. **Concise definition of the geographical area**

The production of 'Varaždinsko zelje' is strictly limited to the area within the administrative boundaries of Varaždin County. The natural boundary of Varaždin County to the north is the River Drava. This includes the following towns and municipalities: Varaždin, Ivanec, Ludbreg, Novi Marof, Lepoglava, Varaždinske Toplice, Bednja, Beretinec, Breznica, Breznički Hum, Cestica, Donja Voća, Martijanec, Gornji Kneginec, Jalžabet, Klenovnik, Ljubeščica, Mali Bukovec, Maruševac, Petrijanec, Sračinec, Sveti Đurđ, Sveti Ilija, Trnovec Bartolovečki, Veliki Bukovec, Vidovec, Vinica and Visoko.

5. **Link with the geographical area**

5.1. *Specificity of the geographical area*

Natural factors:

According to the Köppen climate classification, Varaždin County has a moderately warm and a moderately cold climate.

Climatic measurements taken over a course of several years between June and October, when 'Varaždinsko zelje' is cultivated in the open, reveal an average temperature of 14,9-20,1 °C and average relative humidity of 78,3-85 %

Average monthly rainfall stands at 73-100 mm. With an average rainfall of over 90 mm, the three summer months (June-August) are the wettest, accounting for about a third of annual rainfall. Some 60 % of this rainfall occurs during the growing period (April-September).

Occasionally, winters in Varaždin County can be cold and snowless, with minimum daily temperatures below – 10 °C.

There is a link between the growing of 'Varaždinsko zelje' and the River Drava. The most suitable areas for cultivating 'Varaždinsko zelje' are the plains and the gentle slopes of the Drava River basin. Also suitable is the land in the smaller valleys carved by rivers and streams.

The different geological and lithological properties account for different soil compositions in the lowland alongside the Drava River. Most of the soil in the Drava River basin is classified as P-1 soil. This is a brown, acidic and eutric gravel-based soil and a loamy to predominantly skeletal loess and sand-based soil underlain by Pleistocene-Holocene sediments alongside the Drava River.

Human factors:

The product 'Varaždinsko zelje' has also been influenced by the production methods, which have been adapted to the conditions in the geographical area: fragmented allotments, small areas, small-scale producers. The essential element in the production of 'Varaždinsko zelje' is the skill of the local producers, particularly during harvest. Family members of different generations take part in the harvest, handing down the experience and skill needed for hand picking the product. The harvest relies heavily on the picker's own judgement to determine, on the basis of his/her experience and knowledge, which cabbage heads are mature and ready to be harvested. Using his/her sight and touch the picker makes sure to select only those heads that have matured exactly to the right point. Hand picking also ensures better protection of the crops and prevents any damage that would be caused by machine harvesting. After many years of cultivating the plant and learning about its production under these specific conditions, the producers of 'Varaždinsko zelje' have managed to create a product with unique characteristics that do not prevail elsewhere (Naše pravice, 1905).

5.2. *Specificity of the product*

'Varaždinsko zelje' is a late variety that tolerates cold well. At the time of maturity, 'Varaždinsko zelje' displays the following specific morphological features that set it apart from other cabbage varieties: apart from the colour and prominent veining of the leaves, the cabbage forms a typical, not too big, very solid, firm and flattened head weighing between 1 kg and 3 kg, while the edges of the outer leaves begin to curl upward. A leaf of 'Varaždinsko zelje' is so thin that when placed on the palm, one's fingertips can be seen through it, yet it is also flexible and resilient. The leaves are of light olive colour. It has a bitter taste, with sharp notes, and a pungent smell of fresh cabbage.

Numerous studies have confirmed that 'Varaždinsko zelje' boasts special qualities compared with other types of cabbage. Its specificity is its high dry matter content and exceptionally high sugar content (F. Vešnik, *Utjecaj sorte na kvalitetu kiselog kupusa* in: Poljoprivredna znanstvena smotra, 1969).

Analyses of extract of cabbage leaf at technological maturity have shown the highest anti-oxidation activity. At technological maturity, the total amount of phenols in 'Varaždinsko zelje' is 0,94-1,03 mg/ml GAE, while the total amount of flavonoids is 0,15-0,25 mg/ml CE. The total phenol and flavonoid content in plants depends on genetic properties (genus, species, cultivar) and environmental and growing conditions, and correlates with antioxidant activity (D. Šamec et al., Antioxidant potency of white (*Brassica oleracea* L. var. *capitata*) and Chinese (*Brassica rapa* L. var. *pekinensis* (Lour.)) cabbage: The influence of development stage, cultivar choice and seed selection in: *Scientia Horticulturae*, 2011).

One advantage of 'Varaždinsko zelje' is its suitability for open-air cultivation. Thanks to its resistance to low temperatures, 'Varaždinsko zelje' can be left in the field until late autumn, which eliminates the need for extra storage. This allows for the dry matter and sugar content to keep increasing until the product has matured and is harvested. The specific closed-loop production method of 'Varaždinsko zelje', from the conservation variety seed to the final product, is an additional guarantee of its origin.

5.3. *Causal link between the geographical origin and, where appropriate, a given quality, the reputation or other characteristics of the product*

The high dry matter content and exceptionally high sugar content of 'Varaždinsko zelje' are due to the production method, i.e. the fact that the product, which can tolerate low temperatures, is left in the field until late autumn. Research has confirmed that the high total phenol and flavonoid content in 'Varaždinsko zelje' is due to the product's genetic properties, as well as environmental and growing conditions.

The monthly mean daytime temperatures during the growing period and the distribution of rainfall in the defined geographical area are ideal for the cultivation of 'Varaždinsko zelje', which has been grown commercially only in this area. The cold, snowless winters in the defined geographical area cause the soil that has been ploughed in the autumn to freeze. Besides encouraging the formation of friable soil, this also helps to suppress pest populations, resulting in very healthy plants.

The low-lying terrain of the Drava River basin plays a particularly vital role as it enables a steady supply of water to the production areas. In addition to the existing watercourses, the high underground water levels supply extra moisture to the areas where 'Varaždinsko zelje' is grown. The predominant soil type in the defined geographical area is brown, acidic and eutric loamy soil, which is conducive to the cultivation of vegetables, particularly cabbage. This is corroborated by the centuries-old tradition of cabbage growing in the area.

Factors other than climatic and pedological conditions adding to the specificity of the product include the oral heritage of local producers, handed down through generations with a view to preserving the autochthonous conservation variety from which 'Varaždinsko zelje' is produced. The skill of hand picking, the knowledge of when a cabbage head has matured enough to be harvested and the handing down of know-how related to cultivation and hand picking ensure that new generations of growers can continue to produce 'Varaždinsko zelje' in the traditional way. Hand picking is an essential step in the selection process that is done in the field and guarantees the consistent quality of 'Varaždinsko zelje'.

Its flexible and thin leaves along with its bitter taste with sharp notes make 'Varaždinsko zelje' a vital ingredient for the preparation of traditional local dishes.

Its origins and special status are borne out by the coat of arms of Vidovec Municipality, which features a 'Varaždinsko zelje' cabbage head.

Reference to publication of the product specification

(Article 6(1) second subparagraph of this Regulation ⁽²⁾)

<http://www.mps.hr/UserDocsImages/HRANA/VZ%20ZELJE/Izmijenjena%20Specifikacija%20proizvoda.pdf>

⁽²⁾ See footnote 1.