

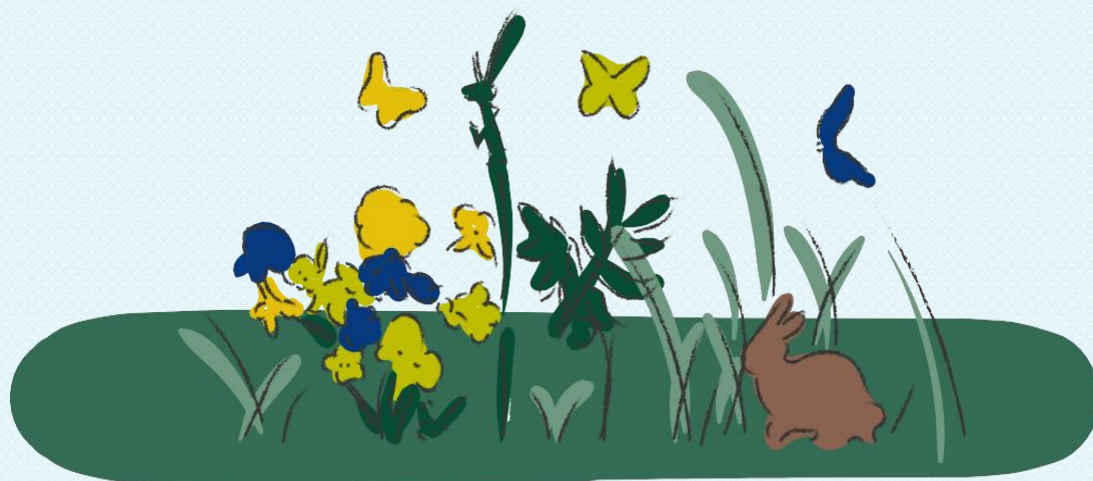
# PREPARATORY ACTION

## EU plant and animal genetic resources in agriculture

Compendium of projects

SLOVENIA

Ljubljanska ledenka



The publication is part of the study “Preparatory action on EU plant and animal genetic resources in agriculture”. The Preparatory Action has been initiated by the European Parliament and financed by the European Commission.

The objectives of the Preparatory action are to better understand the stakes of European neglected genetic resources in agriculture and to tap onto their economic potential.

It aims to provide inspiring examples of how to make the conservation of neglected breeds and varieties economically viable and encourage farmers and other stakeholders to engage.

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#### Legal notice

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## 1 Introduction



Ljubljanska ledenka is an autochthonous variety of lettuce which is part of national and cultural heritage in Slovenia. Its name derives from the capital of Slovenia, Ljubljana. The project “Ljubljanska ledenka” aims at preserving this vegetable variety, also registering it in the Slovenian National list of Varieties and/or in the Common Catalogue of Varieties of Vegetable Species of the EU (CCVVS).

## 2 Description of the genetic resource

Ljubljanska ledenka is an old Slovenian autochthonous variety of lettuce that has been grown and consumed in Slovenia for centuries. It originates from the region of Ljubljana (Trnovo, Krakovo quarter). During the 19th century, it was spread to Austria (Vienna, Graz) and to Czech Republic (Prague).



The original population of Ljubljanska ledenka is of “Batavia” type, with more or less evident red leaf edge. Ljubljanska ledenka is considered as an “umbrella variety”; some of the varieties that derived from it are included in the CCVVS, under synonyms Laibacher Eis 2, 3 and 4. All these varieties have a characteristic red leaf edge.

The lettuce selection process which took place in Slovenia over the past decades was oriented towards types without red leaf edge: the Ljubljanska ledenka variety was marketed as a “red leaf edge” lettuce, although the related typologies have never been inscribed in the CCVVS. Further selection of lettuce typologies without red leaf edge resulted in the Leda variety, the only one inscribed in the CCVVS. With the introduction of the Leda variety on the market, seed production for Ljubljanska ledenka ceased, resulting in the disappearance of both original red leaf edge varieties and green leaf edge varieties of Ljubljanska ledenka from the market.

## 3 Objectives of the project

Autochthonous variety Ljubljanska ledenka not only represents a part of Slovenian and Central European cultural heritage: it also has commercial potential, thanks to specific organoleptic features which are still sought by consumers.

The aim of the project was to identify the autochthonous lettuce variety Ljubljanska ledenka, which has some distinctive features compared to Leda variety and to all the other varieties registered in the National List of Varieties or CCVVS. The identification is relevant from an economic standpoint, as the variety is deemed to have an unexploited commercial potential.

## 4 Actors involved and roles

The Agricultural Institute of Slovenia is responsible for maintenance of the Slovenian Plant Gene Bank, which holds a collection of more than 200 lettuce accessions that were obtained through several germplasm collecting missions held in Slovenia from the early 1990s to the present days. These lettuce accessions were obtained from local markets, from farms with the help of the agricultural advisory service or through personal contacts with farmers, thanks to advertisements in newspapers and from collecting trips. Accessions were characterised, evaluated and multiplied: the seeds were stored afterwards.



## 5 Steps and activities undertaken

A total of 138 lettuce accessions from the Slovenian Plant Gene Bank and 17 accessions of Ljubljanska ledenka from other gene banks around the world were covered by the project. 38 morphological and phenological parameters were evaluated according to the International Union for the Protection of New Varieties of Plants (UPOV) descriptors for lettuce. 41 lettuce accessions which corresponded to the type of Ljubljanska ledenka were selected for further evaluation. The red leaf edge was observed in 7% of lettuce accessions from Slovenian Plant Gene Bank and in 80% of accessions from other gene banks worldwide. Based on the results of these evaluations, the most interesting accessions were selected for further characterisation, evaluation and selection.

## 6 Results to date

Through the collection of morphological and phenological data and through the results of the analyses made, it was possible to select some accessions of the variety Ljubljanska ledenka which differed from the variety Leda and from all the other varieties. Furthermore, one variety with green leaf edge was inscribed in the National list of Varieties as well as in the Common Catalogue of Varieties of Vegetable Species of the EU under the name Ljubljanska ledenka.

## 7 Next steps

It is planned to continue the research activities in order to select the Ljubljanska ledenka variety with red leaf edge, and to register it in the National list of Varieties as conservation variety. The results of the project will enable farmers to cultivate and market the original variety of Ljubljanska

ledenka, as well as to apply for direct payments through the environmental and agriculture program for conservation of genetic diversity.

## 8 Lesson learned and good practices

Slovenian autochthonous lettuce varieties are demanded on the market since both consumers and growers prefer them. Through the involvement of different stakeholders, the project created a successful network that will ensure the preservation of the Slovenian autochthonous variety Ljubljanska ledenka. International cooperation eased the search and repatriation process of lettuce varieties from foreign gene banks. Thanks to the project, the Slovenian autochthonous lettuce variety Ljubljanska ledenka as such will not disappear from the Slovenian market. This achievement is also important for the national program of agricultural biodiversity conservation.

Varieties selected or bred from autochthonous materials and populations represent not only national and cultural heritage but are also important for organic farmers and small gardeners. Biological diversity, diversity in crop quality and the conservation of traditional food are emphasised in these production models.

## 9 Participation to other projects and to networks/ Funding

In the light of the serious genetic erosion process which can be observed in Slovenia, national funds for research activities need to devote special attention to local vegetable genetic resources.

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