

PROJECT I.D.
1.1. Acronym: MAIZRF
1.2. Project title: Regeneration, characterisation and conservation of local maize varieties in the Basque Country
1.3. Financial backers: INIA and DAPA
1.4. Participating bodies: Misión Biológica de Galicia, E.E. Aula Dei (CSIC), CIAM Mabegondo, Cabildo de Tenerife
NEIKER DETAILS
1.5. Lead researcher: José Ignacio Ruiz de Galarreta (jiruiz@neiker.net)
Research team: Project coordinated with 5 Spanish centres
1.6. Start date: 1-1-2008
1.7. End date: 31-12-2010

Summary:

The main aim of the project is the multiplication, characterisation and establishment of a collection of autochthonous maize varieties from the Basque Country. The specific aims are:

- 1 – Characterisation and multiplication of maize varieties from Biscay and Alava
- 2 – Multiplication of already characterised maize varieties from Guipuzkoa
- 3 – Establishment of the collection of maize varieties from the Basque Country
- 4 – Creation of a database to be available on the NEIKER-Tecnalia website

A germplasm collection needs to be characterised correctly and documented for it to be useful to potential users. This makes it vital to complete the germplasm collections of zones that have not yet been sampled (Objective 1), to progress with the characterisation of the collections as new entries are added, to characterise the entries in large collections that have not been included in previous characterisations and to study new collections that have been created, such as those of the Canary Islands and the Basque Country. The participating centres have carried out several evaluations, in the framework of this and other projects, which have used the germplasm characterised and multiplied in them, leading to the publication of several articles. These results led to the creation of a Spanish core collection and the “European Union Maize Landrace Core Collection”, containing 24 Spanish populations, of which six correspond to EEAD, ten to MBG and eight to CIAM. The Basque Country and the Canary Islands collections were formed later, with significant contributions from NEIKER-Tecnalia and CCBAT, respectively.

These collections also need to be monitored with regard to the germination capacity and stocks of each entry and, when either of these parameters falls beneath a threshold, the entries affected should be multiplied (Objective 2.1). We also aim to study the effect of the environment on the quality, health and viability of sees (Objective 2.2). In addition, the new local varieties will have to be characterised within the framework of the new project (Objective 3).

Results and Impact:

The project will provide theoretical and practical results related to the conservation and primary characterisation of local varieties of maize, leading to conclusions that can be extrapolated to other species, as maize is a model species. As regards the practical results, the project will contribute towards conserving the Basque Country maize collection. In addition, the coordination of the five centres taking part will allow the varieties to be exchanged between them.

The most significant impact will be to enlarge the databases of the respective collections, something that will improve the potential of the material for later use by producers and improvers. The results relating to the effect of the environment on the quality and health of seeds will be directly applicable in the implementation of procedures that improve the conservation and multiplication of the germplasm.