

# THE GENERALITAT VALENCIANA'S COMBINED MODEL OF SEED BANKS TO ENSURE THE CONSERVATION OF NATIVE PLANT DIVERSITY AND LANDRACES (VALENCIAN COMMUNITY, SPAIN)

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## INTRODUCTION

The **Generalitat Valenciana** -autonomous government of the Valencian Community (Spain)- is one of the most advanced administrations facilitating plant conservation and ecological restoration in Spain. To ensure plant material for these, its **Department of Environment, Water, Infrastructures and Land**, collects and conserves most seeds, spores, and other plant propagation units, to be facilitated to final users (public administrations, private nurseries, conservation NGOs, landowners and farmers, etc.). This public service is maintained by two centres: **CIEF** (Centre for Forestry Research and Experimentation) and **CAEP** (Aquaculture Centre at El Palmar).

CIEF conserves seeds of terrestrial species, and CAEP is devoted to store seeds of aquatic plants and helophytes, as well as spores of pteridophytes. In both cases, there are both **active** and **base collections**, maintained at 0-4°C and -18 to -25°C, respectively.

The CIEF chambers conserve seeds at **orthodox** conditions. In the case of CAEP, most seed lots are maintained in **semi-orthodox** conditions, without complete desiccation. Both centres, combined with other units of Generalitat Valenciana, volunteers and collaborators, take care of the field collection of seeds or other plant diaspores.



## FUNCTIONS/PURPOSES

- **Forest Seed Bank:** To provide seeds for forestation works and ecological restoration.
- **Landraces Seed Bank:** To provide and exchange seeds to/with farmers.
- **Germplasm Bank of Valencian Wild Flora:** To ensure the conservation of rare, endangered and endemic species.



## RESULTS (see tab. 1)

In 2022, **5,571 seed lots of 1,060 species** and **208 landraces** were stored at the active collections (AC); the base collections (BC) stored **1,287 seed lots of 334 species** and **38 landraces**. Most contents are maintained at the CIEF conservation chambers (5,003 lots of 942 species at AC, and 1,241 lots of 306 species at BC). The Wildlife and Natura 2000 service, joining both their facilities at CIEF and CAEP, stores 4,254 seed lots (850 species) at AC and 896 lots (264 spp.) at BC, being one of the most important Spanish reservoirs of rare, endemic and endangered species (see specific poster). In all cases, viability and germination tests are made regularly, following the ISTA rules.

The Wildlife and Natura 2000 service seed banks provide regularly **duplicates** for the base collection of the Botanical Garden of the University of Valencia. For the case of landraces, the CIEF collection forms a part of the network of **landraces seed banks** set up by the Valencian network of Agricultural Experimental Stations (Department of Agriculture, Livestock and Fisheries).

**Table 1.** Seed collections depending on the Generalitat Valenciana's Department of Environment, Water, Infrastructures and Land. For acronyms, see text.

Centre	Collection Name	Collection type						Service/Unit
		Active			Base			
		Seed Lots	Species	Landraces	Seed Lots	Species	Landraces	
CIEF	Forest Seed Bank	1,025	167	-	353	53	-	CIEF
	Landraces Seed Bank	292	43	208	38	17	38	
	Germplasm Bank of Valencian Wild Flora	3,686	732	-	850	236	-	
CAEP	Germplasm Bank of Valencian Wild Flora	568	118	-	46	28	-	Wildlife and Natura 2000 Service
<b>SUM</b>		<b>5,571</b>	<b>1,060</b>	<b>208</b>	<b>1,287</b>	<b>334</b>	<b>38</b>	