

## DEVELOPMENT OF SITE- AND CULTIVAR-SPECIFIC CULTIVATION TECHNOLOGIES AS WELL AS THE PRODUCTION OF PATHOGEN-FREE PROPAGATING MATERIAL OF SWEET POTATO

### Practical problem

The consumers' increasing interest in sweet potato, one of the most important food crops in the world, is stimulating the farmers' interest for the plant in Hungary and in many European countries. Despite the growing production area, decades of practice and the general cultivation guidelines, however, domestic sweet potato production is currently unable to meet domestic needs in Hungary. This is due to the inadequacy of yield and yield stability, that is caused by the inappropriate choice of technology and the use of propagating material, often of uncertain origin and not tested for pathogens.



### Partners

University of Szeged	project leader,
• Faculty of Agriculture	research institution
National Agricultural Research and Innovation Centre	research institution
• Department of Field Crops Research	
• Vegetable Crop Research Department	
Zoltán Gombos	young farmer
Zsolt Gombos	farmer
Richárd Nagy-György	farmer
Dr. János Pauk	expert, researcher
Zoltán István Privóczi	consultant

### Project

#### Objectives

Development and publication of site- and variety-specific technology guides covering all important aspects of cultivation, supported by experimental results, which can contribute to the integration of sweet potato into the traditionally cultivated crops of Hungary. Variety-specific adaptation and integration of the *in vitro* micropropagation method into the domestic propagating material production, establishment of a propagation material production system tested for pathogens essential for efficient cultivation. Establishment of an *in vitro* gene bank from certified and other sweet potato genotypes in Hungary. Technological recommendation for the utilization of foliage, the by-product of cultivation, as animal feed.

#### Expected results

Eliminating yield stability problems, increasing yield of sweet potato. Developing the utilization of foliage as forage. Establishing a pathogen-free propagating material production system.

#### Initial experiments

Cultivation technology experiments (planting method and time, plant density, fertilization, irrigation method, etc.)  
Plant pathology examinations  
*In vitro* micropropagation with multiple genotypes  
Examination of foliage composition from the feeding point of view

#### Implementation period

(01.09.2018) 30.09.2019 – 30.11.2021

Total budget:

73 176 126 HUF

Supported budget:

59 026 121 HUF