

# LIBBIO

Lupinus mutabilis for Increased Biomass from marginal lands and value for BIOrefineries

## Summary

The Andean lupin has long been grown in Ecuador, Peru and Bolivia. These plants are also suitable for cultivation in Europe, where they can thrive on what is currently marginal land. The LIBBIO project will aim to increase the crop yield and the percentage of lupin beans in the overall harvest weight (known as the 'harvest index').

Once adapted for European conditions, these plants will offer the potential – by applying bio-refinery cascading principles and modern crop breeding technologies – to produce food, animal feed and bio-energy products.

LIBBIO will also aim to establish consumer demand by developing a number of products, including food applications (based on lupin oil and seed protein) and some cosmetic uses. The project will also seek to accelerate development of the supply chain for lupin-derived products.



<http://www.libbio.net/>

**Type of Action:**

Research & Innovation Action

**Value Chain:** VC3 – agro-based

**Start date:** 01 October 2016

**End date:** 30 September 2020

**BBI JU contribution:** € 4,923,750.00

## Objectives

The objective of this project is to develop consumer food, feed, non-food and bio-energy products from Andean lupin varieties (*Lupinus mutabilis*) adapted to European farming conditions by applying bio-refinery cascading principles for crop value creation and modern crop breeding technologies. LIBBIO aims to increase crop yield and harvest index and accelerate supply chain development via a consumer-driven approach for developing high value-added food and non-food products by applying state-of-the-art solvent-free technology for raw material processing.

## Expected impacts

The impact of LIBBIO will consist of several dimensions

- Benefits for the participating partners,
- Economic benefits for farmers and the whole supply chain,
- Environmental benefits and benefits on a European level resulting from LIBBIO's outcomes.
- Contribution to a sustainable low-carbon economy and increasing economic growth and employment, in particular in rural areas, by developing sustainable and competitive biomass industries in Europe based on strong demand from different types of biorefineries and highly increased biomass supply from marginal lands.

- Innovation Center Iceland (Iceland)
- Hanze University of Applied Sciences (The Netherlands)
- Wageningen University (The Netherlands)
- German Institute Food Technologies Quakenbrück (Germany)
- Louis Bolk Institute (The Netherlands)
- Color&Brain BV (The Netherlands)
- Consejo Superior de Investigaciones Científicas - CSIC (Spain)
- Instituto Superior de Agronomia, Universidade de Lisboa (Portugal)
- Agricultural University of Athens (Greece)
- Soil Conservation Service of Iceland (Iceland)
- The University of Agricultural Sciences and Veterinary Medicine Iași (Romania)
- VANDINTER SEMO BV (The Netherlands)
- LUSOSEM Produtos para Agricultura, S.A. (Portugal)
- Agricultural Research and Education Center Raumberg-Gumpenstein (Austria)

## Project coordination

**Name:** Páll Árnason

**Organisation name:** Innovation Center Iceland (Iceland)

**Phone:** +354 522 9177