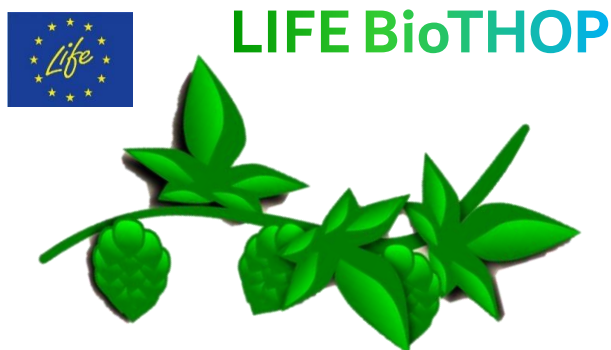


## PUBLIC STATEMENT

### LIFE BioTHOP – BioTwine HOP waste transformation into novel product assortments for Packaging and Horticulture Sector

“With the contribution of the LIFE Programme of the European Union”



Žalec, 17<sup>th</sup> of July 2019

The Slovenian Institute of Hop Research and Brewing (IHPS) with partners from 5 EU states is starting with a European co-funded project LIFE BioTHOP to introduce a 100 %biodegradable, recyclable and compostable twine into hop fields, as an environmentally friendly alternative to polypropylene twines, which are in use nowadays and which degradation in the nature can take up to 450 years. To fulfil the requirements of the circular economy, the project partners are aiming to use the hop biomass after harvest and, together with this new twine, produce new bioplastic products in horticulture, agricultural and plastic packaging sectors.

On the European level, there are 50.000 tonnes of hops produced on a surface of 26.500 ha. Slovenia produces nearly 2.800 tonnes on 1.590 ha annually and is currently ranked as the 3<sup>rd</sup> EU's largest hop producer, and the 5<sup>th</sup> in the world. The hop agricultural sector is the largest exporter in agricultural segment in Slovenia, therefore it also has a great meaning for Slovenia's international visibility. Hop training systems in Europe are still based on wire or polypropylene (PP) twine trellises, usually guided for about 6-7 meters above the ground on a regular arrangement of wooden or concrete poles. The hop biomass after harvest yields up to 15 tons/ha (fresh matter) per season. Nevertheless, the PP twine mixed with hop's plants cannot be properly composted or recycled, only landfilled. IHPS has already been trying to find a technical solutions and alternatives for PP twines. LIFE BioTHOP project will assure besides a better solution to the PP twine, adding tangible value to the industry by hop waste upcycling.

The object of this project is to replace the PP twine on the hop fields with the biotwine made of natural material polylactic acid (PLA), that can be degraded by composting to simple monomers (H<sub>2</sub>O, CO<sub>2</sub> and biomass). Hop plant biomass after harvest can be used as main ingredient of composting and afterwards used as a natural fertiliser or material to produce biodegradable products (bio-composites, planting pots, packaging trays). Therefore, the agro-waste can be drastically reduced and the economy of the sold agro-waste to bioplastic producers can be increased. The demo region, which is Lower Savinja valley in Slovenia) will be an example of good practice for all hop-growing regions not only in EU but also across the world. The project will also benefit in socio-economic value as it can improve the green or so called eco-tourism.

The goal is to completely upcycle the hop waste and to improve energetic efficiency by 25 % by using the biopolymeric composites. Considering the emission of the greenhouse gasses there should be 6-fold reduction compared to conventional plastic production.

BioTHOP Consortium forms a transnational partnership, comprised of 7 partners from 5 EU Member States: Slovenia, Portugal, Spain, Germany and Czech Republic. **Slovenian Institute of Hop Research and Brewing**, acting as Coordinating Beneficiary, runs its principal functions on research, advisory services and green managing procurements for sustainable hop-growing industry. Portuguese **Lankhorst Euronete Group**, in charge of development of home compostable PLA twine for hop-growing sector. German **Zelfo Technology** will develop a technology to reengineer hop waste fibers to be usable in fiber pulp moulding applications and extrusion compounding transforming processes. **TRIDAS** from Czech Republic will take the lead of the piloting action on hop-waste fiber transformation into pulp moulded packaging products. Spanish **Tecnopackaging** will lead the development and production of hop fiber PLA compounds for injection piloting and replication on extrusion blow moulding for the production of films from BioTHOP materials. Tecnopackaging's prepared materials will be used by Slovenian company **TECOS** to perform an action on injection moulding of plating pots for horticulture, in particular for hop seedlings cultivated by IHPS. The 3<sup>rd</sup> Slovenian partner is **Development Agency Savinja** that unites 6 municipalities of Lower Savinja Valley, demo region of the project and the largest hop-growing region of Slovenia. Their presence will stimulate the active hop-growers involvement, disseminate, exploit and transfer the project results regionally and transnationally.

The first meeting of the Consortium was held on 17<sup>th</sup> of July 2019 in the Slovenian town of Žalec. The meeting was followed by a visit to the Ecomuseum of hop-growing and the world's attraction- Beer Fountain.

**The LIFE programme is the EU's funding instrument for the environment and climate action created in 1992. The current funding period 2014-2020 has a budget of €3.4 billion .The EU LIFE Programme provides funding opportunities for the support of Environment, Nature Conservation and Climate Action projects throughout the EU. The maximum EU co-financing rates for projects are 55%, 60% or 75%, depending on the project topic.**

