BioTHOP LIFE18 ENV/SI/000056

BIOTWINE HOP WASTE TRANSFORMATION INTO NOVEL PRODUCT ASSORTMENTS FOR PACKAGING AND HORTICULTURE SECTOR

The object of this project is to **replace the polypropilene twine on the hop fields with the biotwine made of polylactic acid** (PLA) which is produced from renewable resources, and that can be degraded by composting into water, CO_2 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.

LIFE BioTHOP (starting in July 2019, ending in June 2022) will **introduce a 100 % 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**.

The project is coordinated by the Slovenian Institute of Hop Research and Brewing and consist of 6 more partners from 5 EU states: Portuguese Lankhorst Euronete Group, German Zelfo Technology, TRIDAS from Czech Republic, Spanish Tecnopackaging, Slovenian Technological centre TECOS and Development Agency Savinja.

"**The LIFE BioTHOP project has received funding from the LIFE Programme of the European Union.**"
It is cofinanced by the Ministry of the Environment and Spatial Planning, municipalities Braslovče, Polzela, Prebold, Tabor, Vransko, Žalec and Association of Slovenian Hop Growers.

Find us on: www.life-biothop.eu

INŠTITUT ZA HMELJARSTVO IN PIVOVARSTVO SLOVENIJE
Slovenian Institute of Hop Research and Brewing
Lankhorst|Yarns
Razvojna agencija Savinja
Zelfo TECHNOLOGY
TRIDAS
Tecnpackaging

BioTHOP LIFE18 ENV/SI/000056

VPELJAVA BIORAZGRADLJIVE VRVICE V SLOVENSKA HMELJIŠČA IN UPORABA ODPADNE HMELJEVINE V NOVIH INDUSTRIJSKIH PRODUKTIH

Cilj projekta BioTHOP je **zamenjati hmeljarsko polipropilensko vrvico z vrvico iz vrvice iz polimlečne kisline** (PLA), ki je narejena iz naravnih materialov in se pri kompostoranju razgradi na vodo, CO_2 in biomaso, in s tem **spremeniti hmeljevino v primarno surovino za izdelavo komposta na kmetijah (gnojilo) ter vrsto biorazgradljivih izdelkov** (biokompozitni materiali, sadilni lončki za vrtnarstvo, ter pakirni zabojčki/pladnji), s čimer se bo količina agro-odpadkov v občinah Spodnje Savinske doline bistveno zmanjšala, povečal pa se bo prihodek (prodaja odpadne hmeljevine kot vir primarnih surovin za bioplastično proizvodnjo). Spodnja Savinjska dolina bo na ta način postala primer dobre prakse tudi za vsa ostala hmeljarska območja, ne samo v EU, pač pa tudi v svetu, sočasno pa se bo povečala njena dodana socio-ekonomska vrednost, npr. zeleni turizem. Projekt sledi modelu **krožnega gospodarstva s ciljem zvišanja stopnje predelanih odpadnih produktov iz hmeljarske panoge za 100 %**, izboljšano energetsko učinkovitostjo za 25 % preko zamenjave nerazgradljive plastike z biopolimernimi alternativami, medtem ko bodo emisije toplogrednih plinov, v primerjavi z zdajšnjimi dejavnostmi predelave sintetičnih plastičnih proizvodov bistveno zmanjšane.

S projektom LIFE BioTHOP, ki se je začel julija 2019, trajal pa bo do junija 2022, bomo v slovenska hmeljišča **uvedli novo bioplastično vrvico, 100 % biorazgradljivo, reciklabilno in kompostabilno**, ki predstavlja okolju prijaznejšo alternativo trenutno množično uporabljeni polipropilenski vrvici, ki se v okolju razkraja tudi do 450 let. Da bo zgodba zaokrožena, partnerji projekta stremimo k celovitem izkoristku odpadne hmeljevine za nove bioplastične proizvode v hortikulturnem, kmetijskem in plastično embalažnem sektorju.

Koordinator projekta je **Inštitut za hmeljarstvo in pivovarstvo Slovenije**, konzorcij pa sestavlja še 6 partnerjev iz 5 EU držav: **Lankhorst Euronete Group** iz Portugalske, **Zelfo Technology** iz Nemčije, **TRIDAS** iz Češke Republike, **Tecnopackaging** iz Španije, ter Razvojni center **TECOS** in **Razvojna agencija Savinja** iz Slovenije.

Projekt je sofinanciran v okviru programa LIFE Evropske Unije,
s strani Ministrstva za okolje RS,
občin Spodnje Savinjske doline (Braslovče, Polzela, Prebold, Tabor, Vransko in Žalec) in Združenja hmeljarjev Slovenije.

Spletna stran projekta:
www.life-biothop.eu