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PRESS RELEASE

1st July 2021

LAUNCH OF A MULTI-FUNCTIONAL PILOT AGRIVOLTAIC INSTALLATION BY INSOLIGHT, ROMANDE ENERGIE AND AGROSCOPE

Insolight **and its partners** ***Romande Energie*** **and** ***Agroscope*** **will be building a highly innovative solar installation on Agroscope's Conthey site in the canton of Valais with the aim of testing a new agrivoltaic solution (insolagrin). This pilot project was supported by the Swiss Federal Office of Energy (*OFEN*). The insolagrin solution, which proposes the replacement of the protective tunnels used in farming, combines agriculture with the production of renewable energy. At the same time, the pilot project aims to measure the potentially positive impact of the installation on agricultural yield whilst ensuring satisfactory energy production. Significant results would pave the way for unprecedented solar deployment, with no additional footprint on the land.**

Designed by the Renens-based startup Insolight, the *insolagrin* agrivoltaic system incorporates THEIA (Translucency & High Efficiency in Agrivoltaics) solar modules offering a revolutionary combination of translucency and high electrical efficiency. Combining two usage modes based on Insolight's optical micro-tracking technology, these modules focus light on high-efficiency solar cells. When aligned, the optical system can generate energy (E-MODE), but it is also possible to unalign it to 'leak' the light (MLT-MODE). The solar modules therefore act like a 'smart' shade adjusting the amount of light they let through. They enable the optimisation of plant photosynthesis over the seasons and help reduce the negative impact of hot summer temperatures on the yield and quality of agricultural products, whilst recovering the remainder of the light in the form of electricity.

From July 2021, these solar modules will be installed over strawberry and raspberry crops at Agroscope's experimental centre in Conthey as replacements for protective polytunnels. Bringing together members from Insolight, Romande Energie and Agroscope, the project team aims to demonstrate that it is possible to efficiently combine agricultural production and electricity generation on the same site, using a dual-purpose agricultural and photovoltaic structure. The results collected will also help to assess the cost-efficiency of this type of installation and to clarify its financial prospects. The solution backed by the Swiss Federal Office of Energy (OFEN) will be tested for four years on a surface area of 165m^2, designed to provide meaningful results allowing future large-scale deployments to be planned.

"The cultivation of berries and small fruits under cover allows fruit yields and quality to be improved whilst reducing pressure from a majority of fungal diseases" commented Bastien

Christ, Head of the 'Berries and Medicinal Plants' Research Group at Agroscope. "This agrivoltaic structure was created with the aim of replacing and improving the protective and shading functions of the umbrella tunnels we use over strawberry and raspberry crops, without obstructing agricultural activity."

New prospects for the berry sector and solar energy

Switzerland's energy strategy envisages achieving carbon neutrality by 2050. Swissolar considers a massive expansion of solar energy to be the only solution for achieving these objectives[1]. It is estimated that at least 1.5 GW_p will have to be added per year (30 GW_p by 2050), i.e. four to five times the level of current deployment. Combining solar energy generation with the agricultural use of land, agrivoltaics represents a burgeoning trend in Europe which could take off in Switzerland if the pilot project confirms the expectations of its promoters.

Insolight's new-generation photovoltaic technology differs from conventional opaque rooftop solar panels. Their solution becomes an agricultural tool for the benefit of plants: *"Dynamically adjusting the light transmitted to the plants paves the way for increased protection from climate variations and possible increases in crop yields thanks to the matching of the light to the needs of the plants and the lowering of the temperature during heat waves via the shading effect"* explained Mr. Christ.

Through its focus on crops requiring protective structures (polytunnels or greenhouses), the *insolagrin* solar installation does double duty by replacing these existing structures. It also allows us to avoid the use of plastics and to optimise land use.

"*If the results obtained are significant, this innovation could have great potential. Replacing existing structures with solar structures in agricultural areas would complement rooftop solar deployment, and thus hasten the pace of decarbonisation in Switzerland*" explained Martial Genolet, Photovoltaic Business Manager at Romande Energie.

The *insolagrin* solution could ultimately lead to an economic gain, thanks to its simultaneous optimisation of agricultural production and energy generation.

The project is supported by the Swiss Federal Office of Energy's pilot and demonstration programme.

You'll find more information on the pilot project in the brochure attached to this press release (Conthey *insolagrin* pilot project flyer).

[1] https://www.swissolar.ch/fr/services/medias/news/detail/n-n/bfe-studie-schweizer-solarpotenzial-groesser-als-benoetigt/

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About Insolight

A startup based in Lausanne, Switzerland, Insolight is developing a new generation of solar modules, opening up new deployment opportunities in a high-growth solar market. The patented technology is based on an optical concentration system combining high efficiency and translucency. Insolight focuses on the design and the sale of related products and services, whilst the manufacture of the modules is outsourced to an assembly company (currently in Switzerland).

Insolight has obtained various technical validations in recent years. In 2016, Fraunhofer ISE confirmed a record 36% efficiency on a laboratory mini module. In 2018, the module was validated on a rooftop installation by IES-UPM (Solar Energy Institute of the Polytechnic University of Madrid) at 29%. In September 2019, the company was awarded the H2020 HIPERION project (€ 10.6 million, in consortium) to construct a pilot assembly line.

Insolight is seeing strong market traction in agrivoltaics, where the adjustable translucency of the THEIA modules offers a key differentiation with respect to conventional modules. Based on high-efficiency silicon solar cells (20% under CSTC), these modules allow the amount of transmitted light to be adjusted whilst recovering the excess in the form of electricity. The aim is therefore to install the solar modules over crops in order to optimise agricultural production whilst generating electricity. The insolagrin solution, which includes the modules and their control, thus has strong potential for replacing protective growing tunnels or greenhouse shading systems.

In July 2020 Insolight closed a Series A (CHF 5 million) financing round for placing the first 1,000 modules on the market, led by Investiere (Verve Capital) and other investors based in

Switzerland. At present, the team consists of more than 15 individuals with a strong expertise in R&D and sales, as well as 15 industrial partners. The company's long-term goals are to open up new areas for the deployment of photovoltaics and to help achieve a reduction in the number of megatonnes of CO^2 emitted.

For more information on Insolight, go to:
www.insolight.ch

The Romande Energie Group in a nutshell

A key power producer and the number-one electricity supplier in French-speaking Switzerland, the Romand Energie Group offers numerous sustainable solutions in fields ranging from power distribution and generation to energy services, energy efficiency and electromobility.

Working in tandem with customers, investors and partners, the Group aims to contribute to a better quality of life, through its own 100%-renewable production, its innovative services and its Corporate Social Responsibility policy. Romande Energie is also committed to providing high-quality services and ensuring reliable day-to-day provision, thereby meeting the expectations of its customers and supporting French-speaking Switzerland during the transition to a decarbonised energy system.

Romande Energie is always in search of innovative solutions that support decarbonisation in Switzerland. Through its investment in the insolagrin *pilot project in Conthey, the Group provides expertise as an energy producer and serves as a key contact for agrivoltaics, contributing to the boom in alternative infrastructures.*

For more information on the Romande Energie Group, go to:
www.romande-energie.ch

About Agroscope

Good food, healthy environment: as the Swiss federal centre of excellence for research and development in the field of agriculture, food and the environment, Agroscope develops

solutions for the benefit of a sustainable agriculture and food sector. Affiliated with the Federal Office for Agriculture, Agroscope is spread out over a number of sites across the whole of Switzerland. Research is conducted along the entire value chain of the agriculture and food sector, from farm to fork. Fields of research include plants, animals, food, the environment and competition. With its systemic research, Agroscope makes an important contribution to a competitive and sustainable agricultural sector and to a healthy diet with high-quality foodstuffs and an intact environment, for the benefit of society, decision-makers and practitioners.

Swiss berry production has been rising steadily in recent years. Advances in growing techniques have contributed greatly to this trend, as well as to an improvement in fruit quality. To face the various challenges of the future, production techniques must be optimised in order better to respond to the demands of consumers and producers and to meet sustainability criteria. The 'Berries and Medicinal Plants' Research Group develops and tests new approaches for reducing residues on fruits, promoting their eating and nutritional quality and increasing the diversity of the berries. In addition, the optimisation of production techniques aims to improve crop profitability and resource efficiency (water, nutrients, energy) whilst bearing in mind climate change. The insolagrin solution is therefore part of the optimisation of under-cover small-fruit and berry production systems and aims to increase their resilience in the face of climate change. The main agronomic objective of the Conthey *insolagrin* pilot project is to demonstrate that the dynamic shading provided by THEIA panels can improve the yield and quality of small fruits during summer heat waves, whilst generating electricity.

For more information on Agroscope, go to:
www.agroscope.ch

insolagrin @ Conthey (VS)

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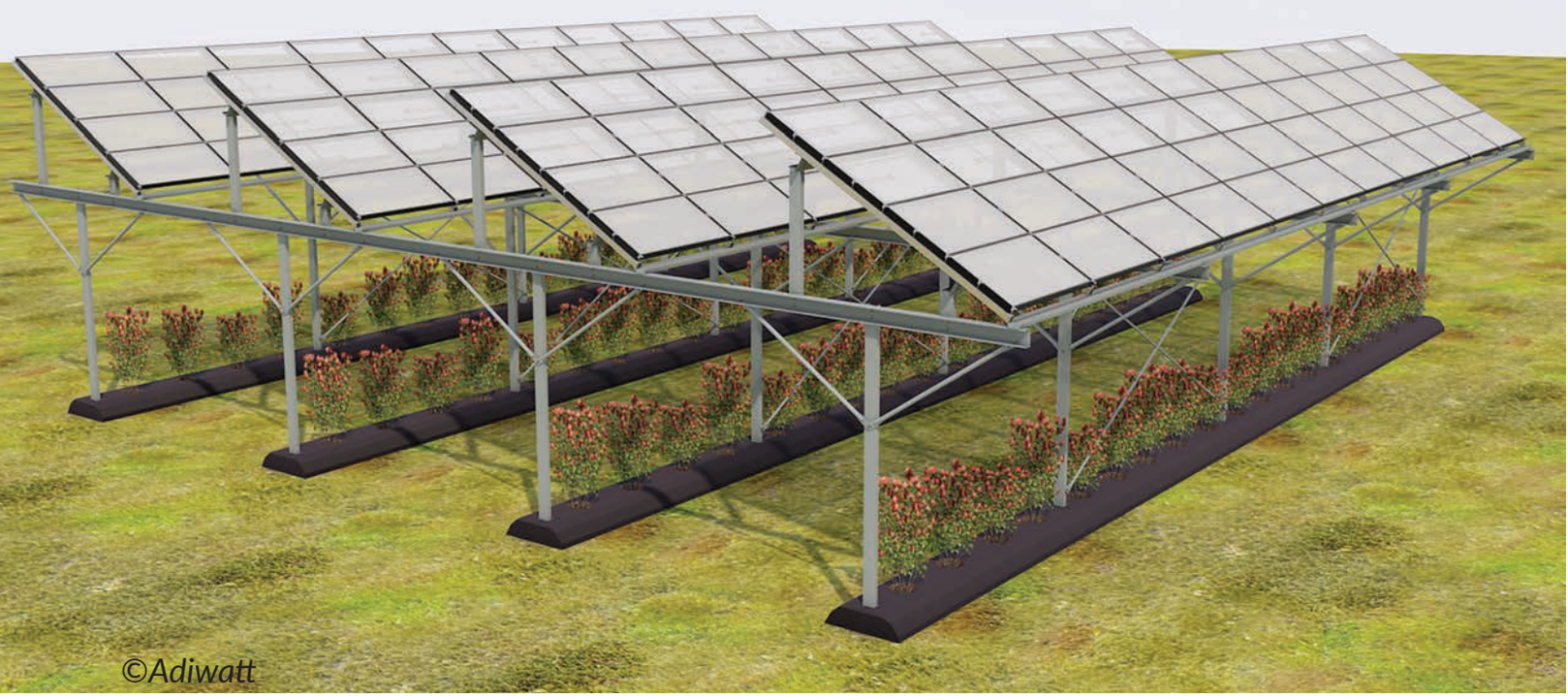

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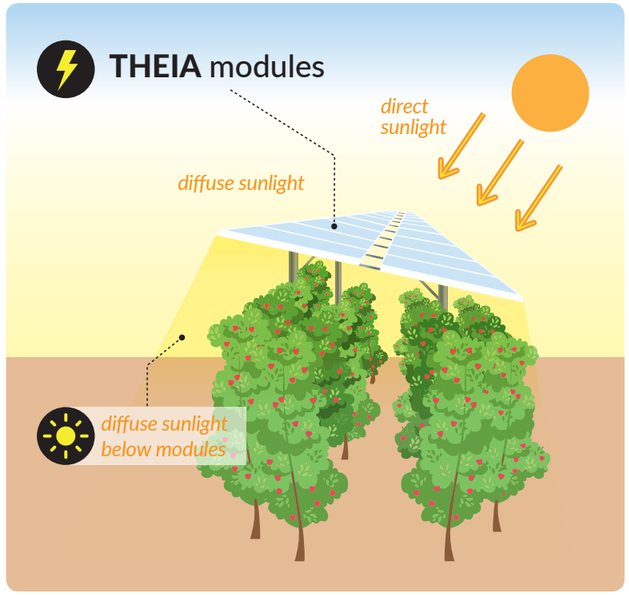
PROJECT IN BRIEF

insolagrin – Conthey (VS) is a 165 m^2 agrivoltaic pilot installation that will demonstrate the replacement of agricultural plastic tunnels by solar modules. The pilot will be installed on top of raspberries and strawberries in Conthey (VS), at the heart a major fruit production region in Switzerland.



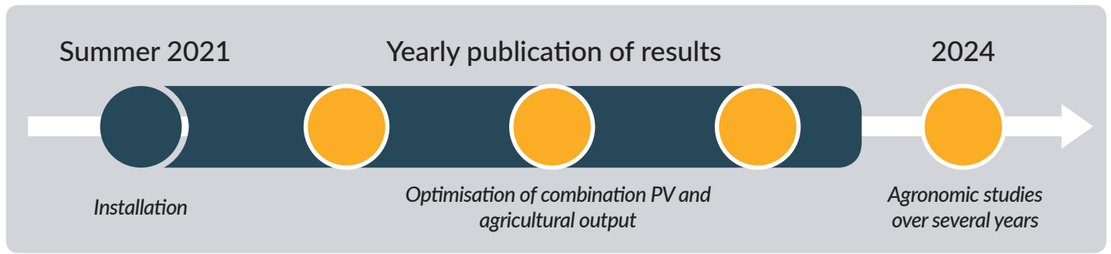
More than a simple solar installation, insolagrin is a new tool for farmers. It enables dynamic adjustment of light, optimizing crops' growth over seasons and variable climatic conditions. The excess sunlight is harvested into electricity, enabling a dual use of land – without tradeoffs.

The project is led by 3 partners, who combine key areas of expertise. Insolight will provide the solar modules and the control system based on the THEIA technology, combining efficiency and adjustable translucency. The energy output will be quantified by Romande Energie, a solar energy producer of reference in Switzerland. The impact on crop yield and quality will be assessed by Agroscope, the Swiss federal centre of excellence for research and development in the agriculture, food and environment sector.

The project supported by the Swiss Federal Office of Energy (SFOE) is starting in June 2021 and will last 4 years. The detailed energy yield and agronomic results will be instrumental to open large deployments: Berries alone represent > 220'000 Ha in Europe - equivalent to a > 300 GW_p potential.

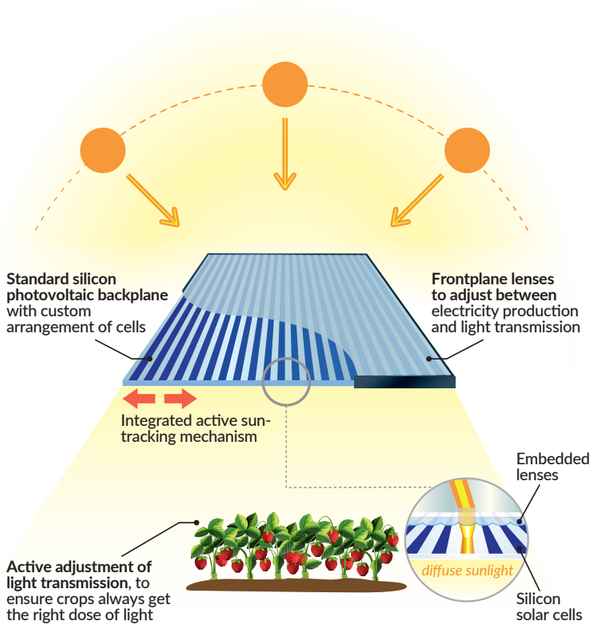
PROJECT KEY FACTS

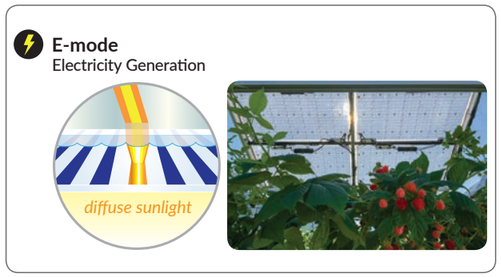
Location	Conthey, Switzerland
Crops	Raspberries and strawberries
Agrivoltaic surface	165 m2
Solar capacity	18 kW_p
Energy produced	Up to 18'000 kWh per year
Agricultural yield	Up to 2'400 kg per year

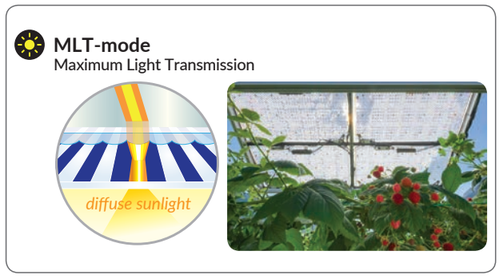


THEIA TECHNOLOGY

Insolight's solar modules are based on the THEIA technology (Translucency and High Efficiency in Agrivoltaics). They provide dynamic shading on static structures.

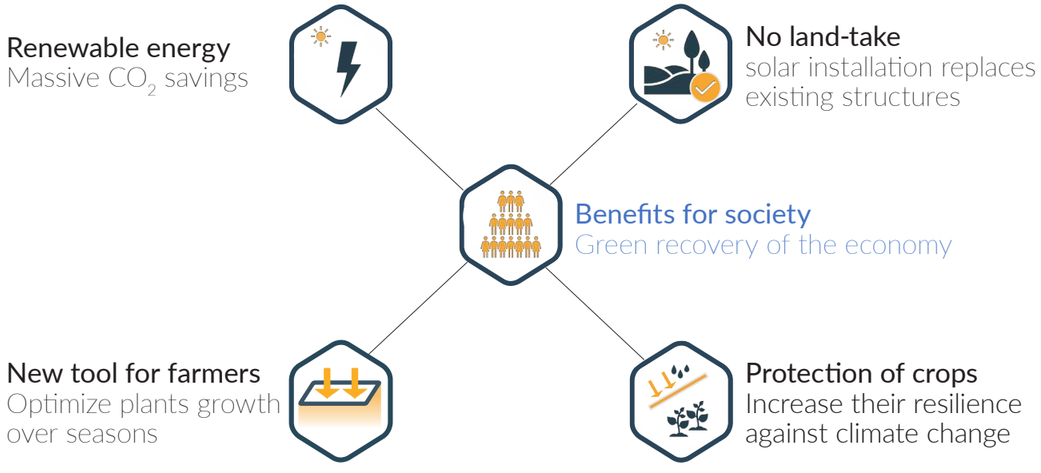






IMPACT

There is an increasing competition for land between food production and solar power. This project aims to solve this dilemma, by leveraging the use of solar modules as shading systems.



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