



EDEN ISS R.U.C.O.L.A. – Rack-like Unit for Consistent on-Orbit Leafy crops Availability

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Category B – Indirect Exploitation of Exploration results in other sectors

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EDEN ISS Mobile Test Facility (1) deployed in Antarctica Neumayer III station, RUCOLA system (2), Future Exploration Greenhouse (3)





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Given the different **challenges of the space environment**, such as **tight control** of the product quality and **low availability of in situ resources** , the study of the EDEN ISS **space greenhouse prototype** led to the **development of innovative solutions** in fertigation strategies, illumination, microbial control as well monitoring technologies, all applicable also in terrestrial controlled environment agriculture.

EDEN ISS technologies, **mainly optimizing product quality**, have already been developed aiming at terrestrial technology transfer **for high value crops** and plants production as well as **scientific activities**. The advantage is the possibility to reduce resources consumption as well as use of harmful chemicals while providing more controlled quality
The potential customers are identified as **private as well as public sector** organizations all around the world.

The technologies are being currently tested in Antarctica analog environment.

Once the set of technologies will be validated, **teaming up with companies related to earth controlled environment agriculture will be necessary** to industrialize the developed products.

The main potential **benefit for the citizens** are the availability of **crops of higher quality** with respect to both nutritional contents as well as harmful chemicals presence.