



Solaris tobacco crop, Photo Credit: Sunchem

## Summary

Started in the Limpopo province in South Africa, Project Solaris is laying the basis for a new regional biojet fuel supply chain. Sunchem South Africa (SA) utilizes RSB certification as a way to improve its Solaris technology while proving it respects various sustainability criteria.



## About Project Solaris

Sunchem Holdings is a research and develop company operating in the sector of genetic and recombinant DNA applied to plants for energy and human purposes. Sunchem SA is a joint venture between Sunchem Holdings and an international group of investors. Sunchem SA and SkyNRG teamed up to scale the energy rich tobacco crop “Solaris” in South Africa, and is supported by Boeing and South African Airways.

## Sunchem SA’s Approach to Sustainability

Solaris or “energy rich tobacco”, is a cross-bred (hence GMO-free) variety of tobacco that contains no nicotine and that produces more seeds and less leaves than traditional tobacco. Solaris yields significant amounts of vegetable oil, press cake and woody and green biomass and thus provides opportunities to grow sustainable bio-energy resources in the region while stimulating socio-economic development in the Limpopo province.

Additionally, Project Solaris is a pilot for a smallholder program initiated by Boeing, South African Airways and RSB to expand opportunities for smallholder farmers to grow crops that produce sustainable biofuels. The program is set up to help farmers with small plots of land to certify their products and gain access to markets for sustainable biofuels and biomaterials.

One advantage of the Solaris crop is that all agronomic inputs it needs, such as fertilizer, water, crop protection etc. are similar to traditional tobacco farming, and hence the local communities are already familiar with the farming protocols. As a new crop with a variety of co-products, Solaris gives farmers access to new and diverse markets; from fuel to various kinds of animal feed to a feedstock for the paper and pulp industry. It’s an alternative crop for both commercial and smallholder tobacco farmers, particularly as there is a global over-supply of tobacco presently.

Solaris has a much lower input cost than traditional tobacco, making obtaining finance for farming less problematic, particularly for smallholder farmers. Also, up to three harvests means farmers could expect an income throughout the season, instead of a once-off at the end of the season. There is an opportunity for farmers to form cooperatives and thus participate in the processing of Solaris.

### Fact File:

*Operator Name:*  
Sunchem Biofuel  
Development South Africa

*Website:*  
<http://www.projectsolaris.co.za/p/partners.html>

*Country:*  
South Africa

*Operator Type (s):*  
Feedstock Producer

*Feedstock Type:*  
Solaris Seed Tobacco

*Biomaterial Type:*  
Biojet fuel

*Date of RSB Certification:*  
2015-08-05



Farmers working in the Solaris tobacco fields,  
Photo Credit: Sunchem

## Why Sunchem SA Chose RSB for Project Solaris

By involving the RSB from the start, Project Solaris ensured the incorporation of the RSB standards into the development and up-scaling protocols. Consequently, when it comes to the food versus fuel debate, Joost van Lier, Managing Director of Sunchem SA says “having to undergo a systemic process of evaluating the social and environmental ramifications of this development as prescribed by the RSB has allowed us to feel confident in promoting Solaris, not only as a financially viable crop for farmers in the region, but also one that will not affect food security or lead to environmental degradation.”

Furthermore, Sustainable Aviation Fuel Users Group (SAFUG) members have played a leadership role – and sent a positive market signal – by indicating their support for the RSB. Indeed, Maarten van Dijk, CEO of SkyNRG says “SkyNRG, as one of the main founders of Project Solaris, believes that the RSB standard should play a central role in the aviation sectors’ efforts to develop truly sustainable jet fuel supply, meeting environmental and social safeguards. By receiving RSB certification, Project Solaris is achieving an important milestone for itself and for the aviation industry as a whole.”

## How RSB Helped Their Business

As part of its RSB certification, Project Solaris conducted a carbon lifecycle analysis which showed that Project Solaris meets RSB’s minimum CO<sub>2</sub> life cycle reduction threshold of 50%. These findings, supported by the RSB certification process, and the smallholder pilot have helped Project Solaris position itself as a novel feedstock viable for local farmers but also environmentally respectful of the region’s natural environment.

Not only does the certification boost Project Solaris’s recognition as a sustainable feedstock but it also gives the company greater access to the aviation industry as RSB certification is crucial for many biojet fuel clients.

RSB certification not only gives farmers market access to the aviation sector but also to other sectors that value being able to clearly benchmark the sustainability of the products it uses. Particularly in South Africa, where a national carbon tax and bio-fuel blending mandate are likely to be enforced in the near future, the certification of the farmers will enable biofuel producers to be confident that the feedstock in question is able to meet the emissions requirements necessary to be part of those programs.

“The RSB certificate is a key factor for our company and development process,” said Sergio Tommasini, CEO of Sunchem Holding. “With RSB, we proved our Solaris technology under different aspects respecting sustainability criteria. Thanks to all partner efforts, we earned this important certificate. RSB believed in our technology and gave us the right advice to improve it during our scale up program.”

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