

CIRCO



Bio4Pack Rice straw packaging

'Our company turns worthless waste into valuable raw materials and products, which can be recycled and composted after they are used.'

- Patrick Gerritsen, Bio4Pack
Participant in the CIRCO Track



Challenge

Harvesting and processing rice leaves behind rice straw. To get rid of this straw, the cheapest and fastest way is to burn it on the rice fields. This process creates huge clouds of smog, threatens local biodiversity and evaporates precious water on the rice fields. Farmers ignore these drawbacks for lack of an alternative, since they only have limited time to prepare their land again for new cultivation and they consider rice straw to be useless waste anyway. At the same time, an increasing amount of plastic packaging is used in the Netherlands to conserve fruit and vegetables better, improve their presentation or keep them together. While consumers and government bodies pay growing attention to the problems created by plastic waste, supermarkets are looking for ways to reduce their use of plastic packaging.

Circular design strategy

Bio4Pack and PaperWise are producing packaging made from rice straw whose properties are identical to pulp or cardboard packaging. Their packaging enables the replacement of plastic dishes with biodegradable dishes that can be recycled through paper collection, both for consumers and for the industry. Dutch technology is used locally, as this packaging is manufactured in the country of origin. Even including transport to the Netherlands, the environmental impact of these products is 75% less than similar plastic packaging.

Circular business model

Rice farmers have an incentive to sell their straw, because burning it is officially illegal and their waste will now be worth money. By selling the material, farmers make nearly 15% more profit on each harvest. As for Bio4Pack, it can expand its range of sustainable packaging with a product which is certified Cradle to Cradle and which has a strong socially sustainable character in addition to demonstrable environmental benefits.

Result & follow-up

Bio4Pack and PaperWise are currently cooperating with rice farmers in Malaysia, whereas they will soon launch a production location in India as well. The packaging is used in the Netherlands by the Ekoplaza organic supermarkets and by regular supermarkets Albert Heijn as well as Jumbo for their organic fruit and vegetables. Germany and Austria also use the rice straw packaging. Since Bio4Pack estimates that its volume of packaging sales will have exceeded 90 million by the end of 2019, it is