

ECO-FRIENDLY PACKAGING - GREEN PACKAGING SOLUTIONS FROM GRAIN FIELD

The description was developed based on the good practice case provided by the University of Hohenheim in I-CON project



D2.1 Template for description of innovative solutions for Short Food Supply Chains (draft prepared by Campden BRI Hungary)

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Project acronym: Smart Food Supply Chains

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Template for good practice cases

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PU	Public	
PP	Restricted to other program participants	
RE	Restricted to a group specified by the consortium	
CO	Confidential, only for members of the consortium	

1. Title of the case description

LANDPACK- GREEN PACKAGING SOLUTIONS FROM GRAIN FIELDS

2. Indicate your role in the Smart Food Supply Chain:

- individual member of the chain:
- chain operator:
- network operator:
- association:
- technical, scientific, or management expert:
- advisor:
- policy maker:
- other:

3. Indicate the region (if applicable): world-wide supplier network

4. WP2 Cross-reference table

Please indicate with an X in the relevant box of the matrix for which needs and the steps / functions of the supply chain the described innovative solution is applicable

		Individual steps of the SFSC							Short food supply chain as whole						
		1	2	3	4	5	6	7	8	9	10	11	12	13	14
Needs of the consumers (citizens)	food safety		X		X	X				X			X		X
	food quality		X		X	X				X			X		X
	trust		X		X	X				X			X		X
	ethical aspects		X		X	X									
	accessibility														
Needs of the chain actors	fair price														
	increased negotiating power														
	shared use of available resources														
	product development support		X		X	X				X			X		X
	access to markets and consumers		X		X	X				X			X		X
	access to infrastructure														

1: Farming

2: Primary production

3: Transport

4: Processing and packaging

5: Storage

6: Logistics

7: Sale

8: Product integrity, authenticity, transparency

9: Marketing concepts

10: Food chain management and networking for enhancing cooperation among chain actors

11: Business modelling

12: Policy environment

13: Legal requirements

14: Labelling

5. Short description of the innovative solution

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- **Describe the specific need or problem being addressed by the case and please explain what is the novelty of this innovative solution**
More and more consumers choose to order online fresh products. The delivery of these products causes issues for some supermarkets and other suppliers, especially those who specialized in organic and ecological products. These companies require **eco-friendly packaging** that provide the desired and needed insulation and damping properties.
 - Thermal packaging made of straw: Ecology and performance combined
 - Thermal packaging made of hemp: Flexible hemp fleece for small boxes
 - Insulated bags made of hemp: the most sustainable insulated pocket
 - Cooling elements and calculator: Natural cooling with pure water

Resource efficiency through renewable resources

“Because packaging is so much more than waste”



1. Figure: packaging made of straw



2. Figure: Packaging made of hemp



3. Figure: Thermal bag made of hemp



4. Figure: Cooling elements

- **Describe the enabling function(s) and the practical benefit(s) - (e.g. for which types of problems and opportunities is used and can it be used, and how)**

The eco-friendly packaging provides:

- 100% natural product
- Flexible for many different order types
- Excellent insulation & shock absorption
- Easy disposal in the organic waste / the garden or in the residual waste
- Hygienic, strictly controlled
- Moisture-regulating
- Space-saving delivery & storage
- Many standard sizes & variants
- Personalization in terms of size and design
- Individually printed option

- **Describe the method/procedure/technology/solution implemented. (Please explain, whether the innovative method is a product / service / process / marketing or organizational / management innovation) After completing the description, please indicate, whether this innovation is a technological or non-technological one.**

- ✓ Climate-neutral production along the entire production process
- ✓ Minimal primary energy consumption
- ✓ Pure straw, no additives, hygienic, strictly monitored
- ✓ Straw from regional contractors
- ✓ Cost-saving disposal through use of natural materials
- ✓ Use of agricultural side product

technological

non-technological

- **Describe the business, which implemented the innovated solution (size, country, region, location, type of food)**

Green packaging can be successful used by all small/medium or multinational companies, producers and manufacturers, who want to follow the modern eco-friendly, environmental conscious, waste redacted management system.

The packaging can be used as primary packaging for fresh field products and for secondary packaging for processed food as well (e.g. cheeses, dairy products, etc.).

It's independent of the region or the location of the business. The extant packaging material can be changed to the eco-friendly ones.

- **Describe the distribution channels of the product(s)**

The use of the eco-friendly packaging enables a positive distinctive, modern, environmentally conscious company policy. Any fresh fruit and vegetables producers, or finished product producers the regular distribution channels are available.

- **Describe what makes the innovation work.**

That's an eco-friendly packaging.

It's more than just packaging. There is provided: a delicious, sensitive, appealing, funky, unique, irresistible, practical, charming, light, friendly, safe and sturdy, natural kind of packaging.

- **Describe the specific prerequisites for the business related to the implementation of the method and/or related to the location, method, procedure, solution**
- a: **List the relevant necessary resources (including the estimated cost) for the specific innovation.
Please list the relevant ones only (list is annexed)**

MATERIALS:

- fresh fruit and vegetables
- products in primary packaging

HUMAN:

- human resource for operation

TECHNOLOGY:

- change of the old packaging materials to eco-friendly (straw and hemp), which comes from the regional contractors

FINANCIAL

- estimated cost: depends on the volume of the production

- b: **List the relevant necessary capabilities for the specific innovation.
Please list the relevant ones only (list is annexed)**

ETHICAL ASPECTS, MANAGEMENT:

Eco-friendly, natural packaging and natural food in the 21. century is a need of the consumers. The packaging material is natural and ecological as well.

The other unsolved issue nowadays is the problem of the waste. Eco-friendly packaging is made from the “waste” of the field-production, it’s made from renewable resources.

- **The method/technology was established by**
NAME: Landpack GmbH
ADDRESS: Steinlacher Weg 1, 82239 Alling - Germany
DEALER AND SERVICE POINTS:
PRODUCTS FOR PACKAGING OF:
 - primary packaging for fruit and vegetables
 - secondary packaging for meat, cheese, bakery products, cakes, etc.

6. Describe the results, achievements and typical failures

This eco-friendly packaging can be the primary packaging of e.g. fruit and vegetables and can be the secondary packaging of any other products of the food industry.

7. Summarize what makes the case to a good practice for the members of the SFSCs (e.g. lessons learned)

It is a sustainable solution for reusing of the compostable, agricultural side product.

The processing uses for the packaging straw and hemp, which comes from the regional contractors, thereby it's a support for them.

The green-packaging can be disposed entirely through bio waste, but it can also be put into residual waste or used for pets or in the garden.

While styrofoam is based on oil, straw is an agricultural side product, which accounts for almost half of the entire mass during cereals harvest. Hence, straw is not competing with food production such as starch. The use of this resource as a substitute for oil contributes to resource efficiency.

8. Aspects, methods for transfer of methods for other SFSC members

Eco friendly packaging can be used by every producer, who wants to add value to the product due the economical friendly producing.

9. Recommendations for members of other SFSCs for further applications

The eco-friendly packaging can be offered e.g. for premium fresh fruit and vegetables growers, for bakery product manufactures, where the technologies and consumers needs are a degradable green-packaging method.

10. More information is available at (web), if it is relevant

<https://landpack.de/en>

Annex

1. Checklist for necessary resources (tangible and non-tangible):

- materials (access to: raw materials/ ingredients - including volume, land – including size, packaging materials)
- human: labour force: size, knowledge & skills (production, technical, marketing, managerial, ICT, financial, etc.)
- technology: patents, know-how, trademarks, copyrights, trade secrets
- infrastructure, equipment, facilities, - size, minimum volume of production/sales, IT infrastructure
- information, reputation, brand, trust
- financial*

*: estimated cost:

0 - 10 000 Eur
10 001 - 50 000 Eur
50 001 - 100 000 Eur
100 001 - 300 000 Eur
300 001 – 1 000 000 Eur
1 000 000 Eur above –

- other specific necessary resources for the application of the specific innovation

2. Checklist for the necessary capabilities

- **food safety:**
 - basic skills to comply with the EU food safety regulations
 - ability to understand what makes the product safe (the key controls, which ensure the safety of the product – biological, chemical and physical hazards, providing the safety shelf life of perishable products)
 - food safety culture (motivation, responsibility for food safety) and basic skills for the implementation of HACCP

- **food quality:**
 - ability to define the target segments of consumers for SFSCs
 - ability to define the product characteristics which are (tacit) basic requirements for the target segment(s) of consumers;
 - ability to define which product attributes/levels and augmented services represent an added value for the target segments of consumers;
 - food quality culture (motivation, responsibility for food quality);
 - production experiences which help to provide the expected quality reliably, uniformly;
 - ability to provide distinguishable quality which meets the needs of the targeted consumer segment;
 - meeting (local) legal requirements, application of the labelling rules;
 - ability to access the consumer willingness to pay for specific products of SFSCs.

- **trust:**
 - ability to ensure product integrity, authenticity and transparent information for the consumers (including systems, tools);
 - ability to access external trust enhancers (third party certification, internal certification system, participatory guarantee systems);
 - application of the labelling rules and branding (mandatory and voluntary);
 - ability to meet third party certification requirements

- **ethical aspects**
 - ability to understand consumer needs for ethical behaviour related to the specific product(s) of the SFSCs;
 - culture for ethical food production and supply;
 - ability to implement necessary measures to ensure ethical food production and supply;
 - ability to access the consumer willingness to pay for products meeting ethical aspects

- **accessibility to consumers:**
 - ability to organize logistics efficiently and to exploit innovative solutions and distribution channels;
 - efficient, innovative sales methods;

- ability to develop and implement new business models for ensuring access of consumers to products and augmented services;
- **fair price:**
 - collecting marketing information;
 - ability to enhance and maintain cooperation among chain actors including the combined use of available complementary resources, capabilities, competences of SFSCs actors, networking, understanding the principles of food value chain management;
 - ability to define, develop or maintain unique quality of products and augmented services;
 - ability to develop and implement new business models;
 - ability to access the consumer willingness to pay for fair price
- **increased negotiation power:**
 - collecting marketing information;
 - ability to enhance and maintain cooperation among chain actors including the combined use of available complementary resources, capabilities, competences of SFSCs actors, networking, understanding the principles of food value chain management, cooperation culture;
 - ability to define, develop or maintain unique quality of products and augmented services;
 - ability to develop and implement new business models;
- **shared use of available resources:**
 - ability to enhance and maintain cooperation among chain actors including the shared and combined use of available complementary resources, capabilities, competences of SFSCs actors, networking, understanding the principles of food value chain management, cooperation culture;
 - the level of value chain management culture;
 - ability to access the consumer willingness to pay for food with reduced environmental impacts

- **input for R+D:**
 - ability to monitor, research, evaluate, and understand the needs and wants of customers and consumers;
 - ability to develop new products, processes, packaging, preservation techniques, systems and access to new markets, including in other categories;
 - access to innovative technologies; distribution and marketing solutions and methods. management systems;
 - access to local input for R+D covered by other aspects

- **access to markets: and market success**
 - effective promotion, customer service, efficient and innovative sales methods;
 - ability to understand consumer's needs;
 - ability to organise logistics efficiently and to exploit innovative solutions and distribution channels,
 - unique value propositions;
 - ability to develop and implement new business models for ensuring access of consumers to products and augmented services, develop the market accessibility for the suppliers.
 - stock control;
 - ability to access to required raw materials within a restricted geographical area

- **access to infrastructure:**
 - ability to use existing own infrastructure in a focused way to serve consumer needs or to combine it with complementary infrastructures of other SFSC actors, cooperation culture;

- **management:**
 - to implement management systems for vision, planning, implementing), coordinating, controlling, monitoring, continuously;
 - improving; ability to motivate, authorize staff;

- **production, processing:**
 - management system, production experience, specific controlling, monitoring, continuously;
 - willingness to consider and ability to evaluate the adoption of TECI and NTI in the current production processes;
 - any additional specific resources necessary for the application of the specific innovation.