AgriPack

Cilangkap Village - Sumedang Regency

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Cilangkap Village, Sumedang Regency

Area

4,86 Ha

Population

1.326 people

Source : sumedangkab.bps.go.id/

Cilangkap village is located on the northern slope of Mount Tampomas. To the east, the village is bordered by Sekarwangi Village, to the south by Mount Tampomas Forest, to the west by Cibitung and Nagrak Villages, and to the north by Ciledre Village in Conggeang Sub-district.

Problem

Rice Straw Waste After Harvest

So far, the most common way for farmers in Cilangkap Village to get rid of rice straw is by burning it after harvesting. Burning is done directly at the field site, generally at the end of the harvest season before the land is prepared for the second crop (the next rice variety).

Burning straw is considered practical because it flattens the remaining stems, provides ash as instant organic fertilizer, and shortens land preparation time. However, this habit does not consider the long-term implications for soil quality, air quality, or the health of the surrounding community.

The types of rice in Cilangkap village are leci, nengsih, and 49 rice.

Figure 1. Rice straw condition in Cilangkap Village, Sumedang Regency



Figure 2. Processed rice husks that are collected for livestock animal feed

Stages of Community Empowerment

01

Coordination & Preparation

Establish initial communication and set up technical needs/requirements.

02

Education & Introduction of the Material

Spread knowledge about the potential of rice husk/straw waste that is processed

03

Workshop & Package Making

Train villagers directly so they can make the package on their own

04

Evaluation & Discussions

Asses the results and explore ideas for further improvement

05

Documentation & Dissemination

Capture the process and share it with the public

Material Collection System

The provision of burlap sacks at each designated gathering point in the rice field area

Establishing a WhatsApp group to monitor straw availability and coordinate the collection schedule with the gathering team

Every full container will be picked up by the collection team or appointed volunteers

The straw is subsequently delivered to the warehouse for processing and chopping

Production Tools and Materials for Rice Straw Food Container

Chopping machine

Price: US$ 3000/unit

Power: 45 kW

Capacity: 15 Tonne/hour

Number of Unit: 1

Presto

Rp4.700.000

Detail | Info Penting

Kondisi: Baru
Waktu Preorder: 30 Hari
Min. Pemesanan: 1 Buah
Etalase: **Mesin Pangan**

Presto Ukuran Besar, kapasitas 10 Kg diamter tabung= 32 cm panjang = 43 cm, ========== TERSEDIA untuk ukuran yang lebih besar. cek katalog atau hubungi kami *Harga diatas adalah untuk kapasitas 10kg Bahan stainless steel diperkuat dg baja, dilengkapai dg kompor, sarangan, katup pengaman, dan manometer. TERSEDIA KAPASITAS YG LEBIH BESAR . siap kirim ke seluruh Indonesia

Mixer Ball

Mesin Ball Mill Liner Roll 30-2000 L

Model Number: TMAX-QM-50L

Pembayaran: L/C D/A D/P T/T Western Union

Delivery Time: 5 days

Mesin thermo-pressing

Impact of Agricultural Waste (Straw) Management.

By processing agricultural waste such as straw, it can definitely provide positive impacts such as:

Education Impact

Educational impact includes increasing environmental awareness and developing new skills through training on making eco-friendly packaging from straw. It can be applied within communities to emphasize the importance of recycling and sustainable design.

Environmental Impact

By switching to straw packaging, MSMEs reduce dependence on single-use plastic. Additionally, processing straw waste into packaging prevents open burning and air pollution, making it more environmentally friendly for the local ecosystem.

Economic Impact

Utilizing waste materials becomes economically valuable. The products can be sold, generating additional income.

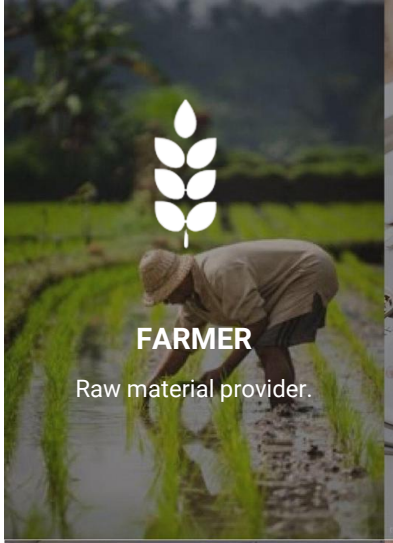
Social Impact

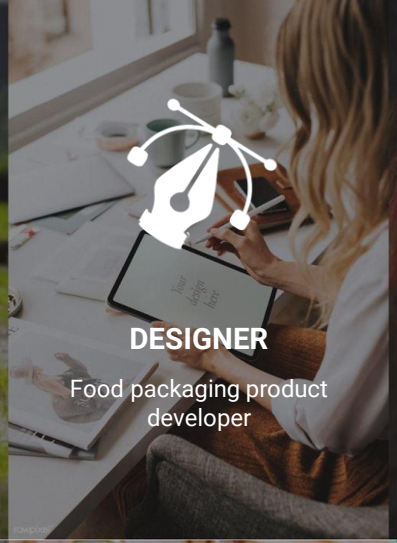
Internally, residents feel more confident because they acquire new skills and are able to produce creative products.

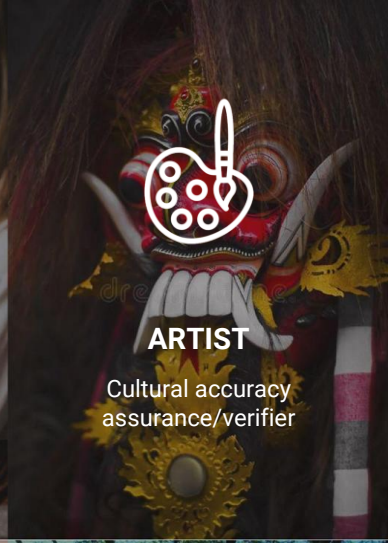
Long-term Plan

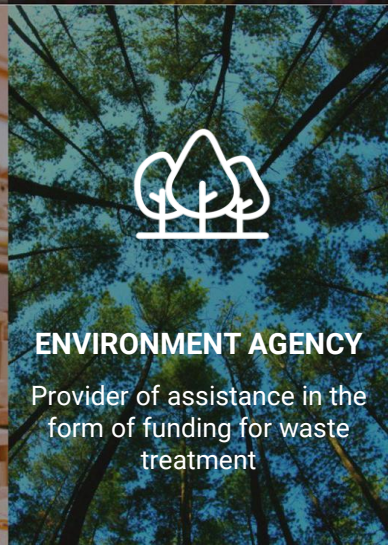
Environmentally friendly packaging made from processed rice waste supports the local economy and serves as a means of sustainability education for residents.

The stakeholders involved in developing this empowerment program include:









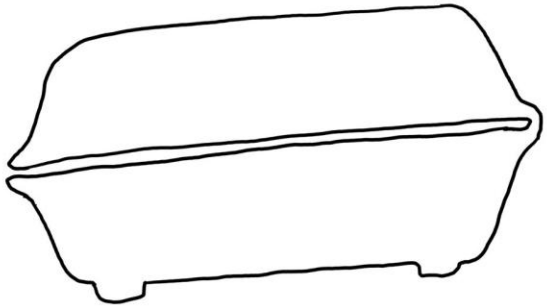
Product Design Concept.

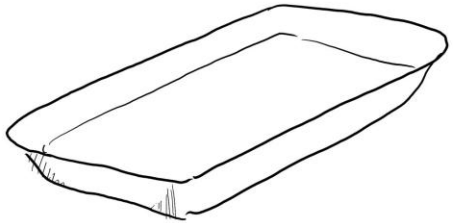
Concepts Concerning Products.

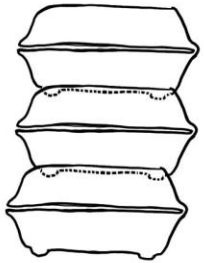
Many micro, small, and medium enterprises (UMKM) in Indonesia, especially those in the culinary sector, still use plastic bags for packaging. The main reasons UMKM use plastic are that it is practical, easily available, and relatively cheap. However, their excessive use of plastic contributes to Indonesia's plastic waste problem (Databoks, 2023).

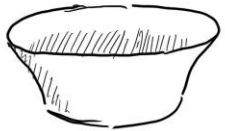
Agripack is designed for dry foods and is best used for foods with little to no sauce, such as nasi padang, pecel, and batagor. It is not recommended for foods with a lot of sauce because “Agripack” containers cannot withstand prolonged exposure to moisture.

Food Packaging Design Sketch.









Tools and Materials for Production
Food Container from Straw

Rice straw powder ground to a coarse or medium texture.

Natural adhesive such as flour.

Mold or shaping form.

Finishing

Food Packaging Production.

01

Rice straws are cut into pieces by machine

02

Fragments of rice straw are combined with water and heated at 100–130°C for four hours

03

The rice straw pulp is formed and then dried

04

The straw pulp is pressed directly by a machine to form the food packaging.

05

Quality control of products aims to ensure that all packaging components are usable and safe.


SEKIAN
TERIMA KASIH

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