COFFEE INNOVATION
Adena Kenawat Agni-dryer
Making Natural Processed Coffees Efficient and Profitable
OVERVIEW: AGNI-DRYER FOR IMPROVED COFFEE PROCESSING

CHALLENGE
Natural coffee price is valued 30-33% higher more than washed process but can take up to three times longer to dry. Outside capital strength, the limitation for small scale processors to process natural-coffee is in production yield per meter square of drying area and insolation of the sun.

COMPANY DESCRIPTION
Adena is a coffee processor and trader in Indonesia which has the vision to improve rural livelihoods by connecting coffee farmers to markets. Since 2016, we developed our coffee mills together with farmers in Gayo Kenawat, Flores Kelimutu and Lintong Nauli.

QUALITY & CONSISTENCY
ADENA – KENAWAT is going to manufacture, deploy and sell a dry-air based mechanical dryer. Using this dryer, processors can reduce the overhead of natural processing by 20-30%. The fuel for the dryer is a combination of LPG and wood pellets or coffee waste.

QUALITY & CONSISTENCY
ADENA – KENAWAT is going to manufacture, deploy and sell a dry-air based mechanical dryer. Using this dryer, processors can reduce the overhead of natural processing by 20-30%. The fuel for the dryer is a combination of LPG and wood pellets or coffee waste.

COST-BENEFIT ANALYSIS
COASTS
LESS THAN 20,000 EUR PER DRYER

EFFECTS ON REVENUE
NOT YET DETERMINED

EFFECTS ON YIELD
NONE EXPECTED

PREPARATION
TIMELINE
3-5 MONTHS

MATERIALS & EQUIPMENT
- AGNI-DRYER
- LPG TANK
- ELECTRICAL CONNECTION
- LEVEL AREA AT LEAST 3M X 4M WITH ROOFTOP ABOVE 3M TALL

STAFFING REQUIREMENTS
1 OPERATOR

LESSONS LEARNED
CHALLENGES
Price of materials was unpredictable due to exchange rate fluctuations. Machine cycles need to dry coffee without damaging the coffee.

TAKEAWAY
Finding the right technical partner (machinery workshop) makes a big difference to the success of the project.
RESULTS

As a result of Adena’s trial,

Cloud cover makes usual solar dome drying impractical in parts of Indonesia where seasons are shifting thanks to climate change, like this farm in Flores.

- **Up to 30%**
  Increase in income from natural processing vs. washed

- **20-30%**
  Reduction in costs for processing natural coffee

- **75**
  Farmers & 500 ha's impacted

- **Cherry prices expected to increase as processing capacity and demand increase**
IMPLEMENTATION

1. PREPARE PLACE FOR AGNIDRYER AT LEAST 3M X 4M OF AREA WITH ROOFTOP ABOVE 3M TALL

2. UNLOAD AGNIDRYER DRUM SETS TO THE PLANNED AREA

3. INSTALL EXHAUST PIPE TO THE DRUM SETS

4. CONNECT ALL CABLE CONNECTIONS TO CONTROL PANEL

5. PLUG IN MASTER POWER CABLE AND PREPARE LPG TO BE PUT INTO GAS REGULATOR

6. SWITCH ON AND TEST FUNCTIONALITY OF THE MACHINE BASED ON CERTAIN INDICATOR SETTINGS (TEMPERATURE AND HUMIDITY)

7. LOAD THE DRUM WITH COFFEE CHERRY AND RUN MACHINE. TEST CHERRIES AFTER ONE CYCLE FOR MOISTURE CONTENT.
COFFEE INNOVATION FUND
Developed and funded by the German Federal Ministry for Economic Cooperation and Development (BMZ), and implemented by GIZ.

MISSION
The Fund’s objective is to increase profitability of small-holder coffee farmers, and foster greater, more equitable value distribution in the supply chain through promoting innovative farming systems, transparent and inclusive business models, and access to new markets.