



– International Fund for Agricultural Development –
– Scouting and Sharing Innovation in Western and Central Africa –

– Forced convection drier for rolled products –

I. Background

1. Name of innovation

Forced convection drier for rolled products

2. Country – Region

Burkina Faso, Western Africa

3. Organization

Rural Microenterprise Support Project (PAMER)

4. Who is the innovator ?

ISOMEK (+226 5039 3167)

5. Actors involved

International Cooperation Centre on Agrarian Research for Development (CIRAD)

6. Implementation date

June 2006

7. Type of innovation

Technological

II. Key issues

8. Summary

The forced convection drier is an innovation that adapts modern drying installations and allows an agrifood processing microenterprise to dry products under industrial conditions. It produces dried products that are not burned, unlike those from a natural convection drier using solar heat, gas or other source of heat. The technology is also independent of the moisture content of the air, so that produce can be dried at any season of the year without any change in settings or in the quality of the dried end product.

9. What issues does the innovation address?

This technological innovation means that the women who process agrifood products will no longer have to stop activities in the rainy season, when it is impossible to use either a solar drying pan, or wood or gas driers that have long drying times and thus allow the formation of mould, the triggering of a fermentation process or the non-enzymatic browning of the products being dried.

10. Key success factors for replication

- Local construction
- Availability of construction materials
- Growth of drying microenterprises and of consumer demand for high-quality products
- Multifunctional character: adaptability of the equipment to a number of different products

11. Main results

- Introduction of the equipment in a drying microenterprise
- Improvement in the hygienic and sensory quality of dried products
- Increase in the production capacity of the microenterprise

12. Target group

All agrifood microenterprises engaged in drying rolled products

13. Difficulties encountered

The main difficulty in introducing this technology is the need for a 220-volt 5-A electrical installation.

14. Financial aspects

This type of drier allows at least a five-fold saving in time compared with natural convection drying for the same type of product.

III. Technical summary

15. The forced convection drier is composed of three parts:

- A gas burner composed of a fire-box and a bottle of butane gas
- An air aspiration and expulsion system running on electricity and composed of a 2-kilowatt electric motor and an ELLICE subsystem
- A drying box 197 cm long, 100 cm wide and 114 cm high; this is divided into three compartments, each equipped with four drying trays with a surface area of 0.52 m², making a total drying area of 6.26 m².



IV. Follow-up

16. Key contacts

Name	Organization	E-mail
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17. Internet link

18. Key documents (document title + link or contact or other details)