PRESS RELEASE

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South-South Technology Transfer brings Oil Press to Mali – and opens up possibilities for plant oil technology in West Africa

In the frame of the Sustainable Energy Advisory Facility, a new oil press has been put on the market in Mali. The effort has been co-ordinated by Mali-Folkecenter, in co-operation with CNESOLER/DNE (the Malian National Centre for Solar & Renewable Energy/ National Directorate of Energy), with ACM (Central Workshops of Markala) constructing the press. Based on the efficient, reliable Nepali 'Sundhara' press, it can be used to press jatropha (poughere) nuts or sesame seed for their oil. It is the first time such a press has been produced in West Africa, a represents a major breakthrough for the future of plant oil technology in the sub-region. (Fig. Original Nepali 'Sundhara' press, left, new Malian press, right).

The new Malian Jatropha press – regional implications

Jatropha(right) is an oil bearing plant, common in Mali, Senegal, Ghana, and other West African countries. It is often grown around crop fields as a living fence to keep out animals. It acts as a windbreak, reduces soil erosion, and the oil which can be pressed from its seed is non-edible. But it can be used as an alternative fuel for diesel engines.

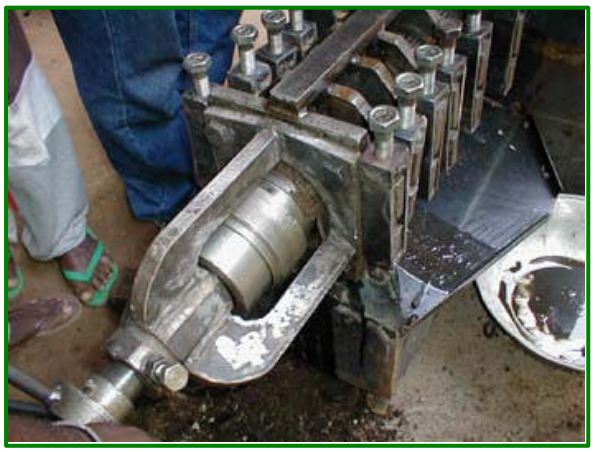
Throughout the sub-region, single cylinder diesel engines are used to provide mechanical power in rural areas. With the new locally produced press, Jatropha can provide the fuel, and a means for rural women to generate income.

The Sustainable Energy Advisory Facility (SEAF) is jointly implemented by UNEP Collaborating Centre on Energy & Environment and UNEP Paris Energy Programme. Funded by Danida, it is a pilot effort in developing countries

Technical challenges

The critical elements: the original Nepali screw (below) and the Malian version (above)

Due to the high pressures involved, a press of this type represents quite a technical challenge. But with effective co-ordination, original drawings and press made available, a skilled team of engineers and a good workshop, the press was realised.



Production of oil and press cake by the Malian-made press

The Multi-function platform concept

In the jatropha multifunction platform concept, a small single cylinder diesel engine is used to power a mill (for agricultural processing) and a jatropha oil press (to produce oil and press cake). After a simple conversion, the engine can use the jatropha oil as a substitute fuel.

The engine can also power a generator for battery charging or rural electrification, a water pump or a compressor.

Jatropha seed is collected by women and taken to the installation for sale and pressing to produce oil and press cake. The oil can be used as fuel or as the basis for soap production. The press cake can be used to make lower grade black soap or as fertiliser. Soap production allows women to start their own micro-enterprises, which means income generation and poverty alleviation. It benefits the women, and of course their children and families.

The engine is in the foreground, press in the background

SEAF is acting to remove the barriers to sustainability of multi-function platforms. Working in 5 villages in the south of Mali, two main barriers have been identified: management/organisational; and the lack of replacement presses and spare parts on the local market. A new platform management structure has been created that does not rely on voluntary work. Capacity building in the villages in the areas of maintenance and book-keeping has tackled the first barrier. Now, with Malian press

The mill, coupled to the engine for agricultural production

production, a basis for expansion of the system is in place.

Mali-Folkecenter will also promote the press among entrepreneurs who may be interested to move into the field of jatropha multi-function platforms on a commercial basis, in partnership with CNESOLER.

Without a doubt, the future of the jatropha multi-function platform in West Africa now looks distinctly bright.

For further information, please contact us.

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