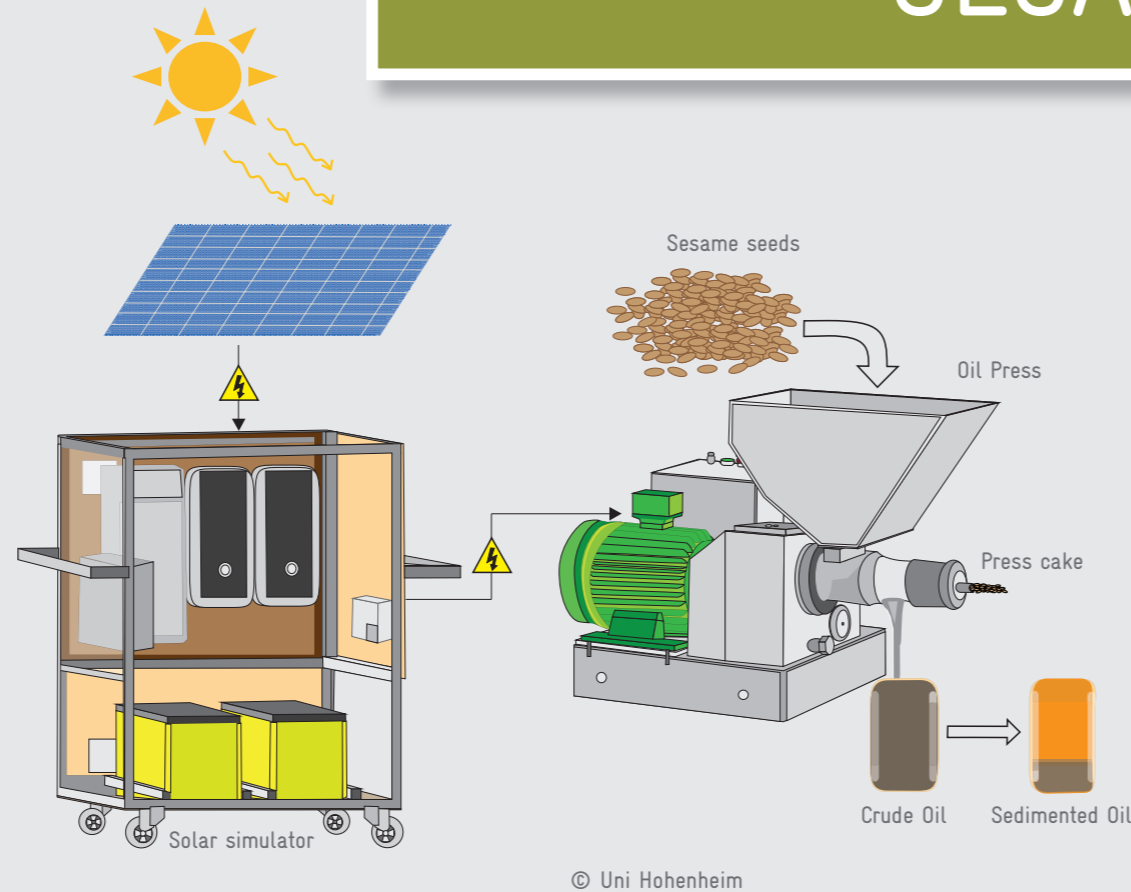


SOLAR-POWERED OIL PRESS FOR SESAME SEED

Why?

Sesame (*Sesamum indicum L.*) is a counter-seasonal cash crop, resistant to dry and harsh weather conditions, requiring little input of fertilizers and pesticides. Sesame seeds contain at least 50% oil and 25% protein. As a by-product of the oil extraction the seed cake can be used and possibly sold as animal fodder.

With an average yield of 616kg/ha and 321,837 tons produced in 2015, Burkina Faso is among the top ten sesame producers worldwide. Mechanical oil extraction using an electrical screw press is still a new technology in the country, especially in rural areas. However, electricity prices are with 0.18€/kWh among the highest in Africa.



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What?

A solar-powered oil press enables the user to produce off-grid and at the same time increase the extraction efficiency.

A special and innovative control unit calculates the optimal operation setting, based on seed moisture content and current weather conditions.

Depending on the capacity of the solar panels and batteries, the solar-powered unit costs between €8,000 and €13,000. During harvest season (November to February), the oil press can operate up to 15 hours per day with an output of 80l oil per day (200kg seeds). The enabling factors are low seed prices (0.9€/kg) and high amount of solar radiation combined with steady oil prices (5€/l). By running the unit only during harvest season, a payback period of 4 months can be expected.

With Whom?



Where?

The solar-powered oil press is suitable for small- and medium-scale cooperatives in rural areas. The oil press is currently being trialled in Burkina Faso in partnership with local universities and GIZ Green Innovation Centers.



More?



Energypedia:

https://energypedia.info/wiki/Solar-Powered_Oil_Press_for_Sesame_Seed