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EXPERIENCES

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Application et Adaptability of Micro-Irrigation Technology Developed by iDE in Climatic and Practical Contexts in Burkina Faso



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SUMMARY

iDE is developing a technology of micro-irrigation capable of adapting itself to all types of farming, even on terrains where the slope does not allow for installation of traditional methods of irrigation.

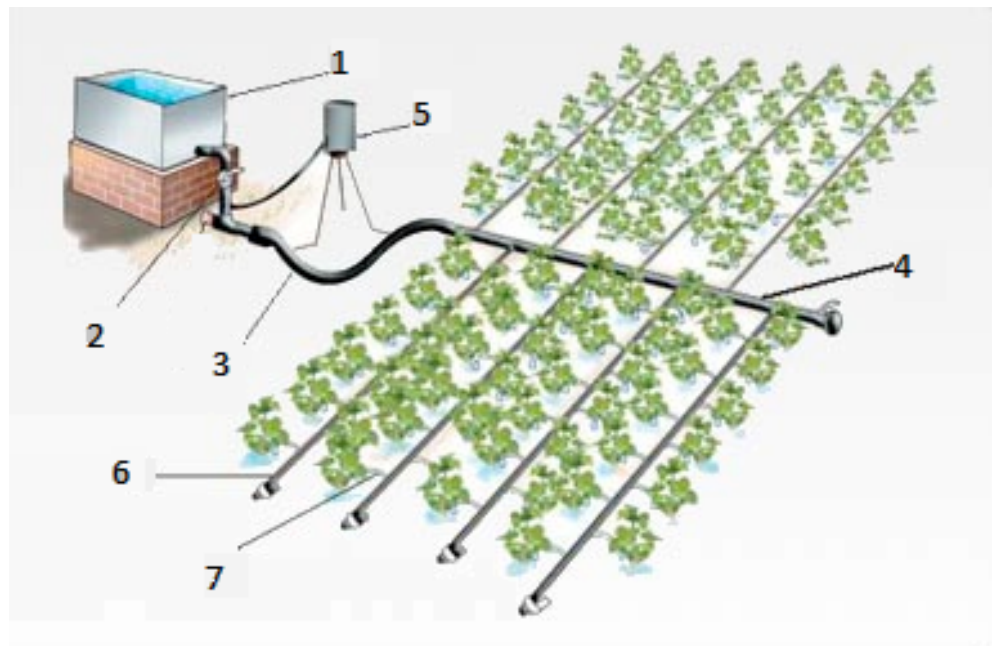
The first results - which are very encouraging - show an increase in yield of 30%.

Objectives :

To have micro-irrigation technologies adopted by farmers in Burkina Faso for better valuation of water, a resource becoming increasingly scarce. To contribute to increased rural household incomes. To create livelihoods for farmers, especially the most vulnerable. To participate in improving the nutrition of beneficiary families.

Methodology:

The technology is a system of drip irrigation with micro-tubes that replace drippers used in conventional systems.



1- water holding tank; 2 – control valve; 3 - main duct
4- secondary duct (support ramp); 5- filter
6 – lateral line (ramp); 7 – micro-tubes (drippers)

The system is presented in kit form of different irrigation areas (20, 50, 100, 200, 500, 1000 m², ...).

Un Kit consists of:

- A control valve for better flow control of water,
- A filter that allows water filtration to reduce the risks of clogging the system,
- The main duct of the network and laterals that can be in PVC, or in polyethylene of high or low density. The lateral ducts are in low density polyethylene with a diameter varying between 12 and 16mm,
- Micro-tubes in low density polyethylene, which supply water at the level of the plant. Their diameter varies between 1 and 1.2 mm,
- Micro-tubes less sensitive to blockage problems allow better application of water at the base of the plant.

The system is available in different sizes and can meet the needs of farmers depending on the surface they have and this at lower prices than other technologies currently on the market. It also allows a reduction in water consumption by 50% compared to traditional methods of irrigation. **The system is suitable for all types of cultures and can even be practical even on land where the slope does not permit installation of traditional methods of irrigation.**

Results :

The application of the system allows an **increase in the yield of 30%** compared to traditional irrigation methods (reduction of water consumption, better implementation, economy of fertilizers, reduction of working time allowing farmers to concentrate on other agricultural and commercial activities).

A kit of 500m² provides an approximate net income of around 140,000 to 180,000 CFA per cycle from October to March. iDE intends to intervene in the third and fourth cycles of vegetable crops, which corresponds to the period of the highest prices for vegetables on the market. (The price of a kilo of tomatoes can be more than 300 CFA during the month of March and reach 2,000 CFA in the month of September)

iDE has developed a market-oriented approach which helps Burkina Faso in a collaboration between farmers, traders, buyers and intermediaries, providing effective means of marketing. iDE works with the market of small vegetable growers (tomatoes, onions, etc.) and enables them to identify market opportunities for their production at competitive prices

In India and Nepal, close to 1 million drip kits were sold, which enabled farmers to double the productivity of their fields using the same amount of water. In Nicaragua, the system allowed families producing coffee to reduce the flowering time of plants from three years to one and a half. The coffee sector is very interested in this technology.

Over the last 27 years iDE has worked with more than 3.8 million farming households in ten countries, increasing average annual income of a family by \$250 the first year of intervention.

Sources :

The information comes from iDE's Catalogue and Website, (www.ideorg.org), as well as from iDE Fact Sheets and from their Business Plan for iDE Burkina Faso.