Online Catalogue:

LOCAL SUSTAINABLE SOLUTIONS IN EAST AFRICA – Water

www.localsolutions.inforse.org

Collection of Successful Cases of Sustainable Energy and Climate Solutions in Kenya, Uganda, and Tanzania.

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The Catalogue is published by Partners of the Project "East African Civil Society for Sustainable Energy & Climate Action" (EASE-CA), a Project by members of the civil society network INFORSE - International Network for Sustainable Energy. The Partners are: JEEP and UCSD in Uganda, Suswatch in Kenya, TaTEDO in Tanzania, which is also INFORSE-East Africa Coordinator, Nordic Folkecenter for Renewable Energy (NFRE), and INFORSE Secretariat in Denmark. More on the EASE-CA Project: www.inforse.org/africa/EASE.htm. The online database behind the Catalogue is designed by NFRE. The EASE-CA Project is supported by CISU - Civil Society in Development, Denmark in 2019-22.

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19.05.2026

Polythene Liner Run-off Water Pond



Why to choose this solution?

The water pond is easy to construct and cheap compared to a metal tank. Furthermore, it serves several purposes. The water is used for irrigation, and it also helps to control soil erosion on the farm.

Savings per day or production:

It can help to save over USh 5,000 (USD 1.2), which would have been spent on buying water for irrigation.

Cost in money and in own time to construct:

The water pond costs roughly USh 1,500,000 (USD 416) to construct.

Lifetime:

3 years.

Maintenance needed:

It is needed to be covered to control water loss through evaporation. Removing the silt especially during the rainy season.

Resources needed in use:

Containers for collecting water.

Problems and limits:

The water ponds are subjected to high rates of water evaporation, water contamination and contains a lot of mineral salts making the water not suitable for washing clothes. If not marked and covered very well, there is a risk to cause accidents as well as acting as a breeding place for mosquitoes.

Where and how can you get it or make it?

JEEP constructs and trains communities in construction of water ponds.

Skills needed to produce, install. maintenance, use:

Needs a skilled person to construct. Maintenance and use needs a small introduction.

How to use it:

How to maintain it:

Climate effect (if any):

Rainwater collection can reduce flooding, soil erosion during heavy rain periods, and the stored water can be used in the dry periods. Most of the materials used in construction and use are recyclable.

Why is it successful?

If you can make it, a short description, typical problems, materials needed:

How to make it (if possible):

How is it delivered and by whom?

Successful financial model

What policies and strategies helped the success?

More info:

Sources:

Case uploaded:
2022-12-30

Roof RainWater Collection



Why to choose this solution?

Rainwater harvesting is a simple and effective tool to collect and store water for domestic and institutional use. The solution provides a cheap and easy way of collecting rainwater from the roof. Materials that can serve to construct gutters are locally available, and include bamboo, banana fibres, iron sheets, etc. Water for domestic uses such as drinking, bathing, washing, water for animals, and irrigation water is made readily available.

Savings per day or production:

Rainwater-harvesting reduces household expenditure on water in terms of time and money used to get the water. For communities that must cross significant distances to fetch water, it helps them save the time for other productive activities. Money that would have been used for buying water is also saved for other necessities.

Cost in money and in own time to construct:

Gutters from banana plantations are free of charge, bamboo guttering costs about 4,000-5,000 USh (USD 1-1.5), and metallic gutters can cost between 5000- 10,000 USh (USD 1.5- 2.9) depending on the size. A small drum for harvesting water -- around 100 liters -- costs 60,000 USh (USD 17.1). A system takes about three hours to construct and can be used immediately after construction.

Lifetime:

This gutter together with the drum can last for over 15-20 years. However, for the case of bamboo gutters insects like termites and wood borers may destroy it before that time.

Maintenance needed:

Seasoning of the wood for the case of bamboo gutters before construction is needed and regular control of insects such as termites is required. Gutters should be cleaned periodically after leaf fall. The banana fibre gutters; these can be replaced every after two weeks. Jars and other storage containers need regular cleaning inside.

Resources needed in use:

Water storage facilities like pots, tanks, etc. are required for water collection and storage. Water treatment for better quality may also be needed.

Problems and limits:

The bamboo gutter is easily susceptible to insect destructions. It may require specific species of bamboo to construct. It may also require the involvement of a carpenter. Installing the gutters on the roof also need a skilled personnel. Storage water systems are expensive such as drums and tanks making them not affordable to some households and the quality of water collected is affected by the cleanliness of the catchment surface.

Where and how can you get it or make it?

The metallic gutters can be accessed from metal fabricators. Storage containers such as pots, drums, tanks can

be bought anywhere within Uganda. People from all regions of the country use the technology to collect rainwater from the roof. Bamboo and banana fibres are available in most parts of the country.

Skills needed to produce, install. maintenance, use:

A skilled person may be required to help during the installation of the water gutter.

How to use it:

Not necessary.

How to maintain it:

Not necessary.

Climate effect (if any):

Rainwater collection can reduce flooding during heavy rain periods, and the stored water can be used in the dry periods. Most of the materials used in construction and use are recyclable.

Why is it successful?

It is successful because it is made by using locally available materials, it requires less knowledge and skills, small quantities of bamboo, banana fibres or metals are needed to set it up and it is easy to make.

If you can make it, a short description, typical problems, materials needed:

To use the technology, gutters and water storage containers are needed. Banana fibres need to be replaced every after two weeks and the bamboo or metallic gutters will need cleaning every after 6 months. Installation needs a skilled person.

How to make it (if possible):

Not necessary.

How is it delivered and by whom?

Skilled ToTs / personnel (Trainers of Trainers) who will install these gutters in the homes of those who are interested and these ToTs will charge the beneficiaries a small fee for installation of the gutters. Skilled persons / ToTs are also crucial in maintaining and ensuring the quality of the installed gutter. JEEP also promotes the technology.

Successful financial model

Support for development, training, and establishment of organised ToTs union.

What policies and strategies helped the success?

Private sector programs of ensuring increased access to water in rural communities and increased resilience to climate change and increased awareness on the benefits of rain water harvesting.

More info:

JEEP, 7 Miles, Gayaza Rd, Kyanja, Kampala, P. O. Box 4264, Uganda. https://jeepfolkecenter. org/
https://www.mwe.go.ug/sites/default/files/library/Rain%20Water%20Harvesting%20Handbook.pdf
https://www.diva-portal.org/smash/get/diva2:23019/FULLTEXT01.pdfTo

Sources:

Support for development, trainings, and establishment of organised ToTs union.

Case uploaded:

2020-12-07

Improved Shallow Wells



Why to choose this solution?

Improved shallow wells can increase access to clean water in communities.

Savings per day or production:

They are cheaper than boreholes.

Cost in money and in own time to construct:

The construction depends on water levels. With high water levels, initial investment is estimated to be 3,000,000 USh (USD 833). However, in areas where the water levels are low, it might cost around 4,000,000 USh (about USD 1111).

Lifetime:

The average lifespan is around 10 years.

Maintenance needed:

The pumps need to be maintained.

Resources needed in use:

Jerry Cans / containers for collecting water.

Problems and limits:

It needs technical personnel to construct. The time required and the construction costs of a well depend on the type, the depth needed to reach water, the volume wanted, and the density of the rock or soil. Very labor-intensive. It is more appropriate to areas with high water levels. Beyond 100 ft, it is very hard to construct. Particularly where water levels are low, changes in seasons may affect access to water.

Where and how can you get it or make it?

JEEP and other private sectors construct these shallow wells.

Skills needed to produce, install. maintenance, use:

Needs skilled personnel to install it.

How to use it:

How to maintain it:

Climate effect (if any):

During prolonged droughts, users might find less or no water because the water table goes down.

Why is it successful?

It is cheaper, providing cleaner and safer water, easy to operate, and garners support from development

funders.

If you can make it, a short description, typical problems, materials needed:

Needs a technical person to construct and maintain.

How to make it (if possible):

How is it delivered and by whom?

JEEP constructs shallow wells.

Successful financial model

Own generated funds to acquire one, or support from development partners through trainings.

What policies and strategies helped the success?

NGO programs and support from development partners.

More info:

JEEP, Tel: +256 (414) 578 316. E-mail: info@jeepfolkecenter.org https://jeepfolkecenter.org/

Sources:

JEEP, 7 Miles, Gayaza Rd, Kyanja, Kampala, P. O. Box 4264, Uganda.

Case uploaded:

2021-03-12

Improved Solar-Powered Shallow Wells



Why to choose this solution?

Solar water pumps is a socially and environmentally attractive technology to supply water. It is simple, reliable, relatively cheap, easily understood and requires low maintenance costs. Skills required to install the system are often available locally.

Savings per day or production:

Improved shallow wells help to reduce on financial bills since, it is installed once and there no monthly bills incurred. This also helps to save money in a way that the expenditures of buying gasoline and diesel to pump the water are minimised.

Cost in money and in own time to construct:

The improved shallow well requires 2-3 days to construct. It costs between USh 4,500,000 - 5,000,000 (USD 1,250-1,388) to construct.

Lifetime:

The solar water-pumping systems are designed to last for a period of about 20 years. However, some components of the system, such as the controllers, may have to be replaced within this period

Maintenance needed:

Solar energy systems require periodic inspections and routine maintenance to keep them operating efficiently. Also, from time to time, components may need repair or replacement. You should also take steps to prevent scaling, corrosion, and freezing. While you might be able to handle some of the inspections and maintenance tasks on your own, others may require a qualified technician.

Resources needed in use:

Water-storage containers.

Problems and limits:

It involves higher initial costs because it recquires a solar pump, plumbing work and tank where the water will be stored. Solar panels are popular with thieves and so need to be monitored during the day and at night. It is also necessary to avoid damaging the panels; youngsters throwing stones are a constant problem. The fact that there are in principle no running costs makes it hard to convince users to set aside money to cater for regular maintenance and repairs. These have to be conducted by experts, who are often not available at short notice. As a result, repairs are time consuming. Lower output in cloudy weather and the system must have good sun exposure between 9 AM and 3 PM.

Where and how can you get it or make it?

JEEP installs and constructs the shallow water wells and these have been installed in all regions in Uganda.

Skills needed to produce, install. maintenance, use:

Needs a technical person to manatain and install.

How to use it:

Not relevant.

How to maintain it:

Not relevant.

Climate effect (if any):

In regards to pollutants released during manufacturing, IPCC (2010) summarises literature that indicates that solar PV has a very low lifecycle cost of pollution per kiloWatt-hour (compared to other technologies). Recycling of solar panels is already economically viable. A solar-based water pump system does not result in greenhouse-gas emissions. Extensive use of solar powered water pumps would reduce greenhouse-gas emissions substantially.

Why is it successful?

It is efficient and can be operated easily with no carbon emissions. It is well known and can be used in several ways / institutions i.e hospitals, schools, households. It has greatly contributed to improved access to waters in poor rural communities. Additionally, it has contributed to improved standards of living through increased access to water. The equipment is purchased once and maintenance can be done after 3-5 years.

If you can make it, a short description, typical problems, materials needed:

Technical personnel are required for installation.

How to make it (if possible):

Not relevant.

How is it delivered and by whom?

JEEP installs them.

Successful financial model

Support from donor agencies and other development partners.

What policies and strategies helped the success?

Government programs implemented by different ministries; for example, the Ministry of Energy and Mineral Development, along with the Ministry of Water and Environment, are training communities on thebenefits of solar energy. Training and advocacy is pursued in communities to foster a positive attitude toward environmental conservation. The government, through the Ministry of Health, is encouraging promotion of solar in off-grid, peri-urban, and rural areas. Many solar subsidies and tax waivers have been put in place through the Uganda revenue authority.

More info:

Sources:

JEEP, 7 Miles, Gayaza Rd, Kyanja, Kampala, P. O. Box 4264, Uganda. Tel: +256 414 578 316. E: info@jeepfolkecenter.org https://jeepfolkecenter.org/

Case uploaded:

2021-02-04

Rainmaker Solar-Powered Water Pump



Why to choose this solution?

The Rainmaker is a portable solar-powered water-pumping system designed for small-scale farming and household use. It can lift water to a maximum height of 100 m, with a capacity of seven cubic meters per day, ensuring a steady supply of water for farming and household needs. It can provide sufficient water for up to 1.5 acres of irrigation. It can also be used for livestock and domestic household needs. The Rainmaker pumps a lot of water and does not use any fuel other than sunlight.

Savings per day or production:

Initially, users of electric water pumps used to irrigate crops had to pay an average of KSh 4,500- 5,000 (USD 45-50) in monthly electricity bills. Running the Rainmaker system now costs KSh 2,500-2,800 (USD 25-28) per month, saving about KSh 2,200 (USD 22) per month, i.e., KSh 73 (USD 0.73) per day.

Cost in money and in own time to construct:

Costs KSh 50,000 (USD 500). A survey fee of KSh 4,500 (USD 45) is charged when a field agent visits a site, of which KSh 2,000 (USD 20) is a sales analysis fee. Installation usually takes one day, and the technician conducts proper on-site training for end-users.

Lifetime:

Not specified.

Maintenance needed:

Post-installation issues such as permanently mounting solar modules of the Rainmaker pump on the roof.

Resources needed in use:

Water, and solar power.

Problems and limits:

Entry of cheaper fake and counterfeit products into the Kenyan market affects customer trust and confidence that have been built in their products so far and could have a negative impact on sales.

Where and how can you get it or make it?

In Kenya, SunCulture, a private company supplying Rainmaker systems, has its main office in Nairobi as well as sales outlets in Eldoret (Uasin Gishu County), Nakuru (Nakuru County), Mitunguu (Meru County), Mutithi (Kirinyaga County), and Matanya (Laikipia County), with more being planned to cater for growing demand. It supplies its products to all parts of Kenya, with most of their sales done through Facebook, radio, and direct enquiries made at the head office. In Africa, SunCulture has supplied solar water-pumping systems to Zambia (where there is a distributor), Uganda, Somalia, Ethiopia, Rwanda, Nigeria, Ghana and Mozambique.

Skills needed to produce, install. maintenance, use:

Production, installation, and maintenance require engineering skills. Use of the system requires training.

How to use it:

To be added.

How to maintain it:

To be added.

Climate effect (if any):

Not specified.

Why is it successful?

An important contribution to their success is that Sunculture has constantly designed and redesigned Rainmaker systems to meet farmersâ€™ needs. Rainmaker also pumps a lot of water and does not use any fuel. Can be used in several ways, e.g., for livestock and domestic household needs. The pump is suitable for many water sources including wells, boreholes, dams, and lakes.

If you can make it, a short description, typical problems, materials needed:

Materials needed include a 24V stainless-steel submersible water pump; 120-Watt portable solar modules; a 480-Watt-hour 24V waterproof battery bank paired with a Weather Smart Maximum Power Point Tracking (MPPT) charge controller in a lockable waterproof portable case; and a brass impact sprinkler with a 10-m radius.

How to make it (if possible):

Not relevant.

How is it delivered and by whom?

Installation of Rainmaker solar-powered water pumps is done by SunCulture Company, which has a dedicated team of 75 staff of which 60% are male and 40% female, based in various parts of the country. These include 16 full-time field-based technicians and 30 field-sales agents who provide installation services to the customers after conducting surveys. The field agents work in, and report to regional representatives in, three main regions, namely Western, Central, and the Coastal Area.

Successful financial model

SunCulture operations are currently supported by grant funding, by income from sales, and by strategic partnerships. Key funding partners include the Shell Foundation, USAID, and Microsoft, among others. The company has also attracted investment from international institutions such as Energy Access Ventures and Partners Group, which has enabled them to add business management, to widen their geographic reach, and to recruit sector-specific partners.

What policies and strategies helped the success?

The overall policy environment is favourable for SunCulture operations in Kenya, to which they can import all their products with ease. Imported solar irrigation systems are tax-exempt, and this favourable regulatory framework contributes to lower selling prices.

More info:

http://www.sunculture.com/

Sources:

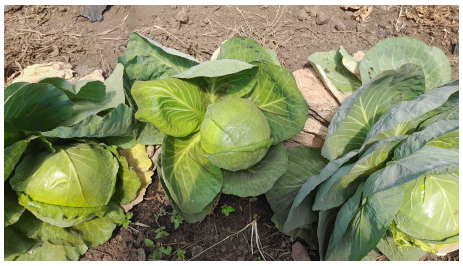
SunCulture, 236, Owashika Road, Lavington, Nairobi, Kenya. Tel.: +254 700 327 002, E-mail: info@sunculture.com

Case uploaded:

2020-08-27

Angaza Greenhouse and Drip Irrigation Farming





Why to choose this solution?

Drip irrigation is an efficient water and nutrient delivery system for growing crops. Relatively less water and manpower is required to irrigate crops. Combination of drip irrigation and greenhouse enhance water use efficiency much more. Greenhouse farming increase crop production because it is possible to create the optimal climate conditions needed for plant growth and it provides possibility to grow more plants per square meter than growing crops in an open field. It is easy to control crop pest and disease and possible to cultivate through the year. Greenhouse help to use little amount of water.

Savings per day or production:

It saves water to about 50 percent because the environment is enclosed and the efficiency of the drip irrigation system where water is directed to the plant root. Crop pest controlled when cultivating in green house, help little use of pesticides or no use at all. By doing this it means less money is spent.

Cost in money and in own time to construct:

The installation of greenhouse of 8mx30m cost Tshs 14,000,000/= The cost of installation depends on market price. Greenhouse structure can also be made from wood or bamboo but does not last long compared with those built by steel type.

Lifetime:

The greenhouse can last for 15 years old and above.

Maintenance needed:

After 5 years, repair of plastic nylon is needed.

Resources needed in use:

Resources needed include standard steel type, steel type assembly and connection, side insect proof screen netting, greenhouse plastic for roofing, Drip irrigation system, water supply (Tank tower, Tank and pipe network.

Problems and limits:

Temperature increases during dry season, leading to affect plant growth negatively. Frequently watering/irrigation can bring cooling of the plants.

Where and how can you get it or make it?

It is available at Angaza Women Centre in Tanzania promoted and installed by Balton company, Greenhouse Tanzania, etc.

Skills needed to produce, install. maintenance, use:

Installation and repair of greenhouse needs trained personnel. Training is needed to be able to construct and repair.

How to use it:

https://youtube.com/shorts/PXS5xKL30sw?feature=share

How to maintain it:

N/A

Climate effect (if any):

Agriculture is one of the main drivers of deforestation in Tanzania. Greenhouse make possible to use small area to produce large amount of produces thus eliminating the need to open new field hence reduced deforestation. The use greenhouse uses little amount of water hence it is suitable during the drought condition. Also due to climate change there is an increase of crop pest, the greenhouse can help to reduce use of pesticides contributing to reduce GHG emissions.

Why is it successful?

Amount of water required for watering plants is reduced. Enable production even in off season, normally crops produced in off season fetch good market price.

If you can make it, a short description, typical problems, materials needed:

Not applicable, needs a skilled technician

How to make it (if possible):

N/A

How is it delivered and by whom?

Main actors are the supplier of drip irrigation systems, farmers, water supply agency.

Successful financial model

The initial capital for installation/construction of greenhouse was obtained from sponsor. Korea Government funded the installation of the Greenhouse. The cost of repair/maintenance is covered by revenue generated through selling crop produce.

What policies and strategies helped the success?

National irrigation Master plan, Tanzania Agriculture policy 2013, Tanzania Horticultural Development Strategy 2012-2021.

More info:

Sources:

Angaza Women Centre (AWC), P.O Box 143, Sanyajuu - Siha, Tanzania. Email: angazawomen@yahoo.com, Telephone +255 756716798

Case uploaded:

2022-03-28

Mpunzungulu Huzi Solar Powered Drip Irrigation Mango Scheme

Why to choose this solution?

Increases in population along with rising demands for water and energy have caused stress to water and energy resources. Replacement of conventional sources of energy with renewables, and of conventional methods of irrigation with highly efficient irrigation techniques, will increase global water and energy security as well as benefit the environment. Mpunzungulu Agriculture Marketing Cooperative Society (AMCOs) is involved in small-scale commercial farming and processing of mangoes. The farm comprises 200 acres and is expected to expand to 500 acres. Diesel is the main source of energy used for pumping water from the borehole for irrigation of the mango farm. Replacement of the diesel pump with solar and use of drip irrigation will minimize water use while contributing to increased farm productivity and environmental conservation.

Savings per day or production:

Solar is an abundant source of energy and available for free. Drip irrigation uses less water without affecting the crop yield. A solar-powered water system is cost-effective over years, as it requires minimal operational and maintenance costs, unlike a diesel-powered system.

Cost in money and in own time to construct:

Cost involved in installation of the system to cover 20 acres amounts to TSh. 78,600 million equivalent to USD 34,000 (solar water pump with capacity of 18 m3/hour costs TSh. 48,300 million equivalent to USD 20,900 and the drip irrigation system costs TSh. 30,300 million equivalent to USD 13,100).

Lifetime:

The system is expected to last for a period of 3 to 5 years.

Maintenance needed:

Requires regular cleaning of the water pump. Drip plumbing requires at least annual testing, adjustment, and repairs of leaks.

Resources needed in use:

Solar radiation.

Problems and limits:

No solar power at night so there is a need for a large battery bank. High initial costs for material and installation and long return of investment.

Where and how can you get it or make it?

Sold by companies in Tanzania e.g. by Merry Water Company Limited https://www.merrywater.co.tz/, Ensol Tanzania Ltd, Davis & Shirtliff https://www.davisandshirtliff.com/tanzania-branches.

Skills needed to produce, install. maintenance, use:

It requires special skills to manufacture solar and water pump. Simple training is all that is required to maintain and use it.

How to use it:

How to maintain it:

Requires regular cleaning of the water pump. Drip plumbing requires at least annual testing, adjustment, and repairs of leaks.

Climate effect (if any):

Solar power is pollution free and causes no greenhouse gases emitted after installation. It reduced dependence on foreign oil and fossil fuels. Eliminates burning of diesel fuel to power pumps; and reduces water use.

Why is it successful?

The agricultural sector is the largest employer in Tanzania, sustaining the livelihoods of more than 70% of the population. Increasing agricultural productivity is recognised as one of the most effective ways to fight poverty and to stimulate socio-economic development. Irrigation is among the measures that can improve yields and reduce vulnerability to changing rainfall patterns, and drip irrigation delivers water specifically to plantsâ€™ root zones, resulting in vastly reduced water losses to evaporation, runoff, and off-target spray and overall lower use of water. Solar water pump has provided reliable, cost-effective and environmentally sustainable energy for the Mango farm.

If you can make it, a short description, typical problems, materials needed:

Equipment required includes solar panels and other accessories, water pump, special pipe for drip irrigation, small replacement parts such as emitters, etc.

How to make it (if possible):

How is it delivered and by whom?

Main actors include Chamwino District Council (is a government authority of the area, where the farm is located. It is responsible in provision of extension services, and assisting AMCOS to attract different investors), Mpunzungulu AMCOs (is an association of mango farmers and owners of the farm), University of Sokoine (suppliers of mango seedlings), World Resource Institute (financier of the solar powered drip irrigation system), TaTEDO (involved in installation of the system), Solar pumps companies (suppliers of solar pump and drip irrigation system).

Successful financial model

Public private Partnership and Special Purpose Vehicle.

What policies and strategies helped the success?

Tax exemption for solar panels.

More info:

Contact: Chamwino District Council, Dodoma, Tanzania.

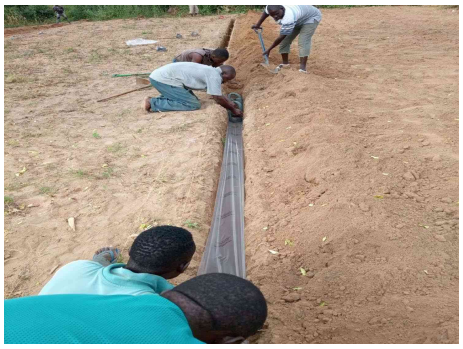
Sources:

TaTEDO, MbeziJuu, Mpakani Road, Goba, House No GOB/KZD/883, P. O. Box 32794, Dar es Salaam, Tanzania. Tel: +255 738-201498, E-mail: energy@tatedo.or.tz, http://www.tatedo.or.tz

Case uploaded:

2021-03-19

Subsurface Water Retention Technology (SWRT)



Why to choose this solution?

The technology (membrane) prevents water and nutrients lost through deep percolation in sandy soil hence increase productivity and reduce soil based poverty.

Savings per day or production:

This is a long-term technology which last for more than 50years.while comparing two plots one with SWRT and control, the SWRT plot produces five times the control

Cost in money and in own time to construct:

A plot of 10m x 10m consumes a membrane of KSH. 4000 (USD 40) plus labor. Lets assume we use 3intsallers for 2 days to complete this plot each installer to be paid KSH 500 (USD 5) per day total cost of installation will be 3 x 2 = 6x500=KSH 3000. Total installation will cost a farmer KHS 7000 (USD 70).

Lifetime:

SWRT is predicted to last more than 50 years.

Maintenance needed:

Maintain shallow cultivation with no use of ox or tractor plough.

Resources needed in use:

Polythene membrane, Jembe (Shovel), Tape measure

Problems and limits:

The technology is applicable in only sandy soils. No deep ploughing such as OX-plough and tractor plough.

Where and how can you get it or make it?

Jomo Kenyatta University of Agriculture and Technology (JKUAT) Enterprise Limited

Skills needed to produce, install. maintenance, use:

There are trained persons on membrane installation

How to use it:

https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&cad=rja&uact=8&ved=2ahUKEwjDsNn9tbT3AhWIyaQKHXUmD6AQwqsBegQIBBAB&url=https%3A%2F%2Fwww.youtube.com%2Fwatch%3Fv%3D4PtlQM0z8cU&usg=AOvVaw3MnRMCXded7PyfLQlGorz0

How to maintain it:

N/A

Climate effect (if any):

Gases produced by the membrane have been collected, tested and found environmentally friendly to human beings.

Why is it successful?

Successful because the technology increases production up to 5 folds, very effective in semi- arid areas.

If you can make it, a short description, typical problems, materials needed:

You need to have the membrane which gauge .Jembe, shovel tape measure etc. installation is done by trained people.This technology is applicable to sandy farms with a depth of 1.2m. No use of ox or tractor plough.

How to make it (if possible):

https://www.google.com/url?sa=t&rct=j&q=&esrc=s&source=web&cd=&cad=rja&uact=8&ved=2ahUKEwinhqHvuLT3AhXH5KQKHVeZCdkQwqsBegQIBBAB&url=https%3A%2F%2Fwww.youtube.com%2Fwatch%3Fv%3DT4Ro1UmAzIs&usg=AOvVaw2ImRlNRrNArIOoee9MSAp0

How is it delivered and by whom?

Delivered by Jkuates, the International Center for Tropical Agriculture (CIAT), Saint Louis University (SLU).

Successful financial model

The technology is financed by Nordic Climate Facility (NCF).

What policies and strategies helped the success?

Established 20 trials in four villages in Makueni county, Kenya .This served as a learning point for other farmers. The project is also providing 10mÃƒâ€”10m free membrane to early adopters where they will only pay for installation cost.

More info:

JKUAT ENTERPRISE LIMITED, P.O Box 6200-00200, Nairobi, Kenya. Email jkuates@jkuates.jkuat.ac.ke, Info@jkuates.com, E: jemimahkanini6@gmail.com, Call +254724256696 +254708694592

Sources:

Visit JKUAT ENTERPRISE LIMITED

Case uploaded:

2022-04-27