

I. Project name.

Solar Food Dehydrator.

II. Executive summary.

Mestizo women from Guapalayna and Urique communities operate the present project that carries out the dehydration of tropical fruits and vegetables from the Urique Canyon in Chihuahua, México, these women, considered vulnerable perform the planting, harvesting, drying and packing of the product. Marketing and necessary training is made through Ecos AC. With this project local economy is boosted and self-employment is generated, in the meanwhile based on sustainable production, regional products are promoted.

III. Photography.



IV. Background, problems that deals with.

The community of Guapalayna is considered by the Mexican Government, through the SEDESOL dependency as a zone that needs priority attention based on the high rates of exclusion and poverty. The difficult access to this community makes governmental support almost inexistent and hard to achieve. In the municipality, the 70% of the indigenous population is Raramuri, those are associated with poverty as well. There are no similar projects in the region, consequently with this requested resource the community will work in conjunction with more productive projects, because this, served as an example. Ecos, A.C. does not look for

welfarism, but the founding of projects like this, so in this way the people can work and have responsibilities as well as benefits.

V. Scope and objectives.

Generate economic resources for self-sustenance; give added value to the crop free of chemicals through a sustainable production, to commercialize them through Chihuahua state and more under an appropriate and competitive scheme. On this way the project members can improve their life conditions and at the same time they are activating community economy, this products will be known as produced in the canyon by this communities.

VI. Sustainability.

a) Social impact.

The project benefits and employs 11 families from Guapalayna community. Their families are benefited as well because they are in charge of the planting and harvesting of vegetables and fruits free, while the women are in charge of the dehydration and packing the finished product. In addition this project will be enable to buy the fruit and vegetables production from 40 families from the same community. In Chihuahua city, 5 persons will be benefited as well since they will handle and ship and deliver the finished product to the resellers, all this from the canyon to Chihuahua. This make a total of 16 direct and 99 indirect beneficiaries.

b) Economic impact.

At the moment the women part of the project are making the dehydration their way of life, but the income aren't enough to consolidate and make the project grow, with this project they will be benefited from the very first year since the product sales are guaranteed and also in the financial run a biweekly salary is embedded for their work in the food dehydrator.

c) Environmental impact.

In this project no chemical products are used in order to obtain the raw material, the agricultural lands are from yesteryear and no new croplands are being started. They use drip irrigation systems which minimizes the lost of water, efficient use of production, which reduces the impact of consuming other natural resources from the community, the economy activity is focused in only one region, so this prevents the people to spread in others

communities looking for other economy activities or trading other species of flora and fauna, since they have a licit, productive and profitable activities.

d) Replication potential

The project is profitable because it has positive financial indicators, consequently once this project is finished it will be able to operate by itself, which is the main objective that this dehydrator can work with their own resources with total autonomy. In the same way this project can be replicated in other communities on different municipalities as long as they have the same geographic conditions to produce the raw material, the same technical conditions and the most important, the same organization capabilities for whoever is involved in the project.

For being a project currently in operations under an organizational scheme based on production is guaranteed to work at the same way, consequently the missing gear is to concrete the financial support.

The target market is; self-service stores, college dining halls and public in general.

As showed in the financial indicators the R C/B is 1.51, this will be achieved using price and costs from the financial run, which gives certitude to be a profitable investment.

VII. Community Involvement.

The Dehydrator activities are detailed on this way. Planting harvesting and delivering the raw material to dehydrate: community husbands.

- cleaning, slicing of raw material, preparation for dehydration, recollection and packing of finished product: 11 women in charge of the project.
- Collection of finished product from Urique, handling and shipping to Chihuahua: 5 men of ECOS AC.
- The women from this project will buy the fruits and vegetables produced by 40 families in the Guapalayna community in order to operate the dehydrator to full capacity and therefore increase the marketing. With this, women and families from the community will be benefited, in first place because they will sell their own harvest, and the 40 families will sell at the same time their harvest that usually was or not planted or wasted.

VIII. Technical feasibility.

For the operation of the project will have a written authorization from the municipal authority, giving permission to develop the activity without more special permissions. Once the industrial building is finished will fulfill all the safety guidelines like security lines, risk point and security meeting point, an insurance will be hired as well in case of natural disasters or any other kind. Social security will be given to those who work in the facilities.

Ecos, A.C. trained those involved in the project, since this women already have home solar dehydrators from a two years ago project, they dehydrates for their own consume. At the present time they use the facilities to dehydrate twice a week with satisfactory results and the finished product is intended for sale on different communities, but they require a bigger production in order to consolidate the project.

IX. Innovation.

The dehydration project for raw material is using solar energy at a 100%. In this region nor in the municipality there is no other project like this. We are pioneers and the spearhead on this kind of activities using the community participation and food free of chemicals as well as the proper use of alternative energy is definitely an added value to the production.

X. Evidence.

Please check this link for watch a dehydrate video:

<https://www.youtube.com/watch?v=IQ-9Li8No2U>

Please check the next link for view the Ecos, A.C. jobs:

<https://www.youtube.com/watch?v=uhfpfHbTzGM>

XI. General Budget.

General Budget

Concept	Unit of measurement	Quantity	Unit price	Total invesment	Amount in USD			
					Ecos, A.C.	Fundación Cementos de Chihuahua, A.C.	Goldcorp	Global Giving (Economic Support)
<i>Fixed investment</i>								
Terrain	m2	1,150	\$ 3.93	\$ 4,522.47	\$ 4,522.47	\$ -	\$ -	\$ -
Dehydrator infrastructure	m2	12	\$ 280.90	\$ 3,370.79	\$ -	\$ -	\$ 3,370.79	
Process ship	m2	80	\$ 280.90	\$ 22,471.91	\$ -	\$ 22,471.91	\$ -	\$ -
Industrial equipment	lot	1	\$ 5,617.98	\$ 5,617.98	\$ 5,617.98	\$ -		\$ -
Utility vehicle	Unit	1	\$25,000.00	\$ 25,000.00	\$ -	\$ -	\$ -	\$ 25,000.00
Specialized furniture	Unit	1	\$18,750.00	\$ 18,750.00	\$ -	\$ -	\$ -	\$ 18,750.00
Others								
Subtotal:				\$ 79,733.15	\$ 10,140.45	\$ 22,471.91	\$ 3,370.79	\$ 43,750.00
<i>Deferred invesment</i>								
Labor training	Action	1	\$ 1,123.60	\$ 1,123.60	\$ 1,123.60	\$ -	\$ -	\$ -
Others								
Subtotal:				\$ 1,123.60	\$ 1,123.60	\$ -	\$ -	\$ -
<i>Working capital</i>								
Labor	Action	1	\$ 4,098.88	\$ 4,098.88	\$ 4,098.88	\$ -	\$ -	\$ -
Others								
Subtotal:				\$ 4,098.88	\$ 4,098.88	\$ -	\$ -	\$ -
Total in \$:				\$ 84,955.62	\$ 15,362.92	\$ 22,471.91	\$ 3,370.79	\$ 43,750.00
Total in %				100%	18%	26%	4%	51%