Newsletter

Food Security & Farmers Eating Habits









Mungbean Plant

EFFORTS EXERTED BY EDA, SHA & OTHER PARTNERS TO CHECK FOOD SECURITY PROBLEMS IN SEMIEN SHEWA ZONE OF AMHARA REGION & IN AKAKI KALITY SUB CITY OF ADDIS ABABA

Food security problems were first reported in Ethiopia in the early 1970s and have remained a serious challenge to the country's development ever since. Recurring droughts, erratic rainfall patterns, ecosystem degradation, rapid population growth, household asset depletion, inadequate rural infrastructure, poor understanding of water development, low level of technology employed in agriculture and insufficient diversification of rural livelihoods are the main causes of food insecurity (MoARD, 2007).

Various studies reveal that even nowadays 57% of child deaths are caused by malnutrition. According to the latest national survey, among children aged between 6-59 months; stunted growth, underweight, wasting and anemic conditions are reported to be 38%, 34%, 12% and 54% respectively. The report furthermore reveals that 57% of children from 6-24 months do not receive vitamin A supplementation and almost 95% of households do not have access to iodized salt **(WFP, 2011)**.

In order to help this predicament and eradicate the associated economic and social problems, various NGOs have given remarkable support to the Ethiopian government and, as part of this work, the Emmanuel Development Association (EDA) and its local and international partners have cooperated to check the precarious food security situation in its intervention areas of Addis Ababa and the Amhara Region. Among other exemplary projects, we have introduced farmers and urban dwellers to mungbean, a new pulse crop, known for its excellent nutritional value.

The Emmanuel Development Association (EDA) is cooperating with Self Help Africa (SHA), Canadian Feed the Children (CFTC) and Oxfam Canada to change the lives of destitute farmers and poor urban dwellers by encouraging them to grow mungbeans and other healthy vegetables, practice apiculture and breed small ruminants on farms in kebles, or council areas, where the organisations are working.

The EDA and its partners aim to change the lives and livelihoods of food-insecure farmers and contribute to Ethiopia's Agriculture Growth Program (AGP). We have been successful in encouraging the prevention of asset depletion and improving the asset-holding capacity of a considerable number of poor farmers and sub-urban dwellers. To date, the EDA and its partners have helped 22,410 people obtain a satisfying degree of food security and, in accordance with the government core program, EDA and its partners have promoted asset transfer as a vehicle for sustained economic empowerment for economically feeble, marginalized households.

As a result, 4,482 farmers now have better access to knowledge and information through the various training sessions which we have held. By using both organic and chemical fertilizers as well as better, improved seeds and by the introduction of contour farming and diversification of livelihood, the agricultural productivity and household incomes of the targeted food-insecure farmers have greatly improved. We have also introduced value chains of agricultural products, such as honey and mung beans, to increase both the value and volume of the growers' sales. We have helped farmers overcome





problems caused by inclement weather conditions and have introduced improved water development and management techniques through supporting farmers to develop shallow, underground water for irrigation and through the provision of water pumps. As a result, hundreds of shallow water wells for irrigation purposes have been dug and water pumps distributed to target farmers. In effect, hundreds of destitute farmers have started growing and harvesting mungbeans and other vegetables with the help of water pumps provided by EDA & SHA and each farmer has earned hundreds of thousands of Birr in a five to nine months period. This means that the farmers' children can now enjoy hot lunches, buy education materials and school uniforms and pay their school fees so that they can attend school regularly. The children and their mothers also have secured, balanced diet and we are seeing less cases of stunted growth, underweight, wasting and anemic conditions.

To strengthen farmers' cooperatives and their capacity, we have provided a number of cooperative leaders with various training opportunities. We have also bought office furniture and distributed it to multi-purpose cooperatives as well as replacing poor, dilapidated store facilities with new, well-constructed ones.



Old dilapidated store



Newly built store by EDA & SHA

As part of the project, we gave 2,291 poor farmers and urban families 4,810 small ruminants so that the project participants can enhance their asset-holding status and diversify their livelihood. These beneficiaries have now reared and own 16,000 small animals which are worth of about 12,800,000 Birr.

Mungbean & ITS CONTRIBUTION TOWARDS CHECKING THE PRECARIOUS FOOD SECURITY SITUATION IN KEWOT & TARMABER WOREDAS

Mungbean is a leguminous pulse crop which performs well in lowland areas on either a sandy or loam soil with a pH value of from 6.2 to 7.2. The plant is highly branched and has trifoliate leaves as do other legumes. When mungbeans are planted in a field for the first time, the necessary nitrogen fixing bacteria must be provided (UOM, 1990).

Mungbean purports to be originated from India and has been grown there since ancient times. It is also believed to has been grown in America as a food crop as far back as 1835. It is also known as green gram, Golden gram, chop suey bean and Chickasaw pea invarious Asian countries and the United States where they are well-branded as a staple food because of its high nutritional value.

Though it is branded well in these countries, mungbean has remained being strange for Ethiopian farmers for years and it was, in any case, practically unheard of until about fifty years ago. Mungbean is

still today considered an exotic crop even if it has been cultivated in parts of Ethiopia for almost half a century. Thus, it is essential to inform farmers about its nutritional value and how to use it in their daily diets especially as mungbean is originally considered as animal feed and for growing as hedges to separate one plot of land from another. Some farmers have recently accumulated substantial wealth by exporting mungbeans but too few people have understood enough about its nutritional value and its importance as a valuable staple food for combatting food security problems.

Nutritional Value of Mungbean and its Substitutability to Replace other Pulse Crops

Scientific studies confirm that the beans is rich in vitamins, minerals and proteins and is the ideal to substitute lentils, pea and horse beans which are all highland crops. Unfortunately, thousands of lowland farmers have failed to consider mungbean as a viable source of food, even during times of acute food shortages, and have gone on buying more expensive lentils, peas and horse beans from highland farmers. People who could not afford these costly highland pulse crops have been seen living at starvation level while having mungbeans stored in their bins or barns.

Efforts Exerted by EDA & SHA to introduce Mungbean as a Food

EDA and SHA have been implementing two projects in Kewot Woreda of Semien Shewa Zone of the Amahara region since 2011. These projects have encouraged more than 1000 farmers to produce mungbean in bulk and have educated them about the crop's nutritional value. Thousands of booklets explaining the beans' nutritional importance have been distributed to thousands of farmers and urban dwellers and a total of 821 participants have attended 6 mungbean promotional events organized by our team. As a result, many farmers and urban dwellers from Kewot and Tarmaber Woredas are now aware of mungbean's nutritional content and have learnt how to prepare various delicious foods, including shiro and kik, ingredients for typical Ethiopian stews, from this bean instead of beans, peas or lentils.





mungbean Shiro powder



mungbean Kik



Stew being prepared from mungbean shiro

Results Achieved and EDA/SHA Legacy

Our beneficiaries have started making sandwich and soups by cooking mungbean whole seeds with vegetables and various flavors and spices.

Of course, EDA and SHA are not the only organisations to introduce mungbean as a crop to farmers and neither are we the only ones to encourage farmers to grow them for export. Farmers had, in fact, already started growing mungbean before EDA's and SHA's intervention in the woredas. But, before EDA's appearance, the woredas farmers had no information about the beans' nutritional value and did not know that they could prepare very tasty food using the bean.

EDA and SHA were the first organizations to make farmers and urban dwellers aware of the fact that mungbean is a highly nutritional crop and, therefore, an ideal substitute for lentils, peas and beans. We were also the first organisations to train farmers and urban dwellers regarding how to prepare a variety of dishes using mungbean and we can, therefore, claim to be the

first and only organisations to convince farmers and urban dwellers to add this new, previously somewhat under-appreciated crop in to their diet. EDA & SHA strongly believe that introducing a new food item to the farmers' diet helps limit the food security problem as it leads to increased diversification and various meal options for the farmers and their families.

REAL DISCERNIBLE FACTS

WITHIN A YEAR - FROM A DESPERATE LIFE TO A GLOWING FORTUNE

Aregahegn's old sordid but



"My farm land is one [1] hectare and it had not been irrigated for several years. As a result, I always had to wait for rain and could only harvest crops once a year. Consequently, my family suffered from a food deficit year after year. While living in such desperate conditions, I heard about two NGOs, (Emmanuel Development Association-EDA and Self Help Africa-SHA), who have been working to support poor farmers. While I was checking the information, EDA's Extension Workers & Development Agents from the Ministry of Agriculture (MOA) contacted me and told me about the advantages of their scheme. So, I decided to volunteer and said that I was ready to use what I can learn to my advantage. They put me in a group with nine other farmers and gave us a water

pump and training on irrigation, horticulture, the nutritional value of mungbeans and the principles and benefits of working as a co-operative. We are now using our water pump and the knowledge we gained from the training sessions and have started to harvest water for irrigation by using a hand-

dug well and water pump.

Up to now, we have managed to harvest three times a year by using the water pump machine and, at four month intervals, I have earned 18,000, 62,000, and 34,570 Birr respectively making a total of 114,570 Birr. All this has helped solve most of my problems. I have now bought my own water pump machine and replaced my original, grass-thatched house with one made of corrugated iron sheets – all this is progress indeed. I am now in the position to provide clothes for my family and school uniforms and education materials for my children and my life is much easier and manageable. From now on, we do not expect food shortages and hope that our family will never suffer a food deficit ever again. Is that not miracle to see a family being changed within a year from a desperate life to a glowing fortune?



Aregahgn's new house on progress



Aregahegn operating his water pump

"THE DAY I MET EDA IS THE DAY I REGAINED MY SIGHT"

- farmer Getu from Yelen

The year 2011 is, as I like to say, when I got my sight back. I can now truly state that all the early years



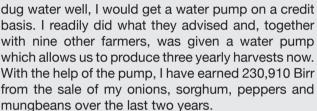
were lost because I was "blind" to the problematic situation. If a person is blind, he or she can't move far without the help of others. Even though a blind person knows that it would be a good thing to go somewhere else, he can't do anything because he can't see a way out of the situation. That's just how I felt ... like a blind person who cannot see a way out. I had been trying to run and escape poverty for years but nothing happened until EDA gave me the opportunity to change my way of working. Thus, I better say that the day I met EDA is the day I regained my sight! Amazingly, in three years, I earned 156,780 Birr! I bought land for 65,000 Birr to build a house on and I also bought a water pump, a camel and an ox.

"ISN'T IT A MIRACLE WHEN A POOR, DESTITUTE **FARMER CAN EARN 230,910.00 BIRR JUST IN A COUPLE OF** YEARS?" - farmer Asrat from Yelen

My life had been really bad for several years. The land I have owned is not fertile and the crop I produced from the land was very small. As a result, I had to go to my folks several times to ask them to loan me money to buy food for my children. Although they helped me at the beginning, they soon got fed up with having to do the same thing again and again and always looked wary when I went to see them.

When there was nothing else that I could do, I sold all my livestock except one donkey. After a year, my luck ran out again and I could not see what the future would bring but, luckily, that was in 2011 EDA and SHA found me! With their help, I feel that I will be able to improve my life and have a much rosier future.

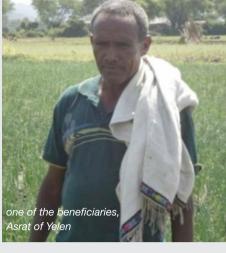
EDA staff workers visited me and told me that, if I



mungbeans over the last two years. It is hard for me to find the words to express the gratitude and respect I feel towards EDA & SHA. My empty stable now houses various livestock, I have been able to buy two oxen, one heifer and one bull as well as a water pump. I also hope to buy a plot of land at Shewa Robit Town to build my family a proper house. Isn't it a real miracle that a

destitute farmer managed to earn 230, 910 Birr

over a couple of years? (Farmer Asrat from Yelen).



"MY CHILDREN ARE NO LONGER IN DANGER OF STARVATION" - Bezawuletaw of Yelen

I have 3 hectares of land to till but I never managed to provide well for my family due to moisture stress, a lack of essential practical knowledge, no irrigation facilities and the general marginality of my land. I worked hard but the income from my land was not even enough to feed my family over the years. As a result, we all lived a very unhappy, sordid life.

Then I was lucky enough to be helped by EDA & SHA. I received training about water pump operation, the correct use of fertilizers pertaining to horticulture as well as information on the nutritional value of mungbean, livelihood diversification and the working of cooperatives. At the end of these various trainings. nine other farmers and myself were provided with a water pump.

So, thanks to God and the help I got from EDA and SHA, I now have a much better standard of living and poverty seems a thing of the past. With irrigation from my water pump, I have produced two onion harvests and have earned 62,200 Birr from selling them. Hereafter, my children are no longer living on the verge of starvation. I am able to provide them with enough food and buy them clothes, shoes and education materials.

I have also recently bought a plot of urban land and corrugated iron sheets to build a new house to replace my poor grass thatched hut. I hope we will start building our home soon buy some oxen. Because of the training and awareness we received during a food promotion event, my wife has started to prepare mungbean stew and soup.



Bezawuletaw, one of the beneficiaries in his house



Bezawuletaw with his water pump



Bezawuletaw with the new corrugated iron sheets he has bought to build a new house

"COMPLEXION OF MY LIFE IS CHANGING FOR THE BETTER"

- Tirunesh of Sina



Tirunesh with hear sheep

I am divorced and have no man to share the burden of family life. As a result, my children and I often had only one very small meal a day and we were usually really hungry. I often had no option other than to go to relatives and friends to borrow money until they were afraid that I would never be able to repay them as I had absolutely no assets at all. Then, my luck changed when, in October 2009, I was given two ewes. I then managed to rear sixteen ruminants and, even though three of them died, I sold another three for 1,700 Birr and slaughtered one for my family to celebrate last Christmas. Thanks to God, EDA and CFTC, I now have ten ruminants, six ewes and four lambs.

Though it is traditional for most of us to kill an animal for the New Year, Christmas, Epiphany and Easter festivities, this had never been possible for me before. In fact, this was the first time I had killed an animal for a religious holiday. So, complexion of my life is changing and, as I have a better chance to increase my earnings, I am not so short of money and can purchase school uniforms and education materials for my two daughters. I actually spent 420 Birr for my daughters' school uniforms and used 300 Birr to partially repay my debt for the two ewes I received from EDA. I also settled debts I had with relations who had previously loaned me money to buy cereals.

"SMALL RUMINANTS ARE EASILY MANAGEABLE"

- Yehuala



Yehuala with his sheep

I had always lived in extreme poverty and was used to being short of food. My small plot of marginalized land does not produce enough food for me and my family and, because of climatic problems, there are years when I cannot even harvest one quintal of produce. During such times, I was forced to beg or ask my family and relatives for help but, in 2011, EDA gave me three ewes and I am much more hopeful about our future now that I have a more diversified livelihood.

Small ruminants are easily manageable in that they do not need much space, are easy to herd and are productive. They reproduce over a relatively short period of time and I have more and more animals in my flock now. Currently, they get a good price at the market and are a good source of money when I need to buy fertilizer and other farm necessities to improve my crop performance. I also use the money to buy cereals when food gets short and clothes and shoes for myself, my wife and a relative who is currently living with us. In general, I can say that I have started to diversify my livelihood and, evenif my crops fail, I can depend onmy sheep."

"I REGRET . . . " Desta of Yelen



Desta with Mungbean shiro, ready to make stew

I regret the time I lost before I learnt that mungbean is such an excellent food. There were days when I was so short of money that I simply could not buy beans, lentils or peas and gave my children bread or ingera with salt even though I had some mungbean in my store. Now, thanks to EDA and SHA, I have learnt how to use my nutritious, healthy mungbean crop.

"REALLY, THEY ARE TASTY, EASILY DIGESTIBLE AND FEEL GOOD IN THE STOMACH ..." - Etayizer of Yelen



Etayizer ready to make shirowot/stew from Mungbean

I am one of Desta's neighbors but, although we live in the same rural farming village, I did not get the chance to participate in the mungbean food promotion event at Shewa Robit which she attended. Later, however, Desta made me taste some of the food she made from mungbean.

She also showed me how to split mungbean to use as kik and how to grind it to make shiro (powder). Following her advice, I now use mungbean to make kik and Shiro and often make Shiro and Kik wot/ stew, for my family. The bean is really tasty, easily digestible and feels good in the stomach. I used to go to various markets to buy the much more expensive lentils, peas and other beans even though I already had mungbean in my bins but, now, all this extra work and fuss is simply not necessary any longer.

"I HAVE JUST STARTED TO SELL MUNGBEAN KIK AND SHIRO ..."

- Avichesh of ShewaRobit

Before this, we did not know how nutritious mungbean is used as food and, so, we only used it for animal forage. We urban dwellers were not happy to eat mungbean even if it is given to us free-of-charge. I always thought this way and refused the beans when it was offered to me because I had no cattle to feed them to!



Ayichesh, preparing kik and shiro from mun gbean

But now, I know all about their nutritional qualities and also know how to use them to make Kik, something like split lentils, and shiro powder. I have just started to sell mungbean shiro and kik to other people. It has, of course, not been easy to convince people who do not know anything about the food value of mungbeans but I have managed to win over a number of customers and more and more are coming over to my way of thinking. I have also started using mungbean shiro and kik to prepare delicious, tasty stews for my family. These stews feel very "comfortable" in the stomach and are very reasonably priced compared to the much more expensive lentils, peas and other beans.

"I WAS SURPRISED THAT Mungbean IS AS TASTY AS LENTILS, PEAS AND HORSE BEANS ... IF NOT BETTER!" - Dagmawit of ShewaRobit



Dagmawit cleaning mungbean kik

I did not attend the mungbean food promotion events organized by EDA but my friend, Ayichesh, who attended all of the events, told me about the varieties of food from mungbean. At first, I did not really believe her because mungbeans had never been used as a food in my town, Shewa Robit. Then, Ayichesh cooked some mungbean soups and stews and let me taste them. They were as good as those made from lentils, peas and horse beans, if not even better, and I was simply astonished.

Since then, I have been making mungbean stews for my family. Lentils are not so light on the stomach, especially for people with gastric problems, but I think that mungbean is fine for everybody. It is not so heavy and indigestible. I have also read a small EDA and SHA booklet and have learned a lot about the beans' nutritional value. The booklet has convinced me to use mungbean and various cereals to make mixed flour for my baby and, as you can see, I am now splitting mungbean for my stews using a traditional device, a local milestone.



"I SPENT SO MUCH PRECIOUS TIME SELLING MY GOLD FOR COPPER"

- Beleyu of Yelen



Beliyu cleaning Mungbean for stew

I did not know anything about the nutritional importance of mungbean but, like other farmers, I planted it simply to trace the boundaries between one plot of land and the next. We all thought that mungbean is tasteless and not nutritious so no-one had ever cooked them as food for ourselves. Then, a few years ago, some merchants said they would like to buy the bean and so we started growing more of them for sale but the market for them was not stable enough and we have not been encouraged to produce them in bulk quantities.



Beliyu preparing stew from mungbean

When the mungbean market failed, we simply used to boil (we call it Nifiro) and give it to herds as snack or used it as forage for animals. Later, I was lucky enough to be invited by EDA to attend a mungbean food promotion event on October 14, 2012 at Shewa Robit Town. I learned a lot about the beans' high nutritional value and heard, for the first time, that they can help protect people from diabetic and various kidney problems as well as many other health troubles which I cannot really remember now. I also heard that the beans are as good as any other pulse crop in supplying protein for good body development and then saw the variety of local dishes prepared by EDA staff members. I tasted mungbean stew, soup and sandwich and the mungbean filling for sambusa, our local pastry. I was astonished that they were all so tasty and it was then that I realized that I had spent so much precious time selling my "gold for copper". From that training onwards, I started to prepare mungbean stew and now I do not go to the market to buy lentils, beans or peas. I use mungbean from my own barn.



THE ROLE OF CERTAIN UNDER-APPRECIATED CROPS IN CHECKING THE FOOD SECURITY PROBLEM THE CASE OF INSET AND POTATO

INSET

Food security problems prevail throughout the country not simply because of droughts, land degradation, climate change and poor technology but also because of a reluctance to recognize certain existing crops as a source of nutritional food. We have developed a number of crops over the years which now comprise the largest part of our agricultural output. We can conclude that the preferred foodstuffs and eating habits of people in developing countries are also major factors regarding their poor diet and starvation conditions.



Inset Plant

Certain crop varieties can withstand various negative climatic and ecological conditions and can provide food for the community. Hwever, because of a lack of knowledge and poor thinking towards these crops or because of bad testing results regarding different plants, people choose not to cultivate them and are, therefore, at risk of starvation.

Enset, for example, is a perennial crop which is widely known in southern Ethiopia. It resembles the banana tree and is, in fact, referred to as the "false banana" in English. It has excellent drought-resistant characteristics and a good capacity of moisture retention.

Once established, it can hold a remarkable quantity of water in its fleshy, succulent trunk and is thought to be capable of surviving up to seven years without rain. It is, therefore, regarded as a "food bank" which can last for seven years and is farmed together with grain, coffee and other crops as it is believed that other plants can take moisture from its water-swollen trunk during times of drought. Enset is planted in the southern part of the countryfor food while its fibre is used to make sacks, mats and really beautiful carpets.

Kocho is a type of starchy bread prepared from Enset. It is usually eaten with milk, cheese, cabbage or meat but only in the south Ethiopia as it has a strange smell which people in other parts of the country do not like. As the English used to call potatoes "Irish food", Kocho has also long been considered an inferior food by many Ethiopians and, yet, history tells us that people who included Enset in their diet have never been starved while those who do not eat it have. When every crop fails, Enset is an excellent supplementary food and can save lots of people from hunger.



Kocho eaten with soft cheese and cabbage

Mats and fiber made of kocho

There are several advantages for farmers who plant Enset as the farmers' land will be protected from soil erosion and, at times of a shortage of rain, Enset waters and serves as a canopy for other crops planted nearby. If draught comes and all the other crops fail, Enset can be used to feed the farmer's family.

POTATO

Potato, although the world's third most popular crop, is Ethiopia's other greatly underutilized crop. We believe that potato was introduced into the country in 1858 of the European Calender by German plant expert, Shimper (Gebremedihin Woldegiorgis.et.al, 2012). Potato has a short growing and ripening period and can

easily help at times of disastrous food crisis. Unfortunately, Ethiopian farmers do not seem to consider the potato as a multi-purpose income generator but, if potato production is integrated in a valid food chain project, it can quickly and easily change the lives and livelihood of large numbers of poor farmers.

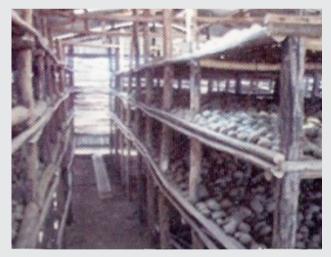
Potato is relatively cheap and, while grain price sky rocket, potato price around the world have kept stable. Potato is also healthy foodstuff and contains various important nutritional elements including riboflavin, thiamine, niacin, iron, phosphorus, potassium, calcium, carbohydrates, fibre and fat. They can be used in any number of traditional Ethiopian dishes such as Gonfo, Kinche, Firfir, the filling for Sambusa pastries, kita – a flat thin bread, injera, bread, soup, local beer and other drinks (Gebremedihin Woldegiorgis. et, al, 2004 EC).



varieties of food prepared using potato

A number of potato plantations and associated industries are currently emerging throughout the country and, as a result, these industries create a new market for potato farmers. More and more people eat potato chips and crisps and relatively simple, modern potato stores, known as Diffused Light or DLS Stores, where both potato seeds and the crop itself can be stored for 9 and 4 months respectively, can now be found in many areas (Gebremedihin Woldegiorgis. et, al, 2004 EC).





Diffused Light Stores (DLSs)





The sweet potato is Ethiopia's third under-utilized crop even though it has a high potential to improve food security and nutrition. Sweet potato is rich in vitamin A, hardy, drought resistant and can be grown easily even by inexperienced farmers (Elias Gebresilassie).

Farmers are currently getting further training regarding various irrigation systems and how to use gravity and water pumps so that they will soon be able to increase their potato, sweet potato and other vegetable harvests from year to year. EDA and SHA are, therefore, sharing their message with more and more stakeholders and, in particular, with NGOs working on food-security projects hoping to bring about a change in general eating habits which are often dictated by cultural barriers. We further aim to enhance people's awareness regarding under-valued and under-appreciated crops which are, nevertheless, economically strong, viable options.



Bezawuletaw hauling water pump to his farm land







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