# Interviews on farming in [name of kebele, name of Zone]

## Place

### Altitude and terrain

The interview was conducted among a small group of farmers selected based on their better performance in farming activities- seedling preparation, and better coffee and enset production.

In the discussion on the effect of altitude and terrain, the farmers responded that Adado is mountainous and receives heavier rainfall in some seasons. The coffee and enset agro-forestry protects other crops and erosion during rainfall, but the roads and paths in the community are very sensitive to the geographic and climatic effects. The highland feature of the PA is advantageous for enset production and trees that protect coffee from damage during heavy raining season. Since the PA receives better rainfall in Belg and Meher seasons, the roads and paths are highly affected.

Farmers also reported that ploughing with oxen is also difficult in the area due to sloppy landscape, which would be exposed to erosion if there was deeper tilling. Therefore, there is no one in the community uses ploughing due to this topographical problem. Farmers report that the altitude is an advantage to receive better rainfall, for the cooler environ and planting highland crops such as enset. But the landscape of Adado is not conducive to move from one place to the other for marketing, or other affairs requiring transportation. It takes much time to move even from one kebele to others in the neighbourhood.

Seedlings such as coffee and enset were not suitable when brought from other areas. Therefore, the farmers use seedlings produced on their land. New seeds are sometimes not suitable to the area, such as maize. They report that they do not use fertiliser due to its effect on the coffee taste; therefore, the maize seeds coming from other areas are not productive enough. These new seeds are better when used with fertilisers, but the farmers use only compost.

A follow-up question was introduced to understand the effect of watershed management on protecting the erosion-vulnerable soil due to altitude and terrain challenges. Farmers report that this initiative somewhat helped in road improvement and it also diverts a bit erosion of road sides.

### Soil

Farmers knew that the soil in Adado is totally fertile, but the scarcest resource. The soil is uniform, except for the landscape variation. They call it *KISHO* to say a soil is infertile. Thus, there is no Kisho in the community. They report that land cultivation is very intensive due to land shortage. This is one of the sources of the problems: they do not to rotate different types of crops which should contribute to soil fertility improvement. It is also not possible to artificially improve the soil with improved fertilisers due to its effect on coffee crop. So over time, the soil is getting less fertile. The total land in the community is conducive to grow coffee (flat areas), enset (mountain areas), vegetables, cereals, fruits, trees and kerkeha. However, land shortage limits options for diversified farming and rotation. Therefore, the community grow coffee and enset in mixed farming system. Compost is used. Other fertiliser is little used. New seeds demand fertiliser and are less productive if the season is dry. Therefore, the respondents report that the community mostly selects the best seeds from their own production. Those people with a larger land size use improved fertiliser for maize production, on areas separate from coffee growing areas.

### Ecosystem

In the community, there is only agro-forestry of coffee and enset in combination with very few trees suitable to protect coffee plants from heavy rain and wind (which affect flowers) and from the sun. Otherwise, there is no forest tree economically used in the community. Tree leaves are left to decompose and used to improve the soil fertility. The trees are used for hanging up the bee hives. They reported that foxes are found in mountain areas, which eat crop at night. Thus, people living in mountain catchments protect the crops and fruits at night. Sometime, there are coffee and enset diseases in the community. They harm the crops, specifically coffee. This affects the annual income of households. Enset become dry due to diseases. This is a very serious problem if it is not protected. Therefore, the farmer immediately replaces the sick enset by a new seedling. Recently, the coffee production reduced for unknown reasons. They harvested much less coffee crop, because some of the trees became dry and others lacked coffee output. Farmers reported that coffee and enset diseases were introduced when hybrid seedlings from other places were used in the community.

There are no new cattle, shoat, or poultry diseases in the community. Farmers as well as a household involved in bee keeping had no information on bee diseases in the community.

Rivers in the community are used for home consumption or for cattle drinking. There is no irrigation practice. People in the river catchments have no practice of using irrigation.

Traditionally, the farmers reported, the community know the rainy season by looking at the flower of a BSANA tree. When the tree starts flowering they expect it will rain.

|  |  |  |
| --- | --- | --- |
|  |  | How good/bad was the rain? |
| 2008 | *Belg* | The rain was sufficient and nearly timely |
| *Meher* | The rain was sufficient and on time |
| 2009 | *Belg* | Not so bad, but it was heavier which affected a few coffee flowers |
| *Meher* | The rain was extended to all the months of the season, not bad. |
| 2010 | *Belg* | Better |
| *Meher* | Sufficient in the season, but not as extended as the 2009 |
| 2011 | *Belg* | Not sufficient for farming activities |
| *Meher* | June and July-heavy rain and August and September- fragmented |
| 2012 | *Belg* | Not seasonal and not heavy as usual |
| *Meher* | Not seasonal; insufficient |

They reported no unexpected flood in the community. The farmers reported that there is no as such remarkable weather variation effect on farming in the community.

## Climate change

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| Year | Belg rain | Meher rain | Unexpected rain | Heat | Frost | Wind *describe* |
| 2001EC | Better | Better | None | None | None | None |
| 2002EC | Better | Better | None | None | None | None |
| 2003EC | Better | Better | None | hotter | None | None |
| 2004EC | Good | Good | None | hotter | None | None |
| 2005EC | Good | Good | None | Hotter | None | None |

The farmers reported that rain, hotness, frost or wind are not big problems in the community. However, the rain affects the coffee flowers if it is heavier than the tree protecting the coffee. This happens in rare occasions. They reported that hotness has not affected farming, but they feel warmer days in sunny seasons. Adado is known for its natural coldness, but there was no unexpected frost. Livestock fattening is common for short periods of time. There are no severe weather variation-related causes to animal diseases in the community. It is not clear what is the cause but there was an occasion of coffee drying as well as enset. They related it to some common coffee and enset diseases rather than to any weather variation effects.

Human health effect due to weather variation is common cold, they reported. One of the respondents strongly believes that the rain and the hotness have somewhat changed, but effects are not visible at present. However, the respondents appreciate the overall climate pattern of the area. They perceive that the weather condition is fair when compared to other neighbour areas.

They were further asked to summarise what changes have been observed on crop production, livestock production, water access, human health, and heat condition in the community. They responded that there has been no perceived impact due to climate change in the community.

## Land

### Land for smallholder farming

The respondents report there is no free land in Adado. They pointed at the pattern of settlement and farming style in the area around the place where the interview was taking place. All the places, they report, are occupied in similar fashion. There is no additional land to accommodate the growing population of the area. Thus, parents give their sons just a place to put their home to form the new family. This trend is getting worse. The land pressure arises from the growing population. People who own less than half a hectare are very many in number. Very few of the community members have land of above 3 hectares. There are also people in the community owing ¼ of a hectare of land. They report that land has been the scarcest in the community. Some of the indicators are the curtailing of livestock production due to lack of grazing land or lack of additional free space to grow grass. They also raised that a significant number of people are migrating to Shakiso for gold mining, Taro for sharecropping or other places due to lack of land to get employed. They also predicted that the community will continue suffering due to lack of land resource.

Surprisingly, they mentioned that the community is more vulnerable to poverty if enset and coffee crops get damaged because the community has no other livelihood means. Every piece of land is occupied by household members. There is no land owned by cooperatives except the land owned by the farmer union coffee washing site. No land is occupied by investors. This is surprising because in other parts of the region, households have diversified livelihoods. Farming is not limited to only two crops like in Adado. Livestock production is also significant in other parts of the region. Households in Adado know their vulnerability to shocks due to their livelihoods being limited to two major crops only.

### Access to land

Approximately 150 households are reported to be landless in the community. Indeed, the landless in the community ranges from 150 to 200. The data varies because interviewees sometimes consider those having a very small portion of land (around 1/8th hectares) as landless, however, they pay tax for it and registered it. The respondents reported that there is no trend of land redistribution in Adado. There is no free land to redistribute. Household members share their land, in size just sufficient to make a house. There is no communal land. No land encroachment is reported. The respondents reported that long term land leasing depends up on negotiation between partners. But, there is no practice of long-term land leasing in the community. Sharecropping for one or two or even for longer years is possible, but short-term leasing is no practiced in the community. Practically, people give land for short-term sharecropping activities for one to two years. It is mainly the people categorised as landless who are involving in sharecropping. Sometimes, richer households take land for sharecropping from the poorer/elder/sick households.

## Crops

### All crops

In the community, crops (coffee, sugar cane, pumpkins, bean, *boloke*, sorghum, teff, barley), root crops (Boyna, Boye, potato), vegetables (cabbage, selata, green pepper, onion), fruits (Avocado, Gisheta, Zeyton, Papaya, banana) and trees (eucalyptus, Wanza, Shola, Tsid, gravillia) are growing. The following discussion was held with respondents.

Growing pulse, oilseeds, and spices is not common in the community.

Maize is commonly grown as grain crop. However, barley, sorghum, beans and Boloke are also produced in very small scale. Maize production is also not in larger scale. There is no irrigation-based farming. Due to the little use of fertiliser, improved seeds that demand fertiliser are also not much used. The community use domestic seeds of maize, barley, sorghum, beans and Boloke. People with larger size of land use improved seeds since they have separated a land portion from coffee planting areas. Otherwise, smallholder farmers using mixed farming of coffee, enset and other crops are less likely to use improved seeds that demand the complementing improved fertiliser. This is to protect coffee’s natural taste as recommended by the Agriculture office at the wereda. Agricultural extension service intervention has created awareness on how and when to use improved seeds, fertiliser or compost in mixed farming. The respondents reported that there is inherited farming practice in the community. Using farming hand tools, organic fertilisers and mixed farming are common practices as per their report and own field observation.

**Root crops** such as **Enset,** *Boyna, Boye*, potato and sweet potato are growing without irrigation. Enset is a subsistence root crop. Households produce enset seedlings on their land. Agricultural extension service created awareness on how to prepare nursery site for enset seedlings. Enset is considered as drought resistant. All parts of enset are used for household and livestock consumption. Availability of enset is an indicator of wealth in the community. Seeds used to grow the crops are local and not improved. But “Canada *Boyna”* as they call it was introduced by the agriculture office of the wereda. It is produced in very small scale and for home consumption only. Sometimes through Wereda agricultural office intervention, new seeds or ways of farming are introduced to the community. There is no NGO related intervention for root crops in particular and for other interventions in the community.

**Vegetables** such ascabbage, *selata*, green pepper and onion are commonly produced in the community in small scale. There is no irrigation to produce vegetables. At present, salad is newly introduced by the agricultural extension service. Households consume vegetables at home. In some cases, households sell vegetables on the market to buy other spices like salt, spices for coffee drinking during breakfast/lunch/dinner.

**Fruits** such as avocado, gisheta, and zeyton are common in the community.No irrigation is used to produce fruits. The fruits were not introduced by agricultural extension service or NGO, people buy seeds from the market and grow them. Fruits are mostly consumed at home and the remaining is sold to buy other consumable items or spices. No intervention is introduced to improve fruits in the community.

**Trees** such as eucalyptus, warka, wanza, and tsidi are very commonly grown. There is no irrigation to grow trees. Eucalyptus is commonly sold. Wanza, warka and tsidi are used for timber production. No intervention is introduced to improve tree production in the community. Rather eucalyptus tree is now less planted since it harms coffee plant and dehydrates soil.

### New crops

Farmers reported that there is no new crop or tree introduced in the community.

### Declining crops

Nothing is reported on declining crops.

### Subsistence crops

**Enset**, Maize and Boyna crops are mainly used for household consumption. Enset is extraordinarily important as a subsistence crop in the community. People use enset for human consumption, animal consumption, drought resistance, wealth indicator etc.

Enset (subsistence crop) and coffee (cash crop) are historically the most important crops and culturally belong to the Adado community. Farmers also added that these crops will be the identity of the community and inheritable for the future generation.

In both times (2003 and 2013), the Enset crop was the most important.

## Cash crops

### Change

**Coffee** is the most important cash crop in the community. Tree is not as significant as to consider as cash crop, but people use it for house construction, fencing, timber production and covering coffee plant. In both times (2003 and 2013), the coffee crop was the most important cash crop.

### Coffee

#### Coffee production

Respondents reported that farmers plant coffee seedlings in all parts of their land mixed with other crops. Since coffee has become the most important cash crop both for local and national and international markets, farmers have been planting it. This day coffee and enset made Adado a remarkable place for agro-forestry. Every piece of land is occupied with crops due to the availability of seedlings for every household in the community. Therefore, coffee production has increased in the community.

Coffee output is highly sold cash crop in the community. Almost all output in a household is sold on the market. People mostly use husks to drink and sell the main output in both Adado farmers’ Union coffee processing site or in Dilla, ECX. Sometimes the coffee disease affects the output level. Sometimes coffee trees get dry and the household lacks output. Most of the time family labour is involved in harvesting coffee. However, those with more than 3000 coffee trees hire daily labourers for harvesting. Coffee *Eshet is* the fresh output and it requires being harvested at the proper season, otherwise its market quality will decline at the local Union market place. Therefore, households are obliged to hire labour. Most of the time, labour is hired from poor family members in the community or landless households.

#### Coffee inputs

Since the awareness creation by the agricultural extension service about how to prepare coffee seedlings in their private nursery sites, the households have no problem to find inputs to grow coffee. Farmers reported that coffee seedlings coming from outside the community are less suitable to cope up with the environment. Therefore, local coffee seedlings are considered better. The change in coffee production and productivity is incredible. Farmers report that coffee production improved for the last decade since the community is better aware of how to prepare coffee seedlings and plant/harvest it. There is no remarkable problem reported. For coffee production the community uses organic fertilisers in order to preserve the natural taste demanded on international markets. Therefore, people use decaying organic matters. Trees covering the coffee provide leaves that decay and are used as a fertiliser. People continuously replace the coffee trees drying or less productive and older ones with new ones besides planting more coffee in free spaces. Therefore, the use of seedlings as an input is increasing. Pest affecting the coffee crop is not specifically known by households, however, there are diseases that results in the crop to dry and be less productive. The community is not allowed to use inorganic fertiliser that affects coffee taste. Therefore, pesticides are not used. The respondents reported that there is no specific credit targeted to support coffee growing. They said that it is the individual’s interest to search for credit from private lenders or relatives. They use coffee seeds from their own coffee output in a better season.

Fertiliser, seeds and pesticides are little used in the community. Fertiliser use is discouraged by the wereda agricultural office. Seeds are taken out from coffee outputs. Access to fertiliser, seeds or pesticides is not a big deal in the community. However, the households are not allowed to use them in crop lands.

The crop DA supports farmers in preparing coffee seedling nursery sites. Households are also trained by DAs on how to harvest coffee and send it to local or central markets without damaging the required quality.

Wereda agriculture office regularly supports the DA to arrange training or awareness creation workshops in the community. Therefore, the DA is supported by Agricultural office in the wereda when preparing awareness creation workshop.

In the community, farming technology is totally manual. Hand tools are used for farming. A few new approaches were introduced to grow coffee: how to use compost as an organic fertiliser, training, less use of fertiliser for coffee production.

#### Coffee sales

Coffee (fresh) is sold to the farmers’ Union in Adado. Dry coffee is sold in Dilla ECX office. The coffee produced in this community is highly exportable in the country. It is renowned for its best taste on international markets. Coffee produced in the community is exported to the countries having trade partnership with Ethiopia. Most of the coffee harvested is sent to local or international markets. In Adado the largest amount of coffee is sold to the Union in the Kebele or sent to Dilla ECX market site for cash crops.

## Livestock production

The livestock population in the community is about 1500. There are nearly 3000 sheep, 50 goats, 300 chickens, 120 beehives. In our further discussion regarding the livestock production, the respondents reported that the area is so favourable and free of animal diseases but it is not possible to own much with zero grazing land and insufficient places. Beekeeping is also traditional, but the DA is now promoting it by giving new bee hives.

### Cattle production and fattening

#### Cattle production

The respondents indicates that the cattle population is further declining in the community, because the total landholding is allotted to farming activities and there is no free grazing area. However, households involve in short-term fattening activities. Better quality cattle are mostly brought from other places (Borena). In this community, there is no ploughing of farm land; therefore, oxen are bought for fattening purpose only. Cattle rearing in the community may demand much effort because there is no naturally arranged grazing land. Otherwise, the weather is very favourable to rear cattle, sheep as well as bees. In order to better rear cattle the community should have a means to prepare nutrition artificially. The respondents witnessed that both the new breeds to the area and traditional cattle can cope up well with the local weather condition and are therefore suitable in the area. They have a practice to rear both types of breed. Since cattle rearing is not common in the area, both the father and mother take part in managing cattle. Sometimes, children support the family in fetching water for cattle drinking.

#### Cattle inputs

Mostly cattle consume enset leaves and trunk, sugar cane, and sometimes fodder prepared through mixing crop by-products. The input (fodder) for cattle production is not sufficient due to lack of free land to grow natural grass. It is rather declining. It is common to have breed cattle in the community. They but breed cattle from other places and also get it by natural insemination from a local bred bull. There is DA veterinary providing the clinical service. Sometimes farmers use fattening medicine from the agricultural office in the wereda. The respondents report that the area is not as such vulnerable to animal diseases. There is no special credit arrangement for cattle rearing. Inputs for cattle production are not sufficient in terms of quality breed, medicine, and improved fodder supply. The community members are also less inclined to rear cattle as they are discouraged by land shortage. They currently get veterinary service in the nearby wereda, Bule. Households do not use the kebele veterinary service since there was no serious cattle disease problem. Recently, the wereda agriculture has introduced new fodder/grass/ for cattle. As this does not take a lot of space for planting people are trying to use it.

In our discussion on the declining cattle production trend and their aspirations for the future, the respondents added that cattle production could be improved for those having better land size. Otherwise, the community shall involve mainly in short-term fattening business with man-made animal nutrition. They aspire for the community to involve much on fattening activities rather than rearing due to the natural land endowment constraint.

#### Cattle sales

Mostly the local market for non-fattened cattle is found in Bule Wereda. Buyers are the people from other neighbour kebeles or from the same area, for fattening purpose or for farming activities in other places. Fattened cattle are also sold in Bule Wereda, Sokecha kebele or even in Dilla zonal market place. Traders buy the fattened cattle for selling meat at local markets, Dilla or even they send to Addis Ababa. The respondents did not know the export market, but they know that the final destination for fattened cattle is up to Addis Ababa if not sold and consumed on the local markets.

Regarding pricing information, the respondents know that there is regular price fluctuation. They report that the price is very high for cattle fattened in the coffee season because meat consumption increases as almost all families consume meat once per week. In other seasons, both non-fattened and fattened cattle have lower price on local markets. They have no information about cattle price in other market places. One of the respondents said that there has been tremendous changes (increasing continuously) in the price for cattle, others also share his idea.

For additional questions on their own and community members’ willingness to supply fattened cattle, they report that it would be their benefit if there was sufficient initial capital to begin fattening, but to their surprise even one small ox will not be bought with less than 10,000 ETB.

### Shoat production and fattening

#### Shoat production

There is small scale household level shoat production in the community. Compared to its size a decade ago, there has been no significant change in shoat production in the community. It remained the same.

Shoat are not improved ones but traditional breeds. The respondents reported that there is no as such serious problem to rear shoat except shortage of grassland. Except its nutrition demand, there is no challenge. Traditionally, households producing shoat use homes similar to the other cattle. Like for cattle, all household members participate to manage shoat. Milking from goats and sheep is not usual. However, they are produced for meat production, hides and sale to other market places.

#### Shoat inputs

The goat population in the community is not more than 50. The area is not suitable for goats and people rear sheep instead (3,000). Household’s consumption residuals are mostly used for shoat nutrition. There is no as such remarkable change in inputs for shoat production. Most of the time shoat are bought from Oromia and other zones. Their breeds are traditional; there is no improved breed in Adado. They justified that as shoat will stay only for a short period for fattening in a household, there is no need for improved breeds. Either traditional or improved breeds are bought from other places, there is no locally improved breeds. When the household requires vaccination, they go to the wereda veterinary office since there is no vet service in the kebele. They reported that there is fattening medicine in the vet office in the wereda. Sometimes, households use it. There no as such severe shoat disease in the community.

Regarding shoat production in the community, there are no credit services. They reported that input for shoat production is not sufficient. There is no government intervention since the shoat production is very minimal in the community, vet advisory or other medical services are weak. However, this day AGP (Agricultural Growth Programme) is trying to introduce better shoat and livestock production in the community.

#### Shoat sales

There is Adado small-scale local market for selling both fattened and non-fattened shoat. Individuals buy non-fattened shoat for fattening in a short time span. Most of the times, household sell fattened shoat in Bule wereda market and sometimes in Dilla. Neighbouring kebeles have also better market places. The shoat production is very small-scale and not sufficient for exporting or sending to huge market places on a regular basis. Selling prices depend on the income of the households. Most of the time households earn an income during the coffee season and their consumption of shoat meat also increases. In Belg or kiremt seasons, there is no active local market for shoat. During these cheaper seasons, households keep shoat to fatten them and sell when festivals take place. For instance, in Easter most of the households consume meat.

### Chickens

#### Chicken production

Chicken production is not massive in the community. The community commonly produce chicken, but an individual household does not have more than 10-15 of them. Commonly, the chicken production is mostly not as such high quality. People use traditional chicken. Sometimes, the chickens die when disease caught them.

They report that chicken have their place on the household floor. Labour is not required to produce chicken, as per their report.

Traditionally, the community produce chicken as a domestic animal and sell it when they face financial problems; otherwise, it is not much promoted as a means of business.

#### Chicken inputs

There is no new breed in the community. People do not use new breeds since they perceive that the breeds cannot cope up with the area. Their personal perception on new breeds is also shared in the community. They report that there was information from the DA to produce new breeds of chicken but it has not been implemented so far.

#### Chicken sales

The households produce chicken for selling when they face financial problems, otherwise they consume in festival occasions. They sell in Bule market place or anywhere in nearby market places.

### Bees

#### Bee production

Bee keeping is somewhat good in the community when compared to 10 years ago. Agriculture office has promoted the new hives to encourage beekeeping. They use bees coming from neighbouring areas. There is no problem or risk in bee keeping but the community is not aware of it. The required infrastructure is hive and favourable flowers and water points. These are somewhat available in the community. Production does not require much labour force except household effort.

Additional question was forwarded on local access to hives. There are local carpenters producing local hives equivalent to the ones provided by the agriculture office. On access to water and flower, bees access the river water and flowers from the coffee and other trees. Asked about the potential of income generation of bee keeping, the respondents know that a few community members are gaining income from honey production (nearly 30 ETB per litre). Bee production is suitable in the community, but there is no sufficient intervention. It is not sufficiently promoted and households do not use the potential of bee production in the area.

#### Bee inputs

Bees are captured when they move from one place to the other in searching for favourable places. If there is a hive visible in a tall tree and if the access to flowers and water is better, the bees start to produce honey. This is a traditional means of catching bees. There are both traditional and improved beehives in the community. Skilled workers have started to produce similar beehives (sell 30-50 ETB) to those of the agriculture office. The beehives are put on the higher tree branches. Agriculture office (DA) provides advice on how to use the beehives.

#### Bee sales

People do not buy bees. But, they buy and sell honey. Bees are caught when freely moving from one place to other places while searching for favourable environments.

## Livestock products

### Cattle

#### Cattle products

Butter and milk are produced in very small-scale. The households’ wife sells butter and milk to buy other household consumables. They report that there are few dairy cows in the community. A few households use better quality cows. There is no risk in dairy cow production except the place for rearing them. In the community, households use their homes to keep dairy cows in a separate room or the common room. Households use common inputs for dairy cows to yield milk and butter. Household labour (mostly mothers, senior girls) is involved in milk and butter processing. Children can process milk and butter with traditional milk and butter processing instruments.

#### Inputs for cattle products

They call it “Keshe”, which is used to process milk in traditional ways. They use this household’s traditional instruments (Keshe) to warm milk to produce cheese at home. There is no advice or information provided regarding milk/butter/cheese production. This is mostly traditional done. Agriculture office supports when the households need to inseminate their cow with improved breeds.

#### Sale of cattle products

Mostly milk and butter is sold in the local market (Adado, Bule). Households in the community buy the milk and butter for home consumption. There is no massive production of milk or its by-products to sell it to enterprises. Milk/butter/cheese is sold only for household consumption in the community. Its price is increasing because its production does not meet the demand for it in the community.

### Shoats

#### Shoat products

Households fatten shoat for reselling at better market price. There is no other product of shoat. Households buy it for consuming meat most of the time for celebrating a holiday. Otherwise, the traders sell hides of shoat, which are sent to central markets through middle traders and larger sellers.

#### Inputs for shoat products

There is no other improved input for shoat product production.

#### Sale of shoat products

After using the meat, the households sell the skins to middle traders in the community. There is no wool production.

### Chickens

#### Egg production

Households produce egg for home consumption or selling on the market to earn some income to buy other consumable goods. Sometimes, households use improved breeds of chicken, but the new breeds are not suitable in the area. Therefore, traditional breeds are commonly used for egg production. The area seems suitable for poultry production, but no one is planning to use it.

#### Inputs for egg production

There is no special input for egg-layer production. Respondents reported that Development Agent informs the community members to take part in improved chicken distribution in the wereda agriculture office. Interested households use it. But, most of the time households do not like the improved breeds that cannot cope up with the area. Thus, a few using the improved ones sometimes appreciate the egg size and sometimes complain about their weak resistance to disease.

#### Sale of eggs

There is no much production of eggs in the community. Mostly, the sale is limited to Adado market. The price for one egg is 2 ETB, which is expensive. Sometimes, women or youth involved in trading eggs collect it from the community and sell it in Bule wereda market.

### Bees

#### Honey production

There are a few households preparing honey for selling it on local markets and also in nearer market places in the wereda. It is prepared in traditional beehives. These days, improved beehives are provided from the wereda agriculture office. Traditionally, there is no differentiation between liquid and solid honey. Honey production requires a good flower season and water availability; therefore, it is better when coffee trees start flowering. DA provides advice on how to use improved beehives and where to keep the hives. The selection of appropriate places for improved beehives is done by DA.

#### Inputs for making honey

There is no new equipment used to collect honey from the hives. They extract the honey in traditional ways, using a piece of cloth to protect their hands and face from the bees.

#### Sale of honey

Honey is sold in the community or outside the community. Most of the time, community members use it for traditional medication. Therefore, the demand for it is not met even within the community. In rare cases, the neighbour market places are used to sell honey.

## Farm labour

### Smallholder farm labour

It is common to use family labour in all farming activities in both rich and poor families. However, there is a difference in the extent of use of family labour. Richer families mostly hire labour from outside during peak coffee harvesting or farming seasons. There is a slight change in using family labour because the youth are now busy with their education. Youth spend some limited time on labour when they get extra time. A few households hire agricultural servants for farming activities. This concerns the richer part (nearly 5%) of the community. Hiring agricultural servant as well as participation in daily labour has increased in the last ten years. The remuneration has improved. It was very small in the past, but these days it has increased to at least 30 ETB/day. Much of the coffee harvesting and preparing land for crops is undertaken by local daily labourers. Women involving in enset processing earn at least 20 ETB per day and spend at least 3 days to complete the activities. There are no in-migrants working in the community. However, the payment for daily labour depends on the volume of work and the agreement-contract or daily basis payment.

Poorer households are mostly hired rather than hiring others. Middle-wealth households mostly use family members to farming activities and it is less common for them to hire agricultural servants or labourers

### Customary work exchanges

Since the year 2003, there has been a change in customary work exchanges. Large working parties are not common. However, these days customary work exchange is replaced by 1-5s and small groups of neighbours interested to exchange work. Labour exchange in the 1-5s is done according to a weekly schedule. Members work for 3 hours a day for a week until the farming activities are complete for the group members. In earlier times, labour exchange was on a voluntary basis and interested households took part to support each other. There was no compulsory participation, gimgema and punishments among members. It is still common to work in share cropping. Share cropping has been increasing in the community because households facing land shortage involve in it. For share crop farming, land owning household provide land only whereas the partner provides both labour and inputs.

There is no share rearing practice in the community. Ox is not used for farming in the community. Sometimes, households share farm tools on a daily basis when many of the household members intend to involve in activities and there are few tools.

From our interview, it is clear that traditional customary work exchanges are becoming less frequent in the community.

## Diversification

### Combining farm with non-farm activities

More than half of the households in the community make a living only from farming activities. Wives from richer households mostly involve in petty trade or household works. There is no big difference between wives from middle and richer families. Most of the time, the youth and children from richer families involve in business activity besides their regular education responsibilities. They also support the family in farming activities. However, there is difference in their involvement in household works. The ones from richer families are less likely to engage in farming, but most likely to run their family business. It is somewhat similar for women and girls from the richer family. Their involvement in trading activities and family business is higher than supporting their family in farming works. In the poor families women and girls mostly involve in petty trade.

In general, diversification of activities such as trade, farming or education is more meaningful for women and girls as well as youth and children from richer and middle families when compared to the poorer ones in the community. In the richer and middle families, business is equally important to farming.

## Research officer additions (if any)

### Farming inputs

Farming in the community is constrained by many factors. One of the important ones is the limitation in using inorganic fertiliser. Farmers are not allowed to use inorganic fertilizer in order to protect the natural wild/forest coffee taste. However, farmers are forced to use improved maize seeds, which require compatible fertiliser application to yield sufficient amount of output. Farmers are also not using sufficient irrigation, rather they wait for the rainy season. Enset is mostly planted as a drought resistant crop in the community because there is no other option without fertiliser and improved inputs. Lack of livelihood diversification of households is a burden in the community. Livestock is not much important due to lack of rearing land. How could farming be transformed and food secured if land, farming capital and various other farming inputs are incompatible in the community? How can it be if households’ livelihood is fully dependent on one cash crop and one subsistent crop? There is good water access in the community, but they do not use it for irrigation and seek rain every year. Since state intervention is blocking all other global market influences, many of the economic sectors in the country are not so affected by price fluctuation. But in Adado the poorest farmers are directly affected by international coffee market price.