ALABA PILOT LEARNING SITE DIAGNOSIS AND PROGRAM DESIGN

July 15, 2005

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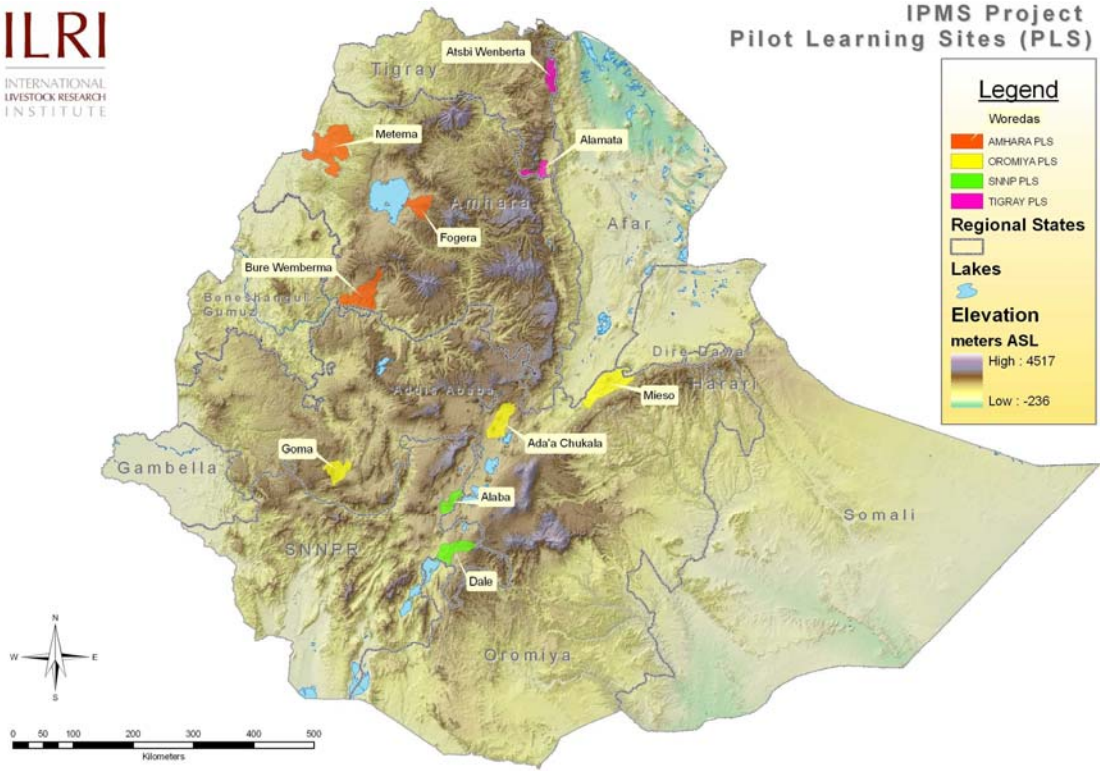
Alaba Pilot Learning Site diagnosis and program design

By IPMS team (names)

1. INTRODUCTION

The International Livestock Research Institute (ILRI) and the Ministry of Agriculture and Rural Development (MoARD) initiated a 5 year project in June 2004 with the financial assistance from the Canadian International Development Agency (CIDA). The project, entitled: "Improving productivity and market success" (IPMS) of Ethiopian farmers, aims at contributing to a reduction in poverty of the rural poor through market oriented agricultural development.

The IPMS project will assist by bringing knowledge on technologies generated by International and National Research Institutes as well as from other sources to the attention of the technology transfer agents and the farming community. It will also facilitate the feedback on these technologies. Such assistance will be provided to 10 pilot learning sites (PLS) across the country; (See map 1). Alaba district (woreda) is one of the 10 sites selected. To further enhance the utilization of such knowledge and the introduction of technologies, the IPMS project will also provide assistance to extension, input supply, marketing and finance institutions, including cooperatives. Such institutional support will be in the form of technical assistance, capacity building, supply of demonstration and training materials, some limited funds for innovative institutional arrangements and studies aimed at developing innovative institutional arrangements.



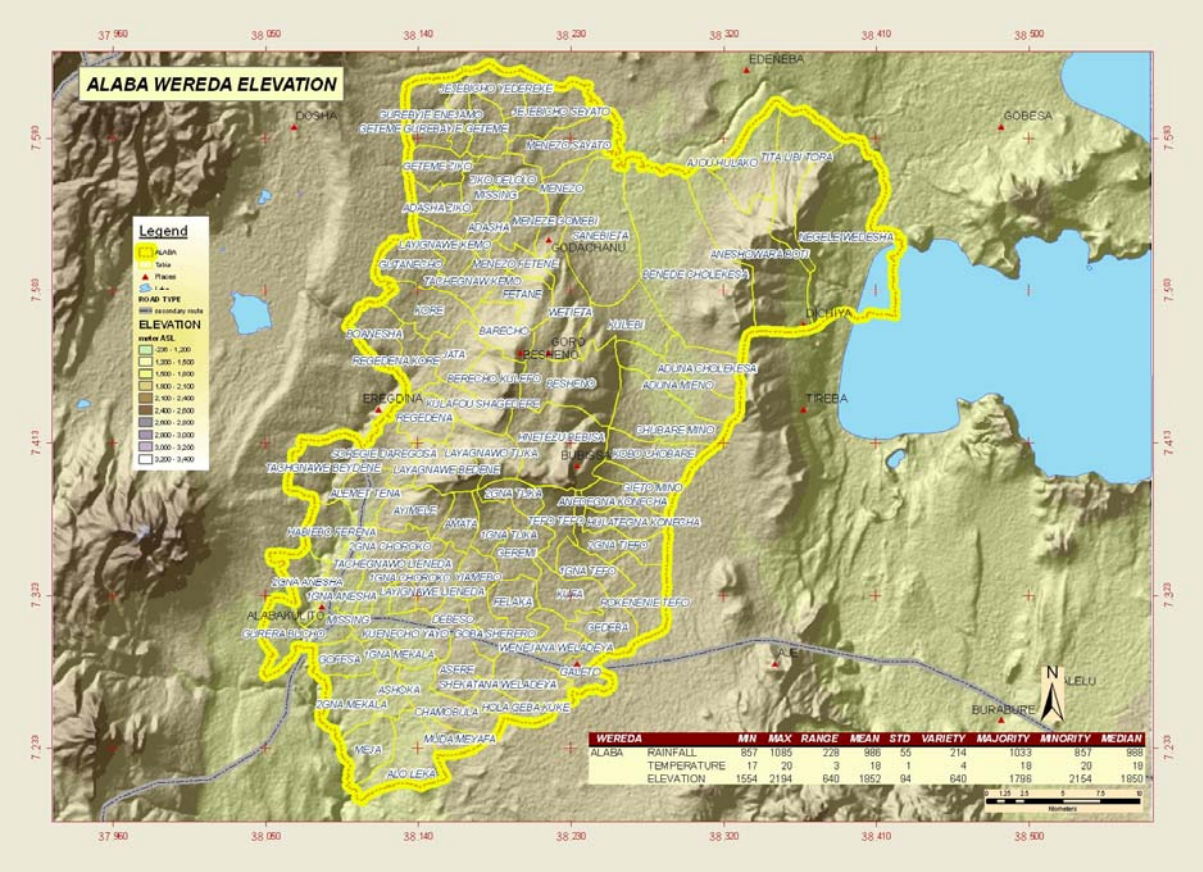
Map 1. Map of Ethiopia with IPMS Pilot Learning Sites (PLS)

2. FARMING SYSTEMS, CROP AND LIVESTOCK PRIORITIES

2.1 Description of Alaba Woreda

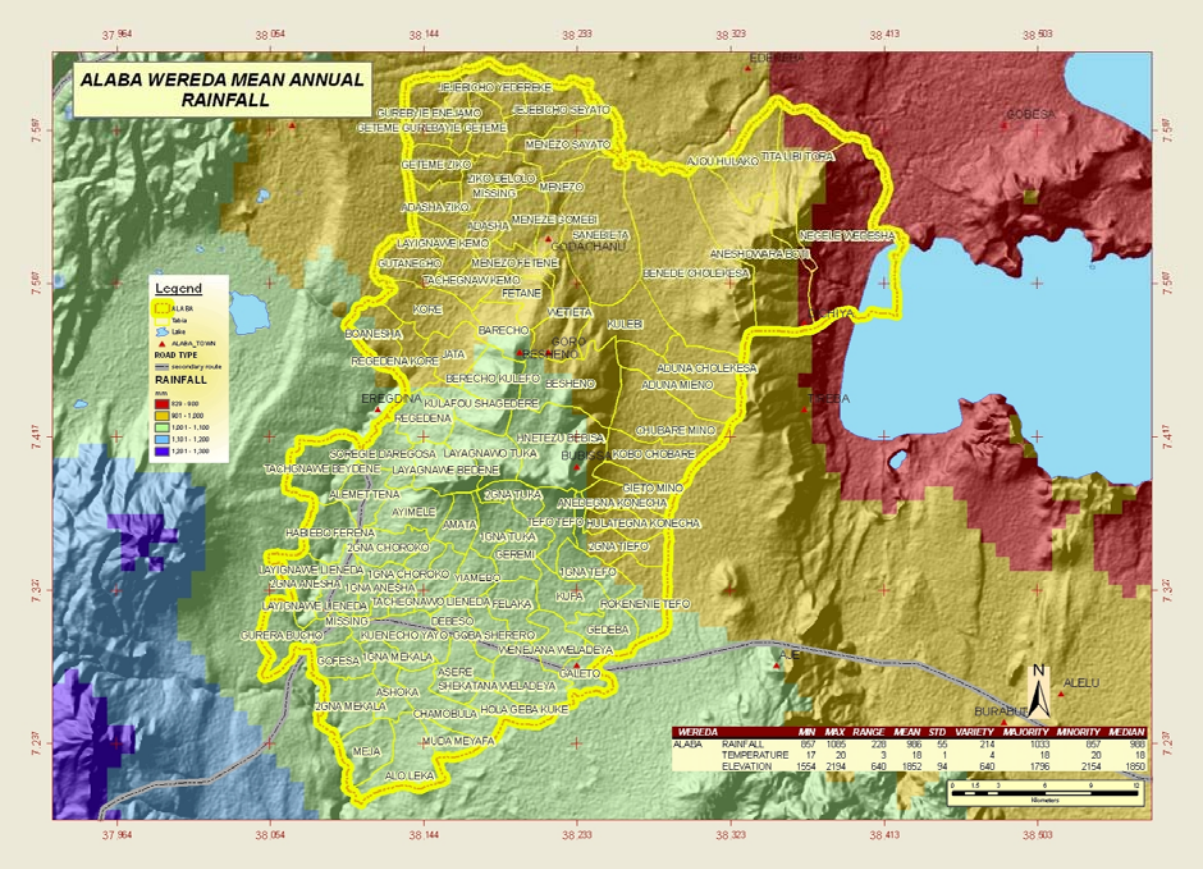
Alaba woreda is located 310 km south of Addis Ababa and about 85 km southwest of the Southern Nations Nationalities and Peoples Regional (SNNPR) State capital of Awasa. The woreda is geographically located **7^0 17' N latitude and $38^0$06' E** longitude. It is located west of Oromiya region, north of Hadiya (Sike), east of Kembata Tembaro, south east of Silte and Hadiya zones. It is a special woreda and has a special status where the administration directly reports to the regional state. There are 73 peasant and 2 urban associations. Alaba Kulito, the capital of the woreda, is believed to have been found towards the end of the 20th century (around 1895). According to the recent woreda population reports (2004/05), the total number of rural households in 73 peasant associations (PA) in the woreda is 35,719. Out of these, 26,698 (75%) are men and 9,021 (25%) are women households. The total woreda population is 210,243, out of which 104,517 (49.7%) are male and 105,726 (50.3%) are female (Annex 2). Economically active population of the woreda (15-55 years of age) are 102,176 people out of which, 55,668 are male and 46,508 are female. Ethnically, there are about 6 major groups in the woreda, but Alaba and Grarage ethnic groups are the dominant groups constituting about 81 and 10 % of the total population, respectively.

Attitudinally, the woreda ranges from 1554 to 2149 m above seas level (m asl), but most of the woreda is found at about 1800 m asl (Map 2). Except for few hills, the woreda has an agriculturally suitable land in terms of topography. Despite the recurrent drought, flood has also been a major problem in the area. The latter is induced as a result of dominantly level topography.



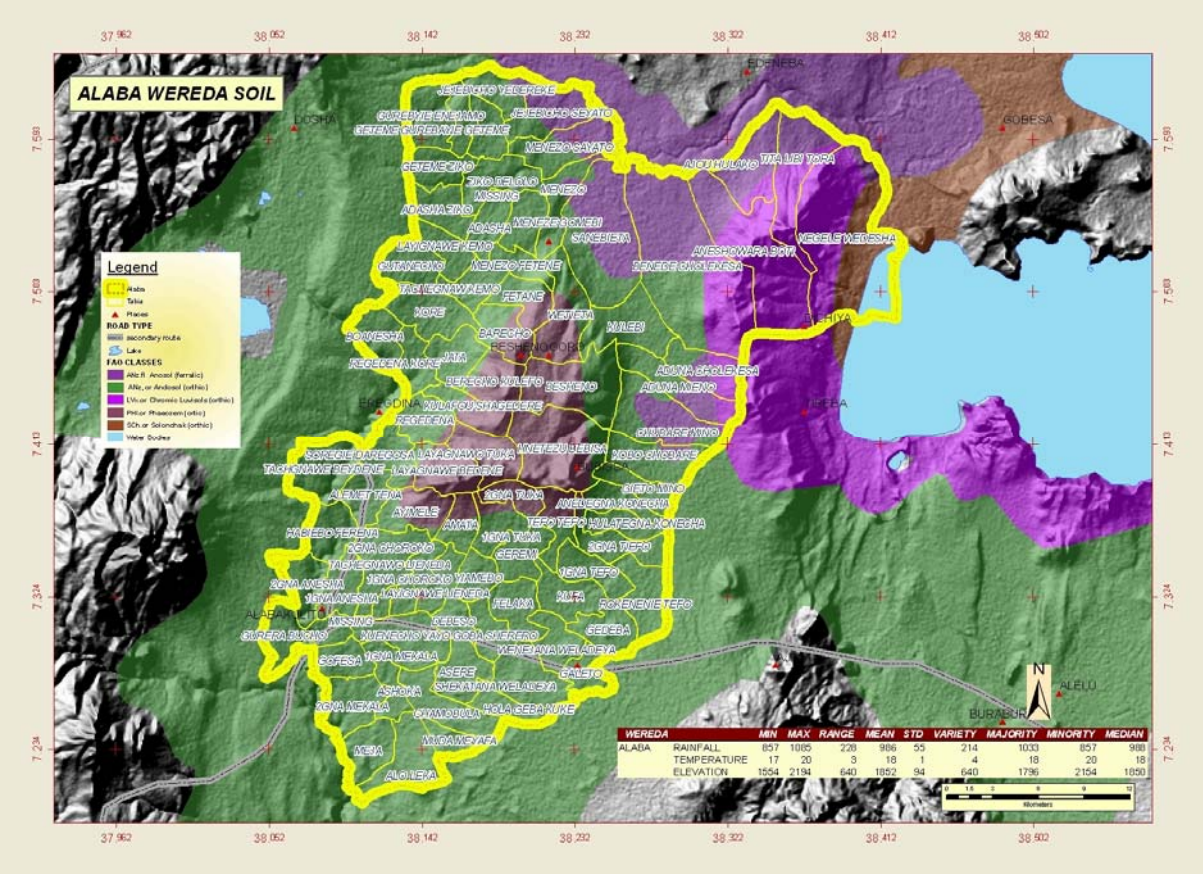
Map 2. Elevation map of Alaba woreda

Rainfall is a major limiting factor in agricultural production in the area. As a result, it is one of the woredas in SNNPR where drought is observed recurrently affecting many households. Agroecologically, the woreda is classified as Weina Dega. The annual rainfall varies from 857 to 1085 mm, while the annual mean temperatures also vary from 17 ^{O}C to 20 ^{O}C with mean value of 18 ^{O}C. The area receives a bimodal rainfall where the small rains are between March and April while the main rains are from July to September (Annex 8). The reliability of the small rains is low that farmers do not or mainly raise pepper seedling to be transplanted during the main rains. However, during the main rains, all crops grown in the area are planted, including maize, teff, wheat, pepper, haricot bean, sorghum and millet. Rainfall during the main rains are erratic that most of the time crops fail due to un even distribution of rainfall over the growing period. That is why the woreda faces crop failures almost every 3 years.



Map 3. Alaba woreda rainfall map

According to FAO/UNISCO Classification system the major soils of the woreda are Anosol (ferralic), Andosol (Orthic), Chromic Luvisols (Orthic), Phaeozem (Orthic), Solonchak (Orthic). The FAO soil map of the woreda at 1:2 million scale indicates that the most dominant soil of the woreda is Andosol (Orthic) which is followed by Phaeozems (Ortic) and Chromic Luivisols (Orthic) in the second and third order. The soils of the area are believed to be relatively fertile and during good rains farmers can harvest good yield even without fertilizer application.



Map 4. Alaba woreda soils map

The total land area of woreda is 64,116.25 ha of which 48,337 ha (75%) are considered suitable for agriculture (Table 1).

Table 1. Land Use type of woreda

No	Land Use	Area coverage (ha)
1	Arable land	44,020.00
2	Grazing land	4,316.95
3	Forest	4,592.00
4	Potentially cultivable	3,644.50
5	Uncultivable land (hills)	2,805.00
6	Others	4,737.80
7	**Total**	**64,116.25**

Source: Alaba Special Woreda Rural Development C.O. (2003/4)

As a result of long history of agriculture and high population in the area, vegetative cover is very low. Consequently, erosion hazards in the sloppy areas are enormous. Huge gullies are observed towards the southern end of the woreda, where soils are totally removed beyond recovery. This is believed to have been aggravated due to the easily detachable nature of the soil. Even though there were some efforts of soil and water conservation (SWC) over the last twenty years, these efforts were fruitless. Many NGOs were involved in soil and water conservation efforts in the woreda. Around Bilate River (south of Alaba Kulito town), there were some trees planted even though none seem to exist now. The tree planting efforts by Kale Hiwet

Church, Food for the Hungry International (FHI) and World Food Programme (WFP) were not effective possibly because of human intervention and soils could not support the growth of these trees. On the other hand, this could also be due to selection of inappropriate tree species, which may have not been suitable to such degraded areas. On the other hand, development of quarry sites in the area has also been believed to counteract the soil and water conservation efforts in the woreda. The commonly observed remnant tree species in the area are *Acacia* species, *Cordia africana, Croton spp.* and *Eucalyptus* spp.These tree species are observed throughout the woreda land standing in scattered pattern. As a whole, Tree density is small on the land surface of the woreda. Eucalyptus tree are dominant around Bubisa mountain which lacks undergrowth grass and other species. This has contributed to formation of extensive gullies in the area.

The recently initiated USAID supported Safety net programme for Natural Resources (NRM) rehabilitation is being encouraged. In addition other NGOs like SNV, VOCA, Water Action and other EU supported programmes are planning to be involved in SWC activities.

Cropping patterns in the area follow rainfall, as cropping totally depend on rainfall. Efforts in the use of irrigation water are a recent development in the area. The area has 4 rivers but the biggest river crossing the woreda is Bilate. This river is the source of many farming families and commercial farms south of Alaba woreda. However, the use of this river in this woreda is minimal. This is because the river is a boundary of another woreda. Developing this river for irrigation purposes in Alaba will require political decision. There are many areas that could potentially be irrigated using Bilate and other rivers. Currently, there are two irrigation sites developed through funds from International Fund for Agricultural Development (IFAD) and World Vision–Ethiopia. These irrigation schemes, Bedene Alem Tena and Lebeko irrigation schemes are using Bilate and Ebala rivers, respectively. Bedene irrigation scheme irrigates 225 ha and supports 300 farm households while, Lebeko irrigation scheme irrigates 25 ha and supports 75 farm family households. The major crops grown using these schemes are maize, pepper, onion and livestock feeds like Rhodes grass, cowpea and others. Recent studies have indicated that two additional areas (Jejebicho dam and Lobe Chore pond) could be developed with a total potential irrigable area of 155 ha. Bilate is a perennial river, even though the volume of water decreases substantially during the dry season. The current government efforts of household level water harvesting schemes are also wide spread in Alaba. Prior to this, community managed ponds were common in the area. Over twenty years ago, domestic and livestock sources of drinking water were scarce. This is aggravated during drought periods. Owning to these the community managed water ponds are wide spread in the woreda currently. The topography of the area is suitable for irrigation, if appropriate water harvesting mechanisms are put in place, Alaba could have a substantial amount of irrigable land. However, unlike other PLSs, the water table for Alaba is very deep and use of underground water as a source of alternative irrigation is limited.

As is the of other PLSs, livestock are a major source of farm power and cash income in Alaba. Oxen are the major source of draught power. In addition, as sources of water for both domestic and livestock watering is limiting in the woreda, use of donkey for transport is very high. In addition, donkey is also used for transporting

other goods for the farm households. One can easily notice that livestock in the area are suffering from shortage of feed. Free grazing and use of supplemental crop residues are common sources of livestock feeding in the area. Animal and animal products are good sources of cash to farm households. Sale of butter, especially when there is fluffy grass growth earns additional income for women to fulfil household needs. However, all livestock observed on the road to and from Alaba are skinny and show the unsustainability of feed resources. In addition to the shortage of feed resources, many livestock diseases are also reported. The common animal diseases reported include, anthrax, blackleg, internal and external parasites. Farmers complain that major resources are spent for treating their livestock.

2.2 Priority farming systems

Two major farming systems were identified in consultation with woreda agricultural experts and farmers in selected sample PAs. Use of altitudinal, vegetation and soil variabilities were difficult due to similarity of these factors, almost throughout the woreda. However, other means of classification where, dominance of one crop/livestock species in one area than the other, was employed to distinguish between farming systems. As a result of this exercise, two farming systems were identified.

1. Teff/haricot bean/livestock farming system

2. Pepper/wheat/goat/apiculture farming system (hereafter referred to as pepper/livestock farming system)

1. Teff/haricot bean/livestock farming system

Forty-three out of the 73 PAs belong to this farming system, where 4 Farmer Training Centres (FTCs) are also located. According to the 1994 census projection for 2005, the total human population living in this farming system is around 119,353 people. While, the total cultivable land is estimated at 27,246 ha. Teff and haricot bean are the major marketable crop commodities, while sheep and cattle are dominant livestock commodities in the area. The PAs belonging to this farming system are found in many parts of the woreda. This is as opposed to the conditions of other PLSs, where farming systems are located in one corner of the woreda. This happens so mainly when altitude, soil type or vegetation is considered during the identification of farming systems. The identification of farming systems in this PLS was based on dominance of one crop/livestock species in one area than the other. This is because almost all factors needed for identifying farming systems were similar. According to the woreda experts, there are 10 zones, which have between 6-8 PA each. According to the woreda experts, 6 out of these 10 zones were categorised as belonging to this farming system. Out of these 6 zones (group of PAs) again, 2 each zones are located west and northwest, while the remaining 2 zoness are situated east and southeast of the woreda town. The soil of this farming system is similar to the other remaining and mostly dominated by Andosols. These soils, found in both farming systems, are easily detachable soils and as a result, a number of gullies can be observed in almost all areas in the woreda. The only two irrigation schemes are also found in this farming system. These irrigation schemes

can collectively irrigate 250 ha and are supporting 375 farm families. Another small river is also found in this farming system.

Maize, teff, wheat, pepper and haricot bean are the dominant crops in with regards to area coverage. A group of woreda experts and farmers were asked to rank these crops based on their market demand, source of income, household consumption use, area coverage and drought tolerance (Annex 3). Based on market demand, the ranking exercise revealed that pepper, teff and haricot bean were among the top marketable crops in this farming system. Among these crops, pepper is not widely grown in this farming system. It should however be noted that the woreda is suitable for all types of crops and livestock, in general, but the degree to which these commodities are grown/raised varies by farming system. The major limiting factor for crop production is moisture stress (shortage of rainfall). Farmers are used to growing chat in their backyards and consumption of chat is very common.

Sheep and cattle are the most dominant livestock types in this farming system. Shortage of feed is one of the limiting factors in livestock production in both farming systems. This is aggravated by both shortage of grazing land (caused due to population pressure) and shortage of rainfall, which denied the growth of sufficient feed resources. All of the livestock observed in this farming system are so skinny that livestock owners are desperate of the situation. Farmers were complaining of the low prices of livestock if they intend to sell their livestock when they are in bad condition. There is hardly milk produced from these cattle except from those that are found close to the Alaba Kulito town. These farmers around the town own crossbred cows, which are stall-fed and are well taken care. Farmers around the town keep livestock targeted for market (sale of milk). Farmers in the woreda believe that the productivity of livestock has decreased substantially due to population pressure, which has forced people to convert natural grazing lands into crop lands. Farmers are heavily dependent on oxen power for all crop operations. Livestock products are generally limited and expensive. During the periods of high feed availability, which is mainly during crop harvest and crop weeding periods, the livestock body conditions become good and sale of livestock earns a reasonably good income. It is also during this period when livestock products like, milk and butter become easily available and earn some cash to farmers The most important marketable livestock types/commodities are shown on Annex 4 of this document.

2. Pepper/livestock farming system

There are 30 PAs that belong to this farming system and 2 FTCs are also located. In these PAs, the total population is 67,450, as has been projected for 2005 in the 1994 census. While, the total cultivable land is estimated at 19,188 ha. Pepper and wheat are the top marketable crop commodities (Annex 3), while goats and apiculture are the top marketable livestock and livestock commodities (Annex 4). There is no cultural barrier in the sale of milk in this farming system. Goat milk is believed to be medicinal, especially for children. It is also common for older men and women also to consume goat milk with coffee. This is unlike our experiences in other PLSs. In both farming systems, maize, teff, wheat, pepper, haricot bean, sorghum and finger millet (in their order of importance in terms of area coverage) are important crops grown by farmers. While, cattle, goats, sheep, donkey, horse, mule and poultry are the livestock types which are dominant in the woreda. In addition, there is substantial

number of bee colonies. With in this farming system, the Besheno zone is believed to have the highest bee colonies.

Farmers in this farming system complained about the cheating by traders in town by manipulating the weighing scale. As a result to this farmers also sprinkle water on to the dried pepper so that the produce will weigh more. On the other hand, farmers argue that water is sprinkled on the dried pepper to keep the pepper from breaking but not to increase weight only.

Use of irrigation is not a common practice in the whole woreda, except in newly developed irrigation schemes. There are also a number of family level water harvesting ponds in the area, mainly for livestock watering. The depth of water wells dug drilling rigs could go as deep as 300 m. Therefore, getting shallow well for both domestic and livestock use is not easy. Consequently, water is a scarce resource in the area. Over twenty years ago (during pick drought periods), it was common for farmers, along the road side, to come out with their containers and ask for any passing vehicle to give them water. There is however a lot of improvement in the area since then. It is now common to see a number deep wells developed by different NGOs including FHI, Water Action and others.

2.3 Priority crop commodities

Maize, teff, wheat, pepper, haricot bean, sorghum and millet are the dominant crops in with regards to area coverage. Other than these crops many other crops are also grown, but economically less important. In most cases, maize is grown in more than 50% of the cultivable land in the woreda, while the all other crops account for the remaining 50% of the area. Despite the size of land allocated for this crop, yield/ha is substantially low (Table 5). In most cases, because of the irregularity of rainfall, production fails and hence the woreda becomes drought-affected. Considering the amount of rainfall in the woreda, one may say that the rainfall is sufficient to support crop growth, but the distribution is very erratic. The rain falls in a very short period of time exposing the crops for moisture stress. Alaba is one of the woredas in SNNPR which is food insufficient. In most cases, production of crops (Table 4) is strongly associated to the amount and distribution of rainfall. However, distribution is more important than even the amount of rainfall received. Until recently, use of irrigation water was not common. However, efforts by both NGOs and the government are showing some results. There are two irrigation schemes already operational since late last year.

Few crops have been identified as priority marketable commodities in the area. Two of the crop commodities selected (pepper and haricot bean) as marketable commodities by farmers and experts, are covered in specialisation extension programs. Most of the remaining commodities are produced for consumption purposes. According to the studies made Co-SAERSAR (1997), woreda Office of Agriculture, proportion of each crop commodity for consumption, market and other purposes are indicated in Table 2.

Table 2. Utilities of major crops in Alaba Special Woreda

No	Type of product	Utilities			
		Home Consumption	Sale	Seed	Others
1	Maize	81.8	11.6	4.0	2.6
2	Millet	81.5	14.6	3.0	0.9
3	Sorghum	80	12	4.7	3.3
4	Haricot bean*	54	44	2.0	-
5	Wheat	24.5	72	2.0	1.5
6	Teff	13.8	81.7	4.2	0.3
7	Pepper	4.0	92	2.5	1.5
Average (%)		48.5	46.8	3.2	1.5

Source: Co-SAERSAR (1997).

*Among the haricot bean types, Red Wolyita is a staple food and is mostly consumed. As can be seen from Table 2, more than 50% of the Red Wolyta type is consumed, while the remaining is sold. However, the newly introduced white types are totally sold. This is because farmers are not used to growing and using this type of haricot beans. Therefore introducing the white types means increasing the marketability of this crop.

In addition to pepper and haricot bean, teff and wheat are also marketable crops.
A group of experts and farmers were asked to identify crops based on their utility (Annex 3). As can be seen from the table above, marketable commodities are the ones that were selected by the woreda experts.

Group discussion result with staff in Alaba special woreda OoANRD agrees with findings of Co-SERSAR (1997). There are three types of commodities in the woreda. The first category is priority marketable commodities. This refers to commodities which are produced and harvested mainly for sell in the market. Average estimated yield of 75% of these groups of commodities is used for market, while 25% is used for household consumption. Priority marketable commodities are the main sources of cash for farmers. This group of commodities is also addressed in **specialization** commodity by the extension program in the woreda. The second category is commodities for household consumption. Production from these commodities is mainly for household consumption (average estimate of 85%) and a smaller proportion of the produce (15%) could also be used for sell. These groups of commodities are addressed as **diversification** commodity by the extension program (Table 3). The last category of commodity is called potential commodities. Potential commodities refer to the commodities which are known in the community but are not widely grown for various reasons.

Table 3. Commodity groups In Alaba Special Woreda

No	Commodity group		
	Maketable	**Consumption**	**Potential**
1	**Crop**		
1.1	Hot Pepper	Maize	Barely
1.2	Haricot Bean (White)	Sorghum	Faba Bean
1.3	Wheat	Finger Millet	Lentil
1.4	Teff	Haricot Bean (Red)	Rape Seed
1.5	Potato	Vegetable (Cabbage Local)	Fenu Greek
1.6			Lin Seed
1.7			Fruits (Banana, Papaya, Mango, Sugar Cane, Avocado, Enset and Citrus Fruits)
1.8			Vegetables (Cabbage, Tomato, Onion, Carrot, Beet Root)
1.9			Vernonia
2	**Livestock**		
2.1	Cattle	Milk	Dairy
2.2	Sheep and Goat	Butter	Beef farming
2.3	Poultry	Cheese	Dairy Goat
2.4	Honey		
2.5	Skin and Hide		

Source: Alaba Special Woreda OoANRD Staff Group Discussion

Over three years, (2002-2004) crop cover shows that maize had covered 43, teff 26, Wheat 9, pepper 7% (but in 2004 it had covered 15%), haricot bean 6%; and sorghum and finger millet 3% each of the total cultivated land of the woreda. While the remaining proportion of the cultivated land was under perennials, root crops and others, accounting for 3% of the total cultivable land (Table 4).

Table 4.-Crop production and area in Alaba Special woreda

No	Crop	Year					
		2002		2003		2004	
		Area (ha)	Production (qt)	Area (ha)	Production (qt)	Area (ha)	Production (qt)
1	Maize	9486.75	41328.25	27052	376696	19236	239160
2	Sorghum	862.75	3451	2717	33592	1285	13618
3	Teff	23194.7	81831	4983	29672	5725	45744
4	Wheat	5503	24763	1351	16000	5070	93075
5	Finger Millet	329	987	2649	42552	1540	21950
6	Barely	NA	NA	235	1410	48	576
7	Haricot Bean	966	1932	1546	15684	4860	29160
8	Pepper	260.8	782.4	3094	18220	5870	17540
9	Faba Beans	24	48	49	294	16	160
10	Lin seed	6	18	6	24	13	52
11	Rape Seed	60	180	64	320	16	80
12	Fenu Greek	8	24	8	24	22	66
13	Potato	238	3570	102	2832	110	3984
14	Lentils	71	213	74	296	19	76
	Total	**41010**	**159127.65**	**43930**	**537616**	**43830**	**465241**

*NA Data not available

Source: Alaba Special Woreda OoANRD, Crop Production and Technology Distribution Desk (2005).

Agroecologically, Alaba is suitable to grow a variety of crops, but the main limiting factor is lack or poor distribution of rainfall. As a result, productivity of most crops is very low. Vegetables and tropical fruits (avocado, papaya and mango) could easily be grown in the irrigated areas On the other hand, after verifications, based on small adaptation trials, vernonia could also be a potential commodity. Experiences from other PLSs, like Alamata and Metema, have shown that this plant can easily be grown in similar climates like Alaba. The following table shows the productivity of the grain crops grown in the wordea, over 3 years.

Table 5. Mean crop yield (qt/ha) (2000-2004) in Alaba Special Woreda

No	Crop	Yield/ha
1	Maize	11.6
2	Sorghum	9.0
3	Teff	6.4
4	Wheat	12.5
5	Finger millet	12.2
6	Barely	9
7	Haricot Bean	6.4
8	Pepper	4.8
9	Faba Beans	5.8
10	Lin seed	3.8
11	Rape Seed	4.6
12	Fenu Greek	3
13	Lentils	4

Source: Alaba Woreda OoANRD, Crop Production and Technology Distribution Desk

The marketable crop commodities for the two farming systems are shown below. In addition to these commodities, other potential commodities are also included.

1. Teff/haricot bean/livestock farming system

   1st Teff
   2nd Haricot bean
   3rd Vegetables (Tomato, onion, pepper, carrot, cabbage)*
   4th Tropical fruits (Avocado, papaya, banana and mango)*
   5th Vernonia**
   6th Soya bean***

2. Pepper/livestock farming system

   1st Pepper (rainfed)
   2nd Wheat
   3rd Vernonia**
   4th Soya bean***

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* Potential commodities but need to be grown on irrigated areas.
** Potential commodity

***This is another potential crop which could be grown in Alaba. It would however require high rainfall compared to haricot bean. Some farmers have the experience of growing it but because of lower prices they have stopped growing it. If market arrangements are made, it is possible that this crop could be of higher potential. Current prices seem to be encouraging (~35o birr/qt). The other added advantage is that Awassa Research Centre is the national coordinator for soya bean research. Currently 7 soy bean varieties were released.

2.4 Priority livestock commodities

Alaba being one of the commonly drought affected areas in SNNPR, livestock production is poor. Grazing lands are converted into farmlands due to human population pressure. Most of the time, livestock graze on farm boundaries, road sides or on un productive backyards. In addition, crop residues are also important feed resources. Body conditions of big ruminants can easily show the magnitude of the problem. This is aggravated because rain started late this year, which resulted into low feed availability, which could have otherwise helped to grow some grass for livestock. Many farmers were complaining that because of the poor body weight conditions of their livestock, the market value is very low. Small ruminants are better in their body conditions. It is common to see tethered livestock in the area. The common livestock types that were marketed in Alaba were chicken and eggs. Lack of feed is the major problem in livestock production in Alaba.

The common animal diseases reported include, anthrax, blackleg, internal and external parasites. Poor body condition of livestock is also believed to contribute to the lack of resistance to many of the diseases. Farmers complain that major resources are spent for treating their livestock. The livestock population is very high though the output is poor (Table 6). The woreda is vast, as a result the coverage of veterinary services is poor and most farmers depend on traditional medical practices. Use of illegal drug is very common in the area. The veterinary technicians are very small in number to cover the whole woreda. There is one veterinary clinic and two artificial insemination sites in the woreda. There are also efforts to introduce different forage species. These included sesbania, cow pea, lablab, vetch, Napier grass, alfalfa and *Desmodium* sp. Cattle and oxen holding per household is 6.7 and 1.90 respectively. Small ruminants and poultry are important livestock commodities contributing to the livelihoods of farm households.

According to woreda BoANRD development plan, in addition to crop husbandry, animal resources development is a key issue for ensuring food security and improve livelihoods. To this effect, special focus is given to sheep and goat, poultry, apiculture and production of forage for livestock.

Table 6. Livestock Population of Alaba Woreda

Livestock Species	Population
➢ Cows	48,570
➢ Heifers	22,230
➢ Oxen	45,984
➢ Bulls	16,180
➢ Calves	28,764
o Female	13,130
o Males	15,634
Total Cattle	**161,728**
Sheep	30,750
Goats	36,552
Donkeys	20,960
Mules	1,685
Horses	1,933
Poultry	62,920
Bee Hives	10,000

Source: Alaba Woreda Office of Agriculture and Rural Development (OoANRDRD), 2003/4 (Animal and Fishery Resource Development Desk)

The marketable livestock commodities for the two farming systems are shown below. In addition, other potential commodities are also included.

1. Teff/haricot bean/livestock farming system

   1st Poultry
   2nd Sheep
   3rd Cattle (Butter)

2. Pepper/livestock farming system

   1st Poultry
   2nd Goats
   3rd Cattle (Butter)
   4th Apiculture

2.5 Natural Resources Conservation

The woreda administration has been undertaking soil and water conservation in the woreda for the past 3 decades and the effort has involved both NGOs and GOs. The most common soil and water conservation structure in the woreda are: area closure, stone and soil bund, micro basins and fannyajuu, check dam, gully treatment and shaping. There are efforts of plantation on bunds with elephant and vetiver grasses. These conservation measures are visible in certain areas both on communal and privately owned lands. Major afforestation efforts are in Arsore, Wanja, Sekate, Wolegeba and Chokore PAs. Afforestation programme was carried out around Rekame and its surroundings by FHI. Currently, there are about 560 ha of

eucalyptus plantation, which was planted by FHI on the mountains around upper Tuka PA. The major problems associated with natural resource use and management in the woreda is lack of awareness to farmers, lack of initiatives to take care of land, severe problem of over grazing, lack of joint effort for soil and water conservation. Conversion of grazing lands to crop land is another major problem. As a result livestock are restricted to very small areas and are mostly tethered.

Despite the fact that most of the woreda is flat, land degradation is wide spread. This includes the Reakame area, which is close to Bilate River. The degraded areas have big gullies, which are wide spread. Most of the dissected gullies extend for long distances. The damage made to some of these areas is beyond recovery. However, there are some soil and water conservation efforts in the area through funds from WFP and UNDP. There are 3 nursery sites, which are used for raising tree seedlings. One of thiese nursery sites, Choroko, raises both tree types (fruit trees and trees for afforestation). Over 1 million seedlings from 12 different species will be raised in the 3 different nursery sites and transplanted during 2005 (Annex 6).

The practice of irrigation is at its infant stage. The biggest irrigation scheme (Bedene irrigation scheme) became operation only last year (around May of 2004). Crops grown using the irrigation water include, different vegetables (onion, pepper, cabbage, carrot and tomato) and tropical fruits (Casmir, papaya, avocado, mango, guava and banana). The total irrigated land is about 250 ha. Most of the fruit tree seedlings produced in Choroko are distributed to farmers around these irrigation sites.

As a result of population pressure, vegetative cover is very low. Consequently, it is common to see small hills without trees, which are also with dissected gullies. However, the common tree species available on farm boundaries, back yards and scattered trees include, *Acacia, Croton and Cordia* species. The common plant species around homesteads is *Euphorbia* sp., which is used as live fence material.

Alaba woreda is predominantly flat. As a result, many areas are vulnerable to flooding. Most frequently flooded areas are: Geleto, Gedeba and Wanja PAs.

3. INSTITUTIONS

3.1 Marketing

Cooperatives

Cooperative movement in Alaba Special woreda started in 1960s. During the period (1960 to 1978) 26 cooperatives were established with a total membership of about 26873. The movement had a set back in 1974 during the regime of derg as cooperatives were liquidated and their properties were nationalized. Cooperatives in the former days were not producing demand driven products and they were forcing farmers to sell the produce at dictated price. The effect has depleted the faith of farmers to members of any cooperative. In earlier days only cooperatives with strong leadership survived and they could continue to thrive due to insulated effect from government intervention.

The agricultural cooperative societies proclamation no 85/94 and proclamation No 147/98 at the present provides necessary ambience for the rejuvenation of cooperative movement in the woreda. At present there are 12 agricultural cooperatives with a total member ship of 4000. The cooperatives were established based on international principles and they have been undertaking input supply, product marketing , floor mill service and house rent.

A cooperative development desk, now under the Rural Development Coordination Office, is mandated for the organization and development of cooperatives in the woreda. The desk is organized with 3 teams: credit and marketing; cooperative organization; and auditing, inspection and registration teams. There are 8 staff working for the desk.

There are three types of agricultural cooperatives society. The first is agricultural marketing cooperatives, the second is Multi-purpose farmer's cooperative society and the third is Irrigation water users' cooperatives society. The process of cooperative establishment takes a serious of steps. Initially need assessment and surveys are undertaken which is followed by training and election of committee and board establishment. Then documents are sent to regional cooperative's office for registration.

Today all cooperatives in Alaba special woreda are at primary society level. The most common inputs/ technologies used by cooperatives are fertilizers (DAP and Urea) and improved seeds.

There are also current efforts which are undergoing to promote cooperative in the woreda through NGO and GO efforts. The notable example is the provision of loan, capacity building effort for cooperative members, committees. Provision of loan for purchase of inputs by cooperatives was from local MFI, Development Bank and commercial Bank.

The major problems identified in association with cooperatives in the woreda is lack of advice on inputs supply, absence of need assessment, absence of extra economic activity for members, absence of freedom for member to enter and leave cooperative

membership, poor networking with concerned bodies working on input and cooperatives,

The cooperative desk is mandated to give legal entity to multipurpose cooperatives. Legal entity to saving and credit, and irrigation cooperatives, and to unions is currently the authority of the regional sector of cooperative development. VOCA-Ethiopia is currently working for establishment of Union in a couple of months. A study initiated by World Bank is being conducted in the woreda and the study focuses on insuring farmers in times of natural disaster leading to crop loss.

According to Regional Abstract (2002), the total number of traders involved in marketing in Alaba is 483, with a capital of birr 8.48 m.

3.2 Input supply

In put supply desk, now under the Rural Development Coordination Office, is mandated to oversee the supply and provision of agricultural inputs in the woreda. Although there are several farmers using input in the woreda, there is little success for farmers to be productive while using new technology.

The most common inputs used by farmers in the woreda are: fertilizers, improved seed, vegetable seeds, poultry and improved farm tools. Most of the farmers in the woreda get technical support from DAs and experts at woreda OoANRD. Little attention was given to monitoring and evaluation of inputs in the woreda. Women farmers were targeted mainly in provision of vegetable seed, poultry, goat and sheep supply.

The over all trend in use of input at woreda level is increasing over the years. The quantity of input supply and number of users has increased over the years.

There are several organization which are taking part in provision of input to the woreda. Wondo trade company and Agricultural input supply organization(AISCO) take part in supply of fertilizer. PIONNER, Ethiopian Seed Enterprise take part in supply of improved seed. There are also retailers (shop keepers) involved in supply of fertilizers.

Common problems observed in supply of inputs are: mismatch of demand and supply, untimely supply of inputs, improper use of inputs, misuse of input (some sell out), there are needs of input but lack of capacity to purchase, there are also defaulters in use of inputs loans. There is a need to have coordinated effort to solve some of the above problems. Promotion of input supply in the woreda should be accompanied by training, it is also worth to consider appropriate developed in the centres.
There are efforts by VOCA-Ethiopia to build capacity of cooperative members and there is a plan to establish Union and provide various supports for cooperatives. World Bank is currently undertaking to find a means of insuring farmers in times of disaster that may influence agricultural production.

Table 7. Input supply (qt) in Alaba Special Woreda (2001-2004)

No	In put type	2001	2002	2003	2004
1	Fertilizer (DAP)	1947	1591	1435	7015
2	Fertilizer (Urea)	1327	296.5		3377
3	Imp. Seed (Maize)	101.5	28.5	70	323
4	Imp. Seed (Haricot been)				250
5	Imp. Seed (Wheat)			750	536.5
6	Imp. Seed (Teff)	12.5	994	1087.5	183
7	Imp. Seed (pepper)				10.66
8	Imp. Seed (Soya bean)				7
9	Vegetable seeds	35	45	15	56.5
10	Root crops (Cuttings)			200000	18852
11	Forage seed				
12	Fatting -ox			35	809
13	Dairy cattle				202
14	Improved Sheep				173
15	Improved Goat				125
16	Improved chickens	240	432	513	4792
17	Modern beehive(Kenya)				320
18	Modern beehive(German)				100
19	Rural Tech- (Carts hand driven)	2	1		
20	Rural Tech -Maize thrashing machine				8
21	Rural Tech -Treadle pump				18

3.3 Rural finance

Omo Micro Finance Institute (MFI)

OMO MFI is the major supplier of credit and saving services for the rural population in the woreda. Three branch offices are based in Durame and the office in Alaba Kulito town is sub branch with three staff. The sub branch provides the service to the rural and urban people and the current credit supply is to about 945 clients.

The credit given to the rural and urban areas in the woreda can be classified into two types: Regular credit and Package Credit.

Package Credit

The Package Credit program started in 2005 and it is a new approach. The program runs in cooperation with small scale industry and trade promotion agency and it mainly focuses on the urban beneficiaries. This credit type runs in 14 regional centres of OMO MFI. There are currently 7 packages (groups) with a total of 84 beneficiaries (Female: 37 and Male: 47). A package or (group) consists of 10- 20 people. The loan duration is up to 3 years and the interest rate depends on type of loan installment. There are 2 interest rates for the package credit. 15% interest rate is for loan installment of loan period and 10 % interest rate is for monthly installment.

The package program is implemented through small scale industry and trade promotion agency and the fund is from rural finance service. The term of the package credit is 3 years.

Regular Credit

The Regular Credit program focuses on rural areas and the program has continued for many years. The interest rate for this programme is 18%. The installment in regular credit is on monthly bases or by term. In agriculture sector credit is mainly for those who are involved in management of cattle, goat , sheep, fertilizer and seed.

The term of the regular credit is 1 – 2 years. The range of loan in is from Birr 500 to 5000 Birr. The maximum loan according to recently issued regulation can go up to 20,000 Birr. A mandatory saving of 5% of the principal plus Birr 2/month saving is required of borrowers. It seems that the availability of loan fund in the woreda is not a problem.

Before the formation of groups, screening of beneficiaries, disbursement of loan the sub-branch office in Alaba Kulito town gives education and awareness creation to farmers regarding the nature of credit, loan and repayment procedures. Organization of the interest group can be done by OMO (MFI) or through interested government bodies like the small scale industry and trade promotion agency.

Beneficiaries in PA are usually those who know each other and live in the same locality. For each group organized there will be a leader to be elected. Collaterals could be government staff in the area. If a husband takes the loan the wife becomes collateral. The sub-branch office ensures that beneficiaries screened are eligible for disbursement. Farmers with out outstanding debts, hard working, with “good” habits, able to work, healthy, and resident of PA are eligible. The only ineligible category of population for loan are those under the age of 18. The landless and singles can also get credit. However, not all members of a group may be landless.

There is no loan insurance system used. However, group saving (tax) is used as a guarantee and it accounts for 10% of the loan. There is a recent study initiated on insuring of loans by World Bank in the woreda.

The repayment rate of the regular and package credit to date was estimated to be 75%. The major problems encountered by OMO MFI so far in Alaba Special woreda includes few number of staff, low level of understanding of the people on credit and saving, and scarcity of fund (there are more number of beneficiaries that the amount of available fund). As a whole one can see that the existing rules and regulation is becoming better and the service coverage is increasing.

Agricultural Development Bank

This bank is involved in provision of loan for the purchase of inputs by cooperatives in Alaba Special Woreda. There are currently 10 cooperative which took loan from this bank. These cooperatives were established before 10 years and the total number of beneficiaries is 200. Three of the cooperatives have taken the second round loan recently and the reaming 7 cooperatives have not paid back the loan. The

total amount of loan disbursed far is 70,000 birr. Peasant Associations representatives mainly do follow up of the cooperatives and woreda staff of small scale and trade Industry. Woreda small scale Industry Development plays role in training, organizing and ensuring the registration of the cooperatives.

3.4 Agricultural extension

The agricultural extension service in the woreda is provided by the woreda Office of Agriculture and Natural Resource Development (OoANRD). According to the newly issued structure, the OoANRD is organized with four Desks; natural resources conservation and development desk, extension communication and training desk; animal and fishery resource development desk, crop development and technology dissemination desk. The extension communication and training desk is currently working as part of the crop development and technology dissemination desk.

There are three teams under animal and fishery resource development desk. The teams are the animal health team, the animal and fish resource development team and the animal resource development team. The natural recourse development and protection desk has two teams. The first team is the forest and wild life animals' protection team while the second is the soil and water conservation and agro forestry team. Crop development and technology dissemination desk has four teams. The teams are crop development, crop protection, irrigation development and extension communication team. According to the existing structure rural women expert, agricultural training are under the crop desk.

Agricultural extension is implemented at development centers were one can find livestock technicians, workers on animal resource, natural resource and crop protection and production. According to existing principles, a development centre serves 500 farmers and existing population needs a total of 219 development workers. Similarly, one animal health technician serves 20,000 heads of livestock and that needs 16 technicians. A supervisor will be responsible to oversee of development centers and for 6 development centers and that need a total of 12 supervisors. The current staff working in the woreda OoANRD is tabulated (Table 8)

Major problems which are pointed out in the woreda extension service include serious shortage of budget and necessary facility to run the program, low level of capacity of DAs and subject matter specialists, non participatory approach and not research based, campaign approach and implementation based on external command and lack of evaluation and proper monitoring.

Table 8. Alaba Special Woreda Office of ANRD and Rural Development Coordination Office Staff

Desk (Department)	Level of education.	Number	Total
Rural Development coordination office		1	1
Cooperatives Desk	12+2 yr; 12+4 yr: 12+ 9 month	3:1:3	7
Input Desk	12+2 yr; 12+1	1:1	2
Rural Roads desk	12+3 month	1	1
Disaster Prevention and Preparedness	12+2	2	2

desk			
Water desk	12+2: 12+4,12+9month	1:1:2	4
Land use and management desk	12+2:10+3	2:1	3
Administration service	12	2	2
Civil service reform officer	12+1yr	1	1
Agriculture and Natural Resource Development Office	12+6	1	1
Crop production and Technology Distribution Desk	12+2 yr; 12+4 yr: 12+1yr	9; 3:1	13
Natural Resources Development and Conservation	12+2 yr;	6	6
Animal & Fishery Resource Development Desk	12+2 yr; 12+1: 12+3 months	8; 3:2	13
Extension Supervisors	10+3: 12+6 months	1:1	2
Development Agents	12+9 months; 10+3 months : 12+2	11 ; 30 :4	45

Source : Alaba Special Woreda Rural Coordination office (April 2005)

There are various types of technologies which are introduced and disseminated to the farmers in the woreda. The major ones includes: Triddle Pump (for irrigation) , Tide ride (for NRM), Moder Beehives (for Bee –farm), Energy Saving stove (for household management), Maize seed processor (for crop production) and horse carts (for transportation). The nearest technology centre for the PLS is in Soddo Rural technology centre.

There are plans for the farmers to introduce new technologies especially on storage of crop products and to reduce post harvest loss. There is an increasing trend for the need of introduced technologies as manifested by farmer's initiation for purchase of the technology instead of looking for loan purchase.

The major problems in agricultural technologies include absence of maintenance and service centers for the technology, technology un availability on market, poor level of understanding on technology, expensiveness of technology which often goes beyond the purchasing power of the farmers.

There are various types of trainings, which are offered through OoANRD. Trainings have focused on farmers and agricultural experts working in the woreda. In recent years trainings organized for farmers and DAs includes: trainings on modern livestock husbandry, apiculture, sheep and goat management, Silk production, modern dairy farming. So far the major problems associated with agricultural trainings were not supplemented by practical and lack of follow up after trainings, scarcity of budget to cover needy beneficiaries; woreda level trainings are not supported with proper trainings aids materials like overhead projector.

Future woreda level agricultural training has focused on training of farmers at FTC and ensuring DAs educational trainings from TVET. Over the past years NGOs and GOs have played a role by organizing training and providing budget. In this regard, it is worth to indicate the budget support from EU and UNDP. There are 3 TVETs in the region located in Wolyita, Mizan and Dilla.

Table 9. Location of FTCs in Alaba Special Woreda

No	PA Name	No. of staff	Male	Female	Farming system
1	Andgegna mekala	3	2	1	Teff/haricot bean/livestock
2	Mirab gorentacho	3	3		Teff/haricot bean/livestock
3	Alem tenna	3	3		Teff/haricot bean/livestock
4	Andengna ansha	3	2	1	Teff/haricot bean/livestock
5	Bukko Tibame	3	3		Pepper/livestock
6	Besheno	3	2	1	Pepper/livestock

There are 3 staff assigned to each FTCs in the woreda. The 3 graduates correspond to the field of natural resource management, animal husbandry and crop husbandry and are graduates of the TVETS. Construction of additional 10 FTCs is also undergoing.

3.5 School, Woreda and Agri net

Woreda Net program

Woreda Net Program for Alaba Special woreda is mainly meant for provsion of Video conferencing, internet and related services. The mandate of undertaking the program is at the hand of woreda capacity building office and the Ethiopian Telecommunication Agency installs the system. As part of the effort, all the materials are in place and are being assembled in a serious of phases as planned by woreda capacity building office and Ethiopian Telecommunication Authority. In the woreda meeting hall the materials assembled are server with its accessories in a server room and the plasma with its accessories in the meeting hall. Other materials for the system includes the satellite dish, TV sets and computers.

Current effort indicates that the program will become operational in this fiscal year. Staff has already been employed as IT expert and electrician. Employed staff is to be trained and existing telecommunication service quality is expected to be upgraded in the year 2005.

School Net program

School net program for the woreda has already stared service for the first (garde 9-10) and second phase (grade 11-12) secondary school located in the urban areas. The service commenced service since Oct 2005. There are a total of 15 Plasma TV sets and of this 14 are functional while the remaining one is not. The satellite dish is well placed and operating properly. There were accessories sent with the materials as teaching aid. Accessories include CDs as teaching material. A staff trained for school net provision has been transferred and there is a need to train another. The existing teaching guide is not complete and that needs focus. The future direction indicates that the service will improve when the woreda telecommunication commences digital service and if net worked.

Agri Net program

Though the program was planned to be implemented as pilot project in 18 woredas of SNNPR, it is not clear if Alaba was one of the sample woreda. Watever the case may be, there is no activity running as agri net in Alaba.

3.6 Gender and HIV-AIDS service

Gender in Alaba Special woreda

Women account for 50% of the total population in Alaba Special Woreda. The woreda women's affairs office was established in 2002.

The role of women in agricultural sector is quite evident in land preparation, weeding and harvesting. There is a special role women play in transporting harvest and household gardening. Women also take care of livestock at home. Women equally take part with men in water harvesting schemes and pond construction.

There are NGOs and GO efforts contributing to engendering of development program in Alaba Special woreda. European Union program is targeting women for economic empowerment through goat and sheep program. There is also credit and input access to women through various programs in the woreda. Woreda women office annual report indicates that there are various types of trainings which are conducted to address gender issue. Trainings include prevention and control of HIV/AIDS , income generation, counseling service, family planning, home science extension focusing on house management and small scale agriculture. Gender training was organized in the past years in the woreda and changes are there in attitude as a result of the training. Men have also started taking responsibility of undertaking jobs culturally left for women as a result of the trainings.

Women involvement in community leadership in the woreda is totally absent. However, women in Alaba special woreda have special respect for the peace reconciliation they play in the society. Women have taken committee positions for "MERET Project" and water activity committee, reflecting their representation in the development programs. As a whole the exist fact reflect that a lot has to be done in promoting women leadership and economic empowerment.

The main problems associated with women in the area are: FGM, early marriage, polygamy, absence of pre-martial test, marriage inheritance, forced marriage, multiple marriages leading to high HIV/AIDS vulnerability, denial of the right to own land. Women at home suffer with the community for having water problem, fuel wood scarcity, lack of mill house locally and poor health coverage.

HIV/AIDS in Alaba Special woreda

There has never been previous study undertaken to investigate HIV/AIDS in the woreda. The existence of NGOs operating in the woreda on HIV/AIDS, reflect that situations has been examined by organizations at the level of their interest. It is difficult to quantify the awareness level of people on HIV/AIDS and issues of transmit

ion, but responses from woreda HAPCO indicates that the level of awareness is high.

There are no associations established for/by people living with HIV/AIDS. Inventory of NGO in the area indicates that FGA, KmG are NGOs intervening on HIV/AIDS in the woreda. On Government side Global fund is contributing a lot.

There are efforts to organize skill training for victims, increasing awareness level on reducing harmful traditional practices, condom promotion and gender, HIV/AID workshops. Impact of HIV/AIDS on the community and role of region leaders on prevention and control was informed to selected segments of the society. The major support so far recorded by Woreda HAPCO is care and support to 40 OVCs and PLWHA. The effort is through Global fund and world bank support to Orthodox Church. The woreda HAPCO was established in 2003 and working with only two staff. The vast areas of the woreda can never be covered by these two staff. The office is working closely with Rural Development Coordination office, education office, woreda information office, health centres, keblele administration and police. The average annual budget of the woreda HAPCO is so small that it is mainly used as running cost and office management. There is a woreda level executive board responsible to over see HIV/AIDS prevention and control. The board consists of 5 members representing different segments of the society in which the woreda HAPCO acts as secretary. HAPCO has plan to enhance use of existing VCT and combating traditional harmful practices with its stakeholders in the woreda.

There are 10 functional anti HIV/AIDS clubs in the woreda. The main ones are the Alaba Fere, Nardos and Mahelet. There is poor networking between partners in the woreda. There are 2 HIV/AIDS counselling services in the woreda and the estimated beneficiary is close to 1300.

The total number of HIV/AIDS orphans in the woreda is 570, however, the numbers of people living with HIV/AIDS is not known. Threre are 2 VCT in the woreda. However, the estimated HIV/AIDS prevalence rate in the woreda is estimated to be at 4.4 %. In addition to the low level of poverty, the major aggravating factors for HIV/AIDS spreading in the worea are thought to be abduction, polygamy, female genital mutilation (FGM), Chat chewing and alcohol use among the residents of the woreda

4. PRIORITY COMMODITY DESCRIPRTION, ANALYSIS AND POTENTIAL INTERVENTIONS

The following tables provide a brief description of production, input supply and marketing aspects of the priority commodities together with areas requiring attention and potential interventions as suggested by farmers and professionals during the Woreda PRA and planning workshop. In addition, the possible institutions to be involved in executing these activities are also shown.

Table 10 Spices- Pepper	**Farming system 2 (Pepper/livestock farming system)**	
Production		
Farmers in Alaba depend on rainfall for the production pepper. Local pepper varieties are used as a source of planting material. Alaba is known for its pepper production and is a major cash crop in the area. It is also the main source of pepper to Addis and other nearby markets around it. Productivity of pepper is about 8-10 qt/ha, but could sometimes be lower depending on the season. Land preparation is by oxen based. Hoe is often used during weeding. In the pepper dominated PAs, it is common for farmers to grow pepper in about 0.25-0.5 ha. Pepper seedbeds are normally located around residential areas. However, pepper fields could be as far as 1 km away from the house. Pepper from Alaba could go as far as Dessie and Dire Dawa. Production of pepper is traditional practice in the woreda. The small rains are used for raising seedling at nursery (seedbed preparation and raising seedling in the nursery), which extend from mid February to mid March. Farmers know that pepper that if poor quality of pepper is produced that it will affect the price. However, because of cheating by traders in the towns, with their weighing scales, farmers have started to adulterate the produce by sprinkling water to the already dried pepper so that it will raise the weight of the produce.		
Areas which need to be addressed	***Potential interventions***	***Responsibilities/tasks***
Shortage and poor distribution of rainfall	Develop appropriate water harvesting schemes (dam and pond construction, river diversion)	Woreda Office of Agriculture (OoANRD), NGOs, IFAD and others.
Hail	Timely planting/use of irrigation	OoANRD, IPMS - TA
Diseases like dumping off, root rot, drying of leaves (unidentified pathogen)	Use of resistant/tolerant varieties	Melkassa Research Centre, IPMS - TA
Pests, mainly termites	Application of appropriate chemicals or cultural practices	Melkassa Research Centre, IPMS - TA
Poor research support. Research focus mainly on grain crops.	Link research and the needs of farmers	Melkassa Research Centre, IPMS - TA
Input supply		
Farmers use local planting materials. Farmers have developed selection of best types of pepper plants from own planting materials. Other wise, old pepper varieties resealed long ago from research are even not available in Alaba. Despite this however, Alaba is a known pepper producing woreda in the country. Some farmers use a combination of urea and DAP as a source of fertility for pepper. Most however apply only DAP fertilizer. Few farmers also use compost in their pepper farms. On the other hand use of chemicals against diseases and pests is not common. Mainly, government offices carry out fertilizer supply.		
Areas which need to be	***Potential interventions***	***Responsibilities/tasks***

addressed		
Lack of improved germplasm (absence of new varieties for selection by farmers)	Introduction of new varieties from research	Melkassa Research Centre, Woreda In put supply Desk, IPMS-TA
Late arrival of fertilizers	Organise and support cooperatives for input supply/encourage private traders to be involved in input supply system	Woreda In put Supply and Cooperatives Desk, IPMS -TA
High prices/unavailability of chemicals	Organise and support cooperatives for input supply/encourage private traders to be involved in input supply system	Woreda In put Supply and Cooperatives Desk, IPMS -TA
Poor quality local varieties	Introduce better varieties from research. Encourage research to establish an on farm research site at Alaba	Melkassa Research Centre, Pepper and spice Extraction Factories, OoANRD, IPMS-TA
High fertiliser costs	Use of alternative fertilizer	OoANRD - Extension, IPMS - TA
Credit		
OMO Micro Finance (OMF) is operational in the woreda, but there is no special credit scheme directed towards pepper production only. It is treated as one of the common crops in the area.		
Areas which need to be addressed	***Potential interventions***	***Responsibilities/tasks***
Limited use of credit	Encourage use of improved inputs on credit/cash on hand	OMF, OoANRD -extension IPMS-TA
Marketing		
There 4 market places in the woreda (Alaba Kulito, Guba, Besheno and Kobo). Among which Alaba Kulito is the biggest of all. Individual farmers carry out marketing of pepper. Sometimes however, farmers may organise themselves to transport their pepper from their village to any one of the market places in the woreda. The local market for pepper is highly season dependent, where at harvest it is around 4-5 birr/kg, while 8-10 birr/kg during other seasons. However, the price of pepper is private traders dependent as is the case in other PLSs. There are many pepper traders in Alaba, but 3 are the biggest traders. Traders are known for cheating the farmers by manipulating the weighing scale and farmers has developed a habit of adulteration of the pepper by sprinkling water in to the already dried pepper so that it will weigh high and earn them better prices.		
Areas which need to be addressed	***Potential interventions***	***Responsibilities/tasks***
Adulteration of pepper affecting the quality and hence price	Encourage quality based pricing of pepper	Marketing Agency of SNNPR, OoANRD-Marketing Desk, IPMS-TA
Fluctuating market prices	Establish pepper-marketing cooperatives.	Woreda Cooperatives Desk, IPMS-TA
Lack of linkages between farmers and Resin factories	Encourage contract farming between farmers and Resin factories	Marketing Agency of SNNPR, RDCO -Marketing Desk, IPMS - TA

Cheating of trader by manipulating weighing scales	Encourage cooperative marketing of pepper	RDCO -Marketing and Cooperative Desks, IPMS - TA

Table 11. Lowland pulse – Haricot bean Teff/haricot bean/livestock farming system		
Production		
Haricot bean fields are ploughed 3 times before planting. Usually farmers are used to planting haricot bean in March. Later on haricot bean fields will be used for either wheat or teff to be planted in July. However, experts believe that planting haricot bean in July is most preferred because of more reliable rainfall. Normally, one time weeding is carried out. In most cases haricot bean is harvested green and sometimes it is left to dry in the field. Consumption is in the form of boiled beans (whether bean is green or dry). Some of the produce is also sold in the marklet. Earlier studies indicate that up 42% of the red Wolyta type could be sold. If farmers produce white haricot bean, all is usually sold. Haricot bean is grown during both the small and big rains and the average yield is between 7-10 qt/ha. Haricot requires about 80 -100 kg/ha of seed. This crop is a staple food for the area. Farmers usually grow local Red Wolyta type, but not the white types. Introduction has already been made and farmers are already growing these white types. At present, the red Wolyta type fetches about 140 birr/qt. Storing haricot bean is a problem, because weevil easily damages it.		
Areas which need to be addressed	***Potential interventions***	***Responsibilities/tasks***
Shortage of rainfall	Early planting	OANRD – Crop Production and Technology Distribution Desk, IPMS - TA
Disease outbreaks during heavy rains	Draining excess water, Use of BBM is possible	Woreda OoANRD – Crop Production and Technology Distribution Desk, IPMS - TA
Pest damage	Good management of fields and use of appropriate chemicals	OoANRD – Crop Production and Technology Distribution Desk, IPMS - TA
Hail affecting production mainly at flowering stage	Diversification of crops	OoANRD – Crop Production and Technology Distribution Desk, IPMS - TA
Poor storage life	Introduce modern post harvest technologies	OoANRD – Crop Production and Technology Distribution Desk, IPMS - TA
Input supply		
Farmers are used to grow own or locally bought planting materials of the Red Wolyta type. During planting, about 100 DAP is applied. The use of improved seed is low, however, the government is trying to introduce the white haricot bean types since recently. The white improved haricot bean varieties of Mexican 142 and Awash Melka have been introduced. The price of the improved varieties (seed) for last year was 385 birr/qt. The produce from this was sold at 160 birr/qt. Currently, the planting was planned to be sold at 170 birr/qt. The price became low because these seeds are not the breeders seed.		
Areas which need to be addressed	***Potential interventions***	***Responsibilities/tasks***
Lack of sufficient improved seeds of export	Introduction and on-farm multiplication haricot bean	SARI/ OoANRD Crop Production and Technology Distribution/In put supply

quality	by farmers	desks IPMS – TA
Late arrival of fertilizer	Timely arrival of fertiliser and encourage Cooperatives/trader for improved fertiliser supply	OoANRD Crop Production and Technology Distribution/In put supply desks IPMS – TA
Lack of improved post harvest technologies introduced	Introduction of improved post harvest technologies introduced	OoANRD Crop Production and Technology / RDCO In put supply desks IPMS – TA
Credit		
There is no special credit scheme targeted towards haricot bean.		
Areas which need to be addressed	***Potential interventions***	***Responsibilities/tasks***
Limited use of credit	Encourage use of improved inputs on credit/cash on hand	OMF, OoANRD -Production and Technology Distribution Desk IPMS-TA
Marketing		
Currently, the local price for haricot bean in Alaba Kulito is about 140 birr/qt. Sometimes price of haricot bean becomes discouraging. As a result, some cooperative are trying to buy the members' produce to sold to traders collectively. However, the capacity of the cooperatives so limited that their intervention to stabilising the market becomes fruitless. In some rural market places, price of haricot bean is in the range of 80-160. However, the market channel for haricot development attempts is unclear and this might affect the current initiatives. Marketing of haricot bean is done individually as is the case for other crops.		
Areas which need to be addressed	***Potential interventions***	***Responsibilities/tasks***
No clear market channel on haricot bean marketing	Strengthen service cooperatives to enable buy and sell haricot bean	Regional Marketing Agency, Marketing Desk IPMS-TA
Lack of knowledge of export market quality haricot bean	Link producers and buyers for meeting quality standards (Contract farming)	Regional Marketing Agency, Woreda Marketing Desk IPMS-TA
Lack of storage facilities	Strengthen cooperatives and train farmers on appropriate post harvest technologies	Woreda Crop Production and Technology Distribution Desk IPMS-TA
Market fluctuation	Strengthen cooperatives and train farmers on appropriate post harvest technologies	Regional Marketing Agency, OoANRD Crop Production and Technology Distribution Desk IPMS-TA
Lack of sufficient market places in their locality	Strengthen cooperatives and train farmers on appropriate post harvest technologies	OoANRD Crop Production and Technology Distribution Desk IPMS-TA

Table 12. Teff		**Teff/haricot bean/livestock farming system**
Production		
Production of teff covers around 20% of the total cultivated land and is the second highest in terms land cover. Productivity of teff is very low and the average yield is about 8 qt/ha. Unlike other areas in the highlands, trampling of the soil, during planting is not practiced. It is the second most dominant crop grown in the area, with respect to number of ha under. At an average, farmers in most of the major teff growing PAs in this farming system cultivate 0.5 ha. Production of teff is becoming an important practice because of 3 main reasons. This is because farmers think that teff has quality feed, is drought tolerant and helps earn more cash because of reliable market. Teff is grown during the main rain season. Teff is a labour intensive crop where weeding becomes a major activity. Most farmers are using herbicides to avoid this.		
Areas which need to be addressed	***Potential interventions***	***Responsibilities/tasks***
Shortage of rainfall (sometimes the shortage of rainfall becomes beyond teff's tolerance level)	Selection of early maturing varieties ("Bunign")	Debre Zeit Agriculture Research Centre (DZARC), OoANRD, IPMS - TA
Requires repeated ploughing, (farmers without oxen can not benefit from the high value of teff)	Arrangement with other farmers (e.g. labour/oxen exchange)	OoANRD
Inherently poor yielding	Select and introduce better performing varieties	DZARC, OoANRD, IPMS - TA
Labour intensive	Application of herbicides but environmental side effects (e.g. bees)	OoANRD, IPMS - TA
Input supply		
In put supply is carried out by OoANRD. Currently, in put supply for teff means mainly fertiliser, and herbicides. Some years back, improved seeds of teff, developed at Debre Zeit Research Centre, were introduced to the area. Varieties known as DZ-354, DZ-196 and Cross-37 were growing well. Farmers had the interest of using these seeds. However, since recently, these varieties are no more with farmers. As a result, farmers are using own planting materials. Delivery of fertiliser and herbicide also has their own problems as well.		
Areas which need to be addressed	***Potential interventions***	***Responsibilities/tasks***
Late arrival or insufficient amount of fertilisers and herbicides supplied	Strengthen farmers cooperatives to assist in this regard	OoANRD-Input Supply Desk, IPMS - TA
Unavailability of improved seeds	Create specialised farmers for producing quality planting materials at farm level	DZARC, IPMS-DZ, experience)
Lack of knowledge on the use of fertiliser and herbicides	Training of farmers on the pros and cons of under-application of fertilisers and herbicides	OoANRD-Crop Production and Technology Distribution Desk (CPTDD), IPMS - TA
Un affordable prices of most in puts	Use alternative fertilisation means (compost, manure, crop rotation, etc.)	OoANRD- CPTDD
Credit		

There is no special credit scheme targeted towards teff. OMF is the only institute involved in the rural sector. The requirement of collateral is deterring farmers from taking loan from OMF. Farmers can take credit from OMF, but need to fulfil the requirement of either the Package or Regular credit schemes.		
Areas which need to be addressed	***Potential interventions***	***Responsibilities/tasks***
Un ability of most farmers to down pay before taking credit	Easy access to credit, through funds from IPMS	OMF, In put Supply Desk, IPMS (allocate creditable resource)
High interest rate of loans	Capacitate coops. to enable give credit to members	RDCO-Cooperatives, IPMS - TA
Lack of competitor creditors	Capacitate coops. to enable crediting members	RDCO -Coopertaives, IPMS - TA
Marketing		
Teff is marketed individually. There are however about 2 cooperatives involved in marketing of teff. There is always high demand for this crop. Hence, marketing of teff is not a problem, except that if farmers are not earning what they should earn due to intermediate trades.		
Areas which need to be addressed	***Potential interventions***	***Responsibilities/tasks***
Quality of teff affecting price	Introduce high price fetching teff varieties	RDCO -Input Supply Desk, DZARC, IPMS-DZ experience)
Loss of income due to intermediaries in teff marketing	Capacitate coops. to buy and sell from members, link with bigger traders in Addis	RDCO -Cooperatives Desk, IPMS - TA
Lack of market information	Avail market information	Regional Market Promotion Office, RDCO -Cooperatives Desk, IPMS - TA

Table 13. Wheat		**Pepper/livestock farming system**
Production		
The third largest crop in terms of area cover and source of income is Wheat. As is the case for teff, yield is poor. This crop is significantly affected by shortage of rainfall. It is predominantly grown in about 22 PAs. In 2004, wheat was grown on about 5,000 ha (13%) out of the area under crops. Productivity of wheat is very low considering its potential. Different wheat varieties were introduced last year, but the out put from these varieties were not encouraging due to shortage of rainfall.		
Areas which need to be addressed	***Potential interventions***	***Responsibilities/tasks***
Shortage of rainfall	Introduce low land wheat types, tolerant to moisture stress	DARC/CIMMYT, OoANRD-CPTDD, IPMS - TA
Poor yield	Increased use of soil fertility measures and introduce better varieties	OoANRD, IPMS - TA
Lack of knowledge on the use of fertiliser and herbicides	Training of farmers on the pros and cons of under-application of fertilisers and herbicides	OoANRD - CPTDD, IPMS - TA
Sometimes rust is a problem	Appropriate planting time and use of clean seed from known sources	DARC/CIMMYT, OoANRD-CPTDD, IPMS - TA
Input supply		
In most cases, farmers use local seeds as planting materials. If an introduced variety is found adaptable to the environment, the likelihood of getting that variety the next year, is very low. As a result, farmers are forced to use own planting materials.		
Areas which need to be addressed	***Potential interventions***	***Responsibilities/tasks***
Lack of improved wheat varieties	Capacitate and encourage individual farmers to be involved in seed multiplication and sale	OoANRD – CPTDD and Cooperatives Desk, IPMS - TA
Late or insufficient amount of fertiliser supplied	Capacitate coops. to supply in put	OoANRD-Cooperatives, IPMS - TA
Un affordable prices of most in puts	Use alternative fertilisation means (compost, manure, crop rotation, etc.)	OoANRD-CPTDD
Lack of knowledge by farmers on the use of fertiliser and herbicides	Training of farmers on the pros and cons of under-application of fertilisers and herbicides	OoANRD - CPTDD, IPMS - TA
Credit		
There is no special credit scheme targeted towards wheat, as is the case for most commodities. OMF has a sub-branch office in Alaba Kulito town and can serve the purpose.		
Areas which need to be addressed	***Potential interventions***	***Responsibilities/tasks***
High interest rate of loans	Capacitate coops. to enable give credit to members	RDCO -Cooperatives, IPMS - TA
Un ability of most farmers to	Easy access to credit, through	OMF, RDCO-In put

down pay before taking credit	funds from IPMS	Supply Desk, IPMS (allocate creditable resource)
Lack of competitor creditors	Capacitate coops. In order to give credit to members	RDCO -Cooperatives, IPMS - TA
Marketing		
This is the main issue that has to be addressed to achieve large scale successful marketing. Marketing is done individually. Market prices fluctuate depending on the crop performance. Results from market price assessment (2000-2002) of this crop shows that the price could go as low as birr 100/qt. Coupled with poor genetic material, un availability of fertiliser and small plots, the production of wheat is very small.		
Areas which need to be addressed	***Potential interventions***	***Responsibilities/tasks***
Production is very small	Encourage contract farming	RDCO -Cooperatives, IPMS - TA
Prices become low, especially during harvest periods	Capacitate cooperatives to help stabilise and benefit members	RDCO -Cooperatives, IPMS - TA

Table 14. Vegetables–(Onion, pepper, tomato) Teff/haricot bean/livestock system		
Production		
Vegetable production has started recently with irrigation promotion. Because of the need for irrigation water, nearly all of the vegetable production (except pepper) has concentrated around the irrigation schemes. In addition to irrigation, most pepper production is rainfed. There has only been one harvest since the irrigation scheme became operational. It will be difficult to fully understand problems related to production. In addition, farmers have very small plots, which are irrigated, up to 200 m^2. Farmers are currently own or locally available planting materials. Onion is the second most important; following pepper, but storage related problems would arise soon, if appropriate measures are not taken. With increased efficiency of the irrigation schemes, volumes of produce are expected to increase, and problems will be identified. It will be easier here to introduce contract farming of most of the vegetables, as it is a common practice by vegetable markers from Addis. The following problems are anticipated if these vegetables are to be produced.		
Areas which need to be addressed	***Potential interventions***	***Responsibilities/tasks***
Lack of knowledge on agronomic practices of most vegetable production systems	Introduction of appropriate management practices to optimize quality vegetable production.	SARI/Melkassa OoANRD – CPTDD IPMS - TA
Lack of knowledge on the amount and frequency of irrigation water	Establish optimum water application schedules for vegetables.	SRARI/ Melkassa OoANRD – CPTDD IPMS - TA
Lack of proper post-harvest handling and management	Practical training to improve the proper time of harvest, transport, handling and storage.	SARI/Melkassa OoANRD – CPTDD IPMS - TA
Lack of market oriented production system	Training on the timing of growing vegetables targeting market	OoANRD – In put supply Desk IPMS - TA
Pests and diseases	Use of clean planting materials, availability of necessary agrochemicals on time	SRARI/Melkassa - TA OoANRD – CPTDD IPMS - TA
Input supply		
Most of the inputs in relation to vegetable production are exchanged among farmers themselves. There have been no improved varieties of vegetables, including onions and pepper. In case of out breaks of migratory insects, the OoANRD avails chemicals. Other wise, specific chemicals are also available through cash or credit from OoANRD. However, there are problems because these chemicals do not arrive on time. Vegetable seeds are also bought from local traders, which is poor in viability. On the other hand, farmers may end up buying vegetable seeds which they did not intend to buy because of lack of knowledge. In most cases, farmers end up using the poor but easily available planting materials from their surroundings. Hand tools necessary for vegetable production are also available in the local market.		
Areas which need to be addressed	***Potential interventions***	***Responsibilities/tasks***
Lack of improved planting materials	On-farm program of multiplication of planting material (vegetables) by farmers	SARI/Melkassa/ OoANRD – CPTDD IPMS - TA
Absence of private	Encourage cooperatives	OoANRD – Extension Teams,

agrochemical suppliers	and private small scale traders to purchase and sell agrochemicals	Woreda Cooperative Team IPMS-TA
Lack of efficient irrigation equipments other than already introduced	Introduce different small scale irrigation equipments	OoANRD – CPTDD, IPMS-TA
Credit		
OMF is operating in the woreda. Therefore, it is assumed that this also works for vegetable producers. However, vegetable production involves expensive materials, like water pumps, in which case availability of credit becomes essential. OMF's strong support to this venture will determine its future success. IPMS may also help in this regard.		
Areas which need to be addressed	***Potential interventions***	***Responsibilities/tasks***
Rigid credit system	Encourage development of flexible credit system	OMF, OoANRD – CPTDD IPMS - TA
Group credit system discouraging farmers	Create other convenient (farmer preferred private credit systems)	OMF, OoANRD – CPTDD IPMS-TA
Weak capacity of service cooperatives	Strengthen service cooperatives	OMF, OoANRD-Cooperatives Desk IPMS-TA
Low maximum loan	Increase loan to encourage farmers	OMF, In put supply IPMS-TA
Marketing		
Currently marketing of some vegetables is done individually. Once produced, onion and pepper could easily be sold as Alaba is close to Addis. Farmers in the Rift Valley practice contract farming or wholesale at farm level. This could be applied to the area once Alaba becomes a known vegetable producer. The following problems are expected to hamper onion and pepper production in Metema.		
Areas which need to be addressed	***Potential interventions***	***Responsibilities/tasks***
Market fluctuation	Organise cooperatives to buy and sell member cooperative	Cooperatives Desk IPMS-TA
Lack of market information	Strengthen cooperatives and link with the regional marketing agency	OoANRD – Cooperatives Desk IPMS - TA
Weak capacity of service cooperatives	Strengthen service cooperatives	OoANRD- Cooperatives Desk IPMS-TA
Poor shelf life, especially for onion	Introduce improved cool storage facilities developed by Adet Research Centre, through SARI or Melkassa	SARI/Melkassa IPMS -TA
Lack of knowledge with regards to supply and demand of each commodity	Comprehensive market assessment studies needed	OoANRD-Cooperatives Desk/Regional marketing agency IPMS

Table 15. Tropical fruits –(Banana, papaya, mango, guava, avocado) Teff/haricot bean/livestock farming system

Production

There is a fruit nursery at Choroko. Few farmers in Lebeko irrigation scheme are used to growing some fruits. Production systems are mainly traditional. As a result the fruit species in use are not of good quality. With the possibility of intensifying the irrigation, market needed better fruit types should be introduced. As the bigger irrigation scheme is new, it is possible to make impact through the introduction good fruit varieties. Few farmers are growing mango trees. Two types of banana are grown in the area. Farmers are willing to expand the Cavendish dwarf banana type. Development of fruit production other than these irrigation schemes might be difficult due to lack of other flowing rivers. Attempts are under way however to try to use small ponds for both vegetables and fruits.

Areas which need to be addressed	***Potential interventions***	***Responsibilities/tasks***
Existing planting materials of unknown origin	Introduce new high quality and high yielding varieties from Melkassa	Melkassa/SARI OoANRD – CPTDD IPMS - TA
Newness to the technology and lack of knowledge of fruit management	Practical training of DAs and farmers, experience exchange programmes, increased on-farm introduction, Introduce appropriate management practices	Melkassa/SARI OoANRD – CPTDD IPMS - TA
Lack of technical backstopping and experience	Capacity building of OoANRD staff and re-organising the existing OoANRD managed horticulture seed multiplication site to satisfy demand	Melkassa/SARI OoANRD – CPTDD IPMS - TA
Poor shelf life of fruits aggravated by relatively high temperature	Introduce cold storage system developed by Adet Research Centre	SARI/Melkassa OoANRD – CPTDD IPMS - TA
Hard-to-manage type of fruits existing	Introduce manageable and market demanded fruit types	Melkassa/SARI OoANRD-CPTDD IPMS - TA
Lack of appropriate irrigation technologies for efficient utilization of irrigation water	Introduction of efficient irrigation technologies suitable to the conditions of the area	Melkassa/SARI OoANRD-CPTDD IPMS - TA

Input supply

Some of the planting materials like mango and guava are delivered through the OoANRD. However, the types distributed to farmers are not the right types. Most planting materials come from already existing old stock around the irrigation schemes. Better types of planting materials need to be introduced at its early stage. There is a high demand for fruit seedlings by farmers in the irrigation schemes.

Areas which need to be addressed	***Potential interventions***	***Responsibilities/tasks***
Lack of improved planting materials that have better quality	Introduce improved planting material like short Cavendish banana, Solo papaya and fibreless mango varieties Establish nursery site for	SARI/Melkassa – TA for capacity building including grafting techniques OoANRD-CPTDD, IPMS - TA

	propagation and for adaptation trial	
Limited numbers of fruit varieties available	Introduce and test different types of fruit including melamine nuts, grape and straw berry varieties	SARI/Melkassa OoANRD-CPTDD IPMS - TA
Marketing		
Market demand for fruits is not a problem except that persabilty reported by some farmers. Once improved fruit varieties are introduced, future market opportunities could be high. Alaba is only 310 km away from Addis and market may not be a problem, if quality materials are produced. The following problems are anticipated.		
Areas which need to be addressed	***Potential interventions***	***Responsibilities/tasks***
Poor shelf life of most fruits	Introduce cold storage system developed by Adet Research Centre	SARI/Melkassa OoANRD - CPTDD IPMS - TA
Lack of knowledge with regards to supply and demand of each commodity	Comprehensive market assessment studies needed	OoANRD - CPTDD IPMS
Price fluctuations	Establish fruit marketing cooperatives	OoANRD-Cooperatives Desk IPMS - TA

Table 16. Dairy (Milk and Butter)		**Both farming system**
Production		
Dairy farming in Alaba special Woreda is based on local cattle breeds. Production scale is small. Milk productivity is small and average productivity is estimated to be 2 Lit/cow/day. Dairy farming has focused on meeting the need of household consumption. There are, however, exotic breeds (Holstein) in urban dairy farming where Milk is the commodity as opposed to butter in rural areas. Survey by woreda Micro and Small scale Trade and Industry Development Office indicate that the daily milk production in two of the urban association is 1213 litre. Cattle management is traditional as there is no effort to feed, process, keep and market in modern and organized way. There is an intervention by EU to introduce improved local breeds. Feeding systems is based on low quality feeds with little effort to improve feed. Livestock health service coverage is inadequate and it is limited to vaccination and outbreak control programs. The average livestock holding per household is estimated to be 6.7. Based on this estimation, the average monthly butter production ranges from 0.5 kg (dry season) to 1 kg (wet season). The average price of a kilo gram of butter ranges from birr 25-30.		
Areas which need to be addressed	***Potential Interventions***	***Responsibility/tasks***
Lack of improved forage	Improvement of forage development suitable to the system	OoANRD IPMS
Poor genetic potential of local breeds for milk production and a few number of local breeds were introduced	Selection of better local breeds, improvement of genetic makeup of indigenous breeds for better milk yields	OoANRD ILRI EU
Poor knowledge for increased utilization of locally available feed resource	Feed preservation (hay), increase crop residue utilization, apply supplementation	OoANRD ILRI
Poor coverage of Animal health service	Prevention and control of infectious and parasitic diseases	ILRI OoANRD
Poor knowledge of farmers on Dairy farm management	Training of farmers especially the urban agriculture	OoANRD ILRI
In put supply		
Input supply for dairy sector in Alaba Woreda is very low and only restricted AI and veterinary services to the local breeds. There are 2 AI and 1 veterinary service station in the woreda. Extension packages on forage development, breed improvement, diversified species utilization (like dairy goats), and locally available feed resource improvement is very weak. AI services are delivered by the OoANRD. There is 1 Veterinary drug store that has opened recently. Veterinary services from OoANRD are provided during programmed vaccination period and during disease outbreak cases.		
Areas which need to be addressed	***Potential Interventions***	***Responsibility/tasks***
Less focus on dairy extension packages	Give emphasis to improved dairying	OoANRD IPMS
No training on improved dairy production	Train farmers and technicians	OoANRD IPMS
Lack of improved dairy breeds	Strengthen the AI service and private bull stations	OoANRD EU

Credit		
OMO MFI and Micro Enterprise Agency provides money to farmers. This particularly common for urban areas where land is also other limiting.		
Areas which need to be addressed	***Potential Intervention***	***Responsibility/tasks***
Inadequate credit for dairy and coordinated effort for marketing	Encourage formation of cooperatives and networking	OoANRD, OMO MFI IPMS
Marketing		
Commodity seasonal calendar shows that Milk and milk product supply from rural areas is seasonal and greatly confined to availability of feed during the rainy season (May-Oct). The decreasing commodity ranking order of milk and milk products includes Butter, Cheese and Milk. Milk production is mainly for HH consumption in rural areas and it is only the urban farmers who often sell it out at small scale. Milk production and management appears to be modern in urban areas where the supply in lower compared to the demand from hotels and local residents. Thus dairy farming for rural area focus on Butter as source of income.		
Areas which need to be addressed	***Potential Interventions***	***Responsibility/tasks***
Milk supply is seasonal mostly confined to the rainy season (when feed available)	Introduce improved feed supply for year round	OoANRD, ILRI-Debre Zeit, IPMS
Consumer hesitation due to milk quality and hygiene that comes from rural farmers	Milk collection and inspection through cooperative formation; Training of farmers on tethering and milk processing and handling	OoANRD, ILRI-Debre Zeit, IPMS
Less attention to whole milk sale (butter processing is preferred)	Butter processing technology	ILRI – Debre Zeit IPMS
Current urban milk supply of is from limited sources	Assist in expanding urban dairy	Woreda Small Scale Industry and Trade Office ILRI – Debre Zeit IPMS
Milk supply not fulfilling demands	Encourage for more production in urban dairy	IPMS Woreda Small Scale Industry and Trade Office

Table 17. Sheep and Goats		**Both farming systems**
Production		
Sheep and Goat management in Alaba special woreda is traditional and the breeds are local. There has never been effort to introduce exotic breeds. The current traditional management has not also focused on any improved feeding and housing system. Currently the population of Goat appears to exceed number of sheep in small amount. There has never been effort by NGOs to promote neither sheep nor goat husbandry in the woreda except for the food security program of EU.		
Areas which need to be addressed	***Potential Interventions***	***Responsibility/tasks***
No effort to introduce improved feeding	Train to adopt improved feeding systems	OoANRD, IPMS
Inadequate health service (drug scarcity) Internal and external parasites and diseases problems affecting productivity	Train staff, encourage private traders to sell veterinary medicine	OoANRD
Lack of better breeds	Introduce improved breeds and improved feeding, health and management aspects	ILRI IPMS
Low awareness level of improved sheep and goat management	Training on same	OoANRD, IPMS
Low quality hide from sheep and goat	Focus on hide processing /management	OoANRD
Input supply		
Extension support for improved sheep and goat production and marketing is very weak. Veterinary service focuses on regular vaccination and treatment during disease outbreak. Local sheep and goats are managed with low input production system. Little effort exists to improve the local breed's genetic potential.		
Areas which need to be addressed	***Potential Interventions***	***Responsibility/tasks***
Less extension support, low package dissemination	Vet post construction, Forage seeds and planting material provision	OoANRD, IPMS-TA
Low veterinary service coverage	Increase supply of veterinary facilities and drugs	OoANRD
Little effort for breed improvement	Improve AI service, introduce improved local breeds	OoANRD, IPMS-TA
Credit		
There is credit service for sheep and goat rearing. However, the credit service coverage in the woreda is limited and not well known among farmers.		
Areas which need to be addressed	***Potential Interventions***	***Responsibility/tasks***
Lack of small ruminant focused credit	Provision of credit to address small ruminants production	OoANRD IPMS
Marketing		
Sheep and goat marketing among farmers is mainly confided to holidays. Marketing is done on an individual basis as for the other commodities. Both goats and sheep have good market demand in Alaba town.		
Areas which need to be addressed	***Potential Interventions***	***Responsibility/tasks***
Seasonal market, during holidays,	Market promotion	
No market information given to farmers	Provision of market information	

Table 18. Apiculture (Honey)	**Pepper/livestock farming system**	
Production		
The current focus of OoANRD is to increase the quality and quantity of honey production at woreda level. Some of the problems associated with bee-farm is that the modern beehives are expensive and can also be susceptible to insects (ants). Several farmers lack management of bee and they often lose bee colony. There are efforts to introduce transitional and modern beehives with down payments. Bee-farm in Alaba special woreda is quite traditional. The bee-hives are traditional and made out of bamboo, maize stalk and local materials. The beehives are kept around homesteads and hanged on trees. Farmers lack knowledge of bee foraging and bee colony management. Average yield from traditional beehive is 7 Kg/beehive/season. Efforts exist to introduce modern beehives (transitional, Kenya and German Model). In 2004, about 320 Kenya model and 100 German Model were introduced to the woreda through support by EU. The average yield from modern beehive ranges from 20-25 Kg/beehive/season. Current population of bee colony is 10,000.		
Areas which need to be addressed	***Potential Interventions***	***Responsibility/tasks***
No effort to introduce improved feeding	Train to adopt improved feeding systems	IMPS-TA OoANRD
Inadequate training/skill farmers	Train farmers and staff, encourage cooperatives	IMPS-TA OoANRD
Lack of modern beehives and its accessories	Introduce improved beehives and its accessories	EU IPMS-TA OoANRD
Susceptibility of modern hives to insect damage	Introduce appropriate technology	IMPS-TA, Technology Centers, OoANRD
Low awareness level of modern apiculture	Training on same	IMPS-TA OoANRD
Input supply		
Extension support for improved beehive is very weak. Most of the bee hives are made from local materials. Appropriate beehive technology is available. Farmers need training on modern beehive management . Some of the technology can not easily managed by farmers.		
Areas which need to be addressed	***Potential Interventions***	***Responsibility/tasks***
Less extension support	Bee-Forage and Bee-farm management	OoANRD
Low Beehive distribution coverage	Increase supply of appropriate beehive	IMPS-TA OoANRD
Little effort on bee-farm management	Introduce technical support and build capacity of farmers	IMPS-TA OoANRD
Credit		
There is credit facility for bee-hive but farmers involvement in the area is rare.		
Areas to be addressed	**Potential Intervention**	**Responsibility**
Lack of bee-farm focused credit	Provision of credit to address small ruminants production	OoANRD IPMS Omo MFI
Expensiveness of improved bee hives	Introduce locally appropriate technology	Technology centers, OoANRD, IPMS
Marketing		

Honey market is confided to the times of availability and attention is not given to it as source of income. Marketing is done on an individual basis as for the other commodities. There is more demand for honey than supply at woreda level. Market value of honey harvested from modern bee-hive is 18 Birr/Kg while traditionally harvested honey is 12 Birr/kg		
Areas which need to be addressed	***Potential Interventions***	***Responsibility/tasks***
Seasonal and random supply to market	Market linkage for continues supply	IPMS-TA, OoANRD
No market information and less training was given to farmers	Provide market information and train farmers	IPMS-TA, Cooperatives,OoANRD

Table 19. Skin and Hides		**Both farming system**
Production		
Skin and hide production in both farming system in Alaba special woreda is similar. Skin and hide is mostly collected during holidays. Estimated number of livestock head that reaches Alaba kulito modern abattoir is 12/day while there are 4 skin and hide stores. There are levels in livestock market and there are 8 butcher houses. There are few traders to collect, salt, dry and transport skin and resource from local markets. The quality of product does need improvement.		
Areas which need to be addressed	***Potential Interventions***	***Responsibility/tasks***
Poor quality product due to external parasites	Increase livestock health service and drug provsion	OoANRD
Farmers are not aware of skin and hide marketing opportunity	Train farmers on market promotion of skin and hide	OoANRD, IPMS-TA
Absence of technical support for abattoirs, butcher house and farmers on processing of the products	Provide technical support to all stakeholders	OoANRD IPMS
Input supply		
Input supply for skin and hide production is limited. Disease control and prevention efforts are there by OoANRD but service coverage compared to the demand is too little. Poor handing and disease is the main cause for quality deterioration in skin and hides. Traditional skin and hide processing effort in rural area by individual farmers' leads to reduce in their quality and market value.		
Areas which need to be addressed	***Potential Interventions***	***Responsibility/tasks***
Limited vet service	Train experts and farmers on improved skin and hide production and expand service	OoANRD IPMS ILRI
Credit		
Credit service is not as such focusing on skin and hide business but information from existing MFI in the woreda indicate that it is possible to get loan for it. There are no cooperatives involved on this activity.		
Areas which need to be addressed	***Potential Intervention***	***Responsibility/tasks***
No organized activity	Develop market linkage	OoANRD IPMS
Marketing		

Marketing is based on individual base. There are few skin and hide traders in the town. They collect the products from villages and farmers bring to them. There is decline in quality of skin and hide at every stage as the product goes from the source to skin and hide traders who act as terminal market for the product in the woreda. There is considerable variation in price of the product and there is lack of “price” set based on certain standards.		
Areas which need to be addressed	***Potential Interventions***	***Responsibility/tasks***
Poor quality product	Training of farmers	OoANRD
Lack of organized cooperatives for marketing skin and hides	Organize cooperatives for collecting, processing and marketing of skin and hides	OoANRD /Cooperatives
Unstable price	Provide market information and link cooperatives with product users	IPMS Small scale Industry and trade
Poor processing	Provide technical support for producers and traders	OoANRD /Cooperatives IPMS

Table 20. Poultry		**Both farming systems**
Production		
Poultry farm in Alaba special woreda is traditional. Pullets and cockerels are dominantly local breeds except for a few improved chickens distributed to farmers. The most common breeds are the Rod Island red and it is sourced from Awassa and Debre Zeit. Feeds and vaccination is provided as a support for the improved chickens at the time of distribution. The feed is concentrate and once the vaccination is given there is no follow up or continued support. Average poultry holding per HH varies from 3 to 6 chickens. There have been efforts to introduce modern improved chicken over the past 3 years and the total number introduced so far is 5977 Pullets and cockerels. 20 % of supply was in the last year and efforts are done by EU and through government extension package. The common diseases in the area are Toxidocins and New Castle. Poultry production focused more on eggs that meat.		
Areas which need to be addressed	***Potential Intervention***	***Responsibility/task***
No effort to introduce improved management at large scale and small production	Train and introduce more poultry support	OoANRD
Inadequate training/ skill of farmers	Train farmers and staff, encourage cooperatives	OoANRD, IPMS-TA
Lack of improved breeds and its services	Introduce improved breeds and its services	EU IMPS BoANRD
Input supply		
Extension support for improved poultry is limited to supply of inputs. There are a few farmers who take chickens to get health service. Supply of drug is limited and the common disease reduces the population on the on set and off set of rainy season. Supply of feed is timely and often done at time of supply.		
Areas which need to be addressed	***Potential Intervention***	***Responsibility/tasks***
Less extension support	Focus on technical aspects of production and poultry protection (poultry feed)	OoANRD
Poor coverage of distribution (improved chicken)	Increase supply of appropriate beehive	OoANRD, EU
Inadequate feed and health service services	Increase health service coverage	OoANRD,
Credit		
There is credit facility for producers but the practice is not common.		
Areas which need to be addressed	***Potential Intervention***	***Responsibility/tasks***
Less practice in accessing credit for poultry farm	Organize producers and provide credit	BoANRD IPMS – TA, Omo MFI
Marketing		

Poultry is as source of income for most farmers and market supply is undertaken individually. There is more demand for eggs and chicken on the market than supply at woreda level. There is a good potential to sell of chickens out of Alaba to other markets as the case in the surrounding woreda. Market value of pullet varies from 15 birr at time of scarcity to 6 birr/pullet at time of abundant supply. There is supply shortage for both egg and poultry at the market.		
Areas which need to be addressed	***Potential Intervention***	***Responsibility/task***
Inadequate and random supply to market	Market promotion for continues and more supply	SNV, OoANRD
Absence of market focused production	Organize cooperatives for poultry production, Introduce products quality for markets	Small scale trade and Industry, OMO MFI. OoANRD,IPMS

5. OUTLINE OF PROGRAM OF WORK ALABA SPECIAL WOREDA

5.1 Priority commodities & Natural resource management technologies

During the project's first year, attention will be focused on capacity building, introduction of innovative technology practices, extension methods and institutional innovations for the following priority commodities and their supporting NRM technologies. A brief description of the two major faming systems of the woreda is as follows:

Teff/haricot bean/livestock farming system

43 out of the 73 PAs belong to this farming system where 4 Farmer Training Centres (FTCs) are located. According to the woreda experts, there are 10 zones in the woreda each with 6-8 PA. 6 out of these 10 zones belong to this farming system. Out of these 6 zones (group of PAs) again, 2 each zones are located west and northwest, while the remaining 2 zones are situated east and southeast of the woreda town. The two irrigation schemes, which are found in the woreda, are also found in this farming system.

Crops: Teff and haricot bean are the major marketable crop commodities. In terms of area coverage, the dominant crops are Maize, teff, wheat, pepper and haricot bean.
Livestock: Poultry, Cattle, Sheep and Goat are dominant livestock commodities in the area.

Pepper/livestock farming system

A total of 30 PAs belong to this farming system with 2 FTCs. With in this farming system, the Besheno zone is believed to have the best apiculture potential.

Crops: Pepper and wheat are the top marketable crop commodities. In order of importance and land coverage, maize, teff, wheat, pepper, haricot bean, sorghum and finger millet are also important crops grown by farmers.
Livestock: Poultry, sheep and goats and apiculture are the top marketable livestock and livestock commodities
NRM technologies (both farming systems): Water harvesting structures (traditional and modern), soil and water conservation activities (physical and biological) and irrigation water development. Water scarcity also is a crucial factor to boost commodity production in this faring system as major input. Underground water is so deep that drilling is not feasible for agricultural purposes.

Based on the knowledge captured and the lessons learned during the initial implementation of the innovation program some of the priorities commodities may be dropped, while others may be added.

5.2 PLS Knowledge management –general (RBM Code 100 Series)

The first pillar of the project is strengthening innovative knowledge management system. The objective of the first project component is to develop an agricultural knowledge management system that will enable Ethiopian institutions, farmers and

pastoralists to adapt appropriate technologies from research and development institutions based in Ethiopia and elsewhere. The outcome of the first project pillar is functional agricultural knowledge management system interconnected and utilized at all levels, highlighting innovations and appropriate technologies.

Major bottleneck in Ethiopian agricultural knowledge management system is: Lack of knowledge as one of the key impediments to the development of agriculture. This may mean lack of or poor dissemination of knowledge (awareness of on shelf research outputs, inadequate understanding of the market dynamics and availability of markets for agricultural outputs), lack of awareness of the impact of quality production, lack of awareness for improving production and productivity of selected commodities, poor dissemination of indigenous knowledge.

To improve the capturing and sharing of knowledge on priority commodities and the supporting NRM technologies in the PLS, the state of knowledge and knowledge requirements will have to be assessed on a continuous base during the project life. The initial PRA and the subsequent assessment will form an integral part of this process. Several information gaps that deserve attention have already been identified in relation to priority commodity.

The knowledge will be synthesized and assembled at the federal level in a resource Information Centre using electronic database formats. To share this knowledge with institutions and communities, various process and mechanisms will be used including the distribution of appropriate printed materials (manuals, trainings materials, posters, leaflets in local language), radio programs local exhibitions etc.

To link the PLS institutions with Resource Information Centre, electronic linkages with the Woreda Agricultural Sector will be established. This effort will have to be integrated and synchronized with other activities in this field. i.e. Woreda Net and School Net. School net is operational in the woreda and Woreda Net will be operation in the year 2005. Recently employed staff for woreda net will be trained this year and installation of the equipments and the program will resume this year. The School net is operational since Oct 2005 and it is transmitting lessons form the Educational Media Agency (EMA) in Addis Ababa. Fifteen Plasma TV sets are there of which 14 are functional. There is a need to train a staff for School Net because the trained one has been transferred.

Simultaneously innovative ways of creating a culture of knowledge capturing and horizontal knowledge sharing between the actors in the PLS and between the actors at PLS, regional and the federal level will have to be developed – see section 5.3 on capacity building.

Table 21. Project support for PLS knowledge management system (100 series)

Activities	**Target**	**Responsible**
(100) Continuous assessment of the state of knowledge (Synthesis of knowledge) required to improve productivity and	Woreda Institutions	Woreda institutions involved in extension, iput supply, micro finance, cooperatives, marketing under the supervision of

market success		project staff
(100) Collection and synthesis of data for PLS (GIS) database	Woreda Institutions	Project staff with woreda OoANRD
(100) Establishment of woreda Agri Information center	OoANRD, RDCO	Project staff and OoANRD
(100) Preparation of extension materials and methods and training materials on priority commodities and NRM technologies, input out put marketing systems), preparation of forums to disseminate knowledge, establishing institutional linkage to foster learning and knowledge sharing*	Woreda Institutions	Research and development partners with a help of project funding
(100) Purchase and installation of computers and hard ware, linking with appropriate offices	Woreda OoANRD and RDCO	Project staff
(100) Training of staff in electronic knowledge management**	Office heads and team leaders, extension supervisors	Project staff

*For details see commodity program described in section 5.4–indicated with code 100

**Training is suggested on basic computer utilization, data management including introduction to GIS, communication systems and technical support.

Some extension and training materials exist, especially at the regional level. The resource persons for farmers', DAs' and supervisors' trainings are woreda experts. Woreda experts often get training to go out of the woreda on the basis of invitation from institutions. For example, SNV advisors have recently started training staff in the woreda OoANRD. Similarly, the senior staff from the regional BoANRD also trains experts of the woreda on various topics. However, they need to be customized to the priority commodities and the PLS level situation, including the use of innovative extension methods. Moreover, since the focus of the extension work for the priority commodities will be the FTCs, new extension and training materials need to be developed that fit the requirements and operation of the FTCs.
Annex 2 presents the type of demonstration materials required for each commodity.

5.3 PLS public institutional capacity building –general (RBM Code 200 Series)

The objective of the second pillar of the project is to build and strengthen existing institutional capacity and foster institutional learning and change so that new collaborative arrangements across sectors and levels are developed to better support the dissemination, use and impact of demand-driven sustainable agricultural technologies and information. The outcome of the second pillar is strengthened

institutional capacity of agriculture public organizations to support the development of farmer-based, market-oriented agricultural production systems. In order to introduce the project, and to train institutional staff in innovative technology transfer methods, inter-institutional collaboration and cross cutting themes like gender and environmental assessment, various trainings will be conducted for Woreda staff. (Materials for such training will be prepared by the project with the help of consultants and contributions from the project partners). To stimulate the integration with private institution staff, some staff from the private institutions will also be involved in this training. The training will be continuous during the project life and the effectiveness of the training will be assessed regularly. Lessons learned will become an integral part of follow up training events. One of the critical trainings to be given will deal with innovative methods of agricultural institutional service delivery.

Table 22. Potential Woreda and Regional staff (Training of Trainers) to be included in the innovative methods training

Woreda Offices	**Number**
-Extension supervisors	2
-Office head of OARD	1
-OARD team leaders	4
-OARD sector desks	4
-Input supply experts	2
Cooperatives office	7
Micro finance institutions	4
Women affairs office*	1
Women's association*	1
HIV/AIDS office*	1
Land use planning and environmental protection*	1
Home agents*	15
Regional Office	
Experts at the Extension Department of the regional Bureau of Agriculture and Rural Development	4
Research and extension liaison of SARI/ARC	1

*These trainees are to be included only in the training on gender, HIV/AIDs and environment.

The trained Woreda staff (TOTs) are expected to introduce the innovation concepts to Development Agents in the FTCs, who in turn will use these concepts during their daily work with the farmers and communities (see section 5.4). Use of these innovative methods by FTC staff will be monitored and evaluated by the project staff and form the basis for adjustment in the TOT trainings.

Besides the building of the capacity of the Woreda and FTC staff in the use of innovative methods and institutional arrangements, technical training on the priority commodities, including new production methods/techniques, farmer/group/cooperative based input supply and marketing systems will be provided (Materials for such training will be prepared by the project with the help of consultants and contributions from the project partners). Details for such training are

included in the PLS sustainable livelihood development activities described in section 5.4.

Table 23. Potential Woreda staff to be included in technical training of priority commodities

Office	Priority commodity	Number
Agricultural Development Sector	NRM	1
Agricultural Development Sector	Haricot bean and Pepper	5
Agricultural Development Sector	Tropical fruits and Vegetables	5
Agricultural Development Sector	Goat and sheep fattening	5
Agriculture development sector	Dairy production	3
Agricultural development sector	Poultry and apiculture	3

Natural resources management is important in the woreda. In addition to the innovative methods and technical aspects of training, specialized training will be given to appropriate Woreda staff on sustainable management and development of natural resources, including soil and water conservation, water resources development and conservation for irrigation (ponds, river diversions). Flooding problems are being observed in some parts of the woreda, and hence appropriate measures need to taken.

Table 24. Potential Woreda staff to be included in NRM training

Office	Number
Land use and management	3
Natural resources development and conservation	6
Water desk	4

An integral component of the capacity building activities at the Woreda level is the development of the FTCs. In the initial phase, the project will support selected FTCs with printed materials and demonstration materials (see 5.2) in support of the priority commodities and supporting NRM technologies (see section 5.4 for details).

While many capacity building activities have been undertaken by numerous projects operating in Ethiopia, the actual use of the increased capacity by the staff in their daily work is often minimal because of a host of other bottlenecks and a lack of reward for those staff which have made progress despite the presence of these bottlenecks.

The project will introduce various other capacity building initiatives at the PLS level to alleviate some bottlenecks in order to facilitate the introduction of technologies and institutional innovations. This will include the supply of credit funds and financial and technical support for market studies and linkages for priority commodities and operational cost of experts to supervise and guide the DA staff at FTC level. These activities are integrated in the PLS sustainable livelihood activities (see section 5.4).

The project will furthermore set aside some funds for rewarding experts and FTC staff which have made good progress in technology and institutional innovations.

One potential reward may be in the form of visits to places of interest (this will be introduced in the second project year).

Finally, an integral part of the PLS capacity building support is to create a learning system between the region and the PLS and to create an inter-institutional learning system at the Woreda and FTC level. To facilitate this arrangement the project has established Regional and Woreda level Advisory and Learning Committees (RALCs and WALCs). A budget will be made available to use/develop various learning mechanisms including field visits and small workshops. An integral part of this learning will be the sharing of knowledge between the regions and institutions concerned.

Table 25. Project support for PLS general capacity building support*

Activities	**Target**	**Responsible**
(200) TOT training and follow up in innovative methods	Woreda and 6 FTC staff	Project staff and consultants
(200) TOT training and follow up in gender	Woreda and 6 FTC staff	Project staff and consultants
(200) TOT training and follow up in environmental assessment	Woreda NRM staff and 3 FTC staff	Project staff and consultants
(200) Development of a reward system for institutional staff	Experts and 6 FTC staff	Project staff, WALC and RALC
(200) RALC and WALC learning activities including field visits and workshops	RALC and WALC	Project staff
(200) Degree and diploma training in policy and institutional analysis, extension, innovations, gender, new technologies and commodity specific trainings	TVETs staff, OoANRD staff, regional and federal level MoARD staff	Project staff, OoANRD staff

* Commodity and or technology specific support to Woreda staff institutions and FTCs is described in section 5.4 - indicated with code 200.

5.4 PLS sustainable livelihood development –general (RBM Code 300 Series)

This is the third component of the Project which is aimed at enhancing capacity of farmers, community based organizations (CBOs) and private sector institutions and technology uptake based on market-oriented data. The project will concentrate its efforts on introducing innovative technology (practices) and institutional innovations with farmers and communities near Farmer Training Centres (FTC) which have a potential for the identified market oriented priority commodities and supporting NRM technologies. These potentials were identified by Woreda staff during the national planning and PLS level workshops and will be (re-) assessed during the project's initial implementation phase with the farmers near the FTCs.

Table 26. FTCs with potential for priority commodities and NRM technologies in the Teff/haricot bean/livestock system

FTC	Teff/NRM	Haricot bean/NRM	Sheep /goats fattening	Dairy /butter	Poultry
Andgegna Mekala	X	X	X	X	X
Mirab Gorentacho	X	X	X	X	X
Alem Ttenna	X	X	X	X	X
Andengna Ansha	X	X	X	X	X

Table 27. FTCs with potential for priority commodities in pepper/livestock system

FTC	Pepper	Wheat	Dairy /butter	Goat/sheep fattening	Poultry	Apiculture/ NRM	Horticulture	Hides and skins
Bukko Tibame	X	X	X	X	X	X	X	X
Besheno	X	X	X	X	X	X	X	X

The project deals with commodity specific efforts to introduce innovative practices in technology, institutional arrangement with farmers near FTC for identified market oriented development. The above are the only FTCs in the woreda, at least initially. It is in these FTCs that the concerted efforts in training and other interventions will be made. The most important NRM interventions required in the Woreda include soil and water conservation; water harvesting; small scale irrigation development; soil fertility management, especially the use of inoculums for haricot bean, feed resources and grazing land management; and afforestation. Due to flooding problems, NRM technologies that could address these problems are required across all the FTCs. These six FTCs will be used as the focal points for the introduction of the NRM technologies, since the project will not be able to reach out to all FTCs that will be soon be opened in the woreda.

It is important to note that an initial set of potential interventions regarding the market oriented priority commodities were determined during the Woreda planning workshop (see chapter 4) and an initial set of activities was designed with regional and woreda representatives and partner institutions in the national planning workshop. However, a further (re-) assessment of these activities will take place with the farmers as an integral part of the PLS initial implementation program.

The following sections deal with activities on the priority commodities, which are envisaged to be accomplished within the first year of the project's life.

5.4.1 Spices –Pepper (Pepper/Livestock farming system)

Marketing

Pepper is the most marketable commodity in Alaba. Most of the pepper in the country comes from Alaba and other adjacent woredas. Productivity of pepper is between 8-10 qt/ha. Most farmers in this farming system allocate land of up to 0.5 ha

every year. Assuming the productivity to be at about 4 qt/household and the number of farmer household heads in this farming system, the total pepper production from this farming system would be about 27,000 qt/year. This therefore requires proper market linkages. Currently farmers complain of cheating and also late payment by traders. As a result of this farmers become forced to adulterate the produce by adding water. Hence, quality of the produce is affected and the price.

Table 28. Project support for pepper marketing

Marketing		
Activities	**Target**	**Responsible**
(400) Study on pepper marketing, quality requirements to develop innovative marketing strategy	2 FTCs, Private traders, factories, exporters	Project staff, Regional Export Promotion Agency
(400) Market promotion of Alaba pepper	TV, Radio	Project staff, Export promotion agency
(200) Training on pepper based marketing	Cooperatives, 2 FTCs staff	Project staff and partners
(200) Training on pepper market standards and its achievements	Farmers, Traders and cooperatives	Project staff and partners
(300) Facilitate the provision of marketing fund for cooperatives	Cooperatives within the 2 FTCs	Project staff and OoANRD staff
(300) Facilitate establishment of pepper veranda to meet market quality and standards	Alaba Kuilto market	Export promotion office, IPMS-TA

Input supply

Farmers depend on local planting materials and exchange is farmer to farmer. Selection of planting material is made based on length, fruit, colour and other characteristics of the pepper fruit, while on the field. There has been lack of improved germplasm in the woreda even though there are already developed varieties by Melkassa Research Centre in Nazreth.

Table 29. Project support for pepper input supply

Activities	**Target**	**Resposbility**
(400) Study on existing input supply system	Private traders, factories exporters	Students, Project staff, Input Authority
(300) Facilitate the supply of planting materials for market based development	Farmers in and around 2 FTCs,	Project staff and OoANRD staff
(300) Adoption and diffusion of appropriate technology for pepper production	Private sectors, farmers, cooperatives	Project staff and NAR staff
(200) Training of cooperatives on market oriented input supply for market promotion	Cooperatives and private sectors	

Production

Alaba PLS is known for its good potential of pepper production and the substantial income from pepper production is well recognized by farmers of the area. Market in silte area is now producing quality and more pepper and there is a need to focus on

production constraints in PLS. The major constraints are dominance of local variety, poor linkage between water harvesting technology and pepper production, lack of quality focused production and low awareness of demands at terminal market. Innovative input supplies system, capacity building of farmers and cooperatives, focusing on market oriented production, introduction of appropriate technology at market and production site, establishing of market oriented facilities are essential focus of intervention.

Table 30. Project support for pepper production

Activities	Target	Resposbility
(400) Study existing pepper production system	Farmers in and around 2 FTCs	Project staff and OoANRD staff
(200) TOT on efficient technology use for pepper irrigation	Woreda NRM staff, 2 FTCs staff	Selam Vocational Training, OoANRD staff, IPMS-TA
(300) Strengthening use of water harvesting technology for pepper production through training	Farmers in and around 2 FTCs	FTCs staff guided by OoANRD staff, IPMS-TA
(300) Facilitate the supply of water harvesting and irrigation technologies	Water harvesting structures	Selam Vocational Training, OoARNRD, IPMS - TAf

5.4.2 Haricot bean (Teff/Haricot bean/Livestock farming system)

Marketing

Haricot bean is the second most important source of market income for farmers in the woreda next to pepper**.** The major marketing problem with haricot bean production is lack of linkage and this calls for introduction of innovative marketing system. Formation of farmers' marketing groups, strengthening of existing cooperatives, training of people on haricot bean marketing is also essential. Study on market system and improved knowledge (using innovative methods) and transfer to FTC is needed.

Table 31. Project support for haricot bean marketing

Activities	Target	Responsible
(400) Study on haricot bean marketing and requirements to develop innovative marketing strategy	Private traders, cooperatives	Students, Export Promotion Agency, Project staff
(200) TOT on marketing group formation	Cooperatives leaders, FTCs staff	Project staff and partners
(200) Training on purchasing and processing of beans	Cooperative leaders in and around 4 FTCs	Project staff and partners
(300) Facilitate the provision of marketing fund for cooperatives	Cooperatives in and around 4 FTCs	OMF with funds from the project, OoANRD staff

Input supply
Planting materials from local sources are used. The commonly available seed is the red Woliyta type and it is used a source of their diet. Some white haricot bean varieties are being introduced. DAP fertilizer application is practised in the area. There needs to be a farmer to farmer seed supply system established in the area for sustainable supply system.

Table 32. Project support for haricot bean input supply

Activities	Target	Responsible
(400) Study on existing input supply system	Farmers in and around 6 FTC, Private traders, factories, Importers	Students, Project staff, Regional Input Authority
(400) Study on the need of bio fertilizer	Farmers in and around 4 FTCs	National Soil Laboratory (NSL), Project staff
(300) Facilitate the supply of improved haricot bean varieties	Farmers in and around 4 FTCs	Ethiopian Seed Agency (ESA Melkassa/EARO, BoANRD
(300) Supply of demonstration materials (different germplasm) for farmers/cooperatives	Farmers in and around 4 FTCs	FTC STAFF
(300) Facilitate the development of innovate farmer based seed supply system	Farmers in and around 4 FTCs, Private sectors, cooperatives	Project staff and OoANRD staff
(200) Training of cooperatives on	Cooperatives and private sectors	

Production
Early planting of haricot bean around March allows farmers to plant other cereals after harvest which is around July. The use of bio fertilizer may help these cereals to receive sufficient nitrogen in the soil and with the increasing price of fertilizer, fixed nitrogen will be an added advantage. Hence, there is a good complementarily of this legume with the cereals. Introducing the white haricot bean types will encourage the marketability of this commodity.

Table 33. Project support for haricot bean production

Activities	Target	Responsible
(400) Study on existing production constraints	Farmers in and around 4 FTCs	Students, Melakassa/EARO, CIAT
(200) TOT on management and application of bio-fertilizer	4 FTC staff and woreda agronomists	National Soils Laboratory,
(300) Training on management and application of bio-fertilizer	Farmers in and around 4 FTC	FTCs staff guided by woreda agronomists National Soils Laboratory
(200) Supply of demonstration materials for	4 FTC, Experimental station	EARO, project staff, CIAT

bio-fertilizer		
(200) Facilitate market linkage for output marketing	Farmer marketing groups, Cooperatives, Private sector traders	Regional Marketing Office, OoANRD, Project staff

5.4.3 Wheat (pepper/livestock farming system)

Marketing

Wheat is the third important crop in terms of area coverage but productivity is poor. This is as a result of pests, reliability of rainfall, availability of fertilizer, potential of currently used wheat cultivars. Price of of wheat is low due to marketing problems. Innovative marketing systems are required, in which marketing groups or use of existing cooperative arrangement could also be thought of. .To do this, however, training is essential. Study on market system and improved knowledge (using innovative methods) and transfer of knowledge to FTC is needed.

Table 34. Project support for wheat marketing

Activities	Target	Responsible
(400) Assessment of existing wheat marketing to develop innovative marketing strategy	Farmers in and around 4 FTCs, Private traders, and cooperatives	Students, Project staff, Regional Marketing Agency
(200) Training on marketing wheat (wheat marketing group formation, use the existing cooperatives)	4 FTCs staff	Regional Marketing Agency, Project staff
(200) Training on wheat marketing	Farmers in and around 4 FTCs, Traders and cooperatives	Project staff and partners

Input supply

Innovative input supply system for wheat production is important. Lack and late arrival of input supply is a major issue in almost all PLSs. As a result, local planting material is used.

Table 35. Project support for wheat input supply

Activities	Target	Responsible
(400) Study on existing input supply system for wheat production	Farmers in and around 4 FTCs, Private traders, factories,	Students, Regional Input Authority, Woreda OoANRD, Project staff
(200) Facilitate the supply of different wheat varieties as demonstration for market based wheat production	4 FTCs	Kulumsa Research Centre, OoANRD and Project staff
(200) Facilitate the supply of wheat production manuscripts, manuals, on wheat production	4 FTCs	Kulumsa, Research Centre,, Woreda OoANRD, Project staff
(200) TOT on innovative seed supply	4 FTCs staff, Woreda	Kulumsa,

system	OoANRD,	Research Centre
(200) Training on innovative seed supply system	Farmers in and around 4 FTCs	FTC staff guided by Woreda OoANRD staff,
(300) Encourage the farmer to farmer seed supply system	Farmers in and around 4 FTCs	Project staff and OoANRD staff

Production

Current wheat productivity levels in Alaba are low. Low rainfall and poor distribution of the rains is a common cause for production failures. It is only recently that new whaet varieties have been introduced to the area. However, benefits could not be realised because of rainfall failure.

Table 36. Project support for wheat production

Activities	Target	Responsible
(400) Study on existing wheat production system in Alaba	Farmers in and around 4 FTCs	Students, Woreda OoANRD IPMS-TA
(200) TOT on the general agronomy of wheat production (choice of varieties, planting time)	4 FTCs staff, Woreda agronomists	Kulumsa/EARO, IPMS - TA
(300) Training on the general agronomy of wheat production	Farmers in and around 4 FTCs	FTCs staff guided by Woreda agronomists

5.4.4 Poultry (Both farming system)

Marketing

Production of poultry ranks first among livestock because of the economic benefit realized, even in the traditional production system. Poultry generates a quick solution to farmers' problems in the rural household heads. In order to increase the knowledge in managing poultry and hence improve their income, capacity building of farmers and cooperatives and enhancement of their market orientation is essential. Study on overall production system and introduction of innovative methods for market-oriented production is also needed.

Table 37. Project support for poultry marketing

Activities	Target	Responsible
(400) Assessment of existing poultry marketing to develop innovative marketing strategy	Farmers in or around 6 FTCs	Students, Project staff
(200) TOT on market group formation and marketing (feed and health service provision) of poultry and products	Woreda Livestock Experts, FTCs staff	Awasa Poultry Breeding Centre, Project staff
(300) Training of farmers on poultry market orientation	Farmers in and around 6 FTCs	FTCs staff guided by Woreda Livestock Experts

Input supply

Pullets and cockerels are predominantly local except for a few improved chickens distributed to farmers, recently. The most common breeds are the Rod Ireland red obtained from Awassa and Debre Zeit Poultry Breeding Centres. Feeds and vaccination was provided as a support for the improved chickens at the time of distribution. Once these inputs are delivered there is no continuation into the supply. There have been a total of about 6 thousand pullets and cockerels distributed to farmers in the last 3 years. The supply was made by the help the European Union through the government extension package system. However, there were very few farmers who benefited from this scheme.

Table 38. Project support for poultry input supply

Activities	Target	Responsibility
(400) Assess the existing poultry input supply system	Farmers in and around 6 FTCs	Students, Regional Input Authority and IPMS -TA
(200) TOT in the use of hay brooders, and vaccines (paravets)	Woreda livestock experts and 6 FTC staff	Awassa Poultry Breeding Centre,, IPMS-TA
(300) Farmer on the use of hay brooders and vaccines.	Interested farmers around 6 FTCs	FTC staff guided by Woreda livestock experts, IPMS - TA
(300) Facilitate the supply of hay brooders, day old chicks and vaccines for demonstration purposes	Farmers in and around 6 FTCs	Awassa Poultry Breeding Centre, Woreda OoANRD and IPMS - TA
(200) Training for cooperatives on market oriented input supply promotion	Cooperatives and private sectors	Project staff and OoANRD staff
(300) Facilitate the provision of credit for interested farmers	Farmers near 6 FTCs	OMF through funds by the project
(300) Facilitate establishment of health service for market oriented poultry production	Private sectors, cooperatives	Project staff, woreda OoANRD

Production

Poor heath services, dominance of local variety and traditional production system have reduced the potential benefit from poultry farming in Alaba. Provision of training and facilities to boost poultry production would help improve livelihoods of poor farmers.

Table 39. Project support for poultry production

Activities	Target	Responsibility
(400) Assessment on poultry production	Farmers in and around 6 FTCs	Students, woreda OoANRD, Project staff

(300) Develop linkage for output marketing	Farmers in and around 6 FTCs, Private sectors, cooperatives, farmers	Regional Marketing Authority, Woreda OoANRD, IPMS- TA
(200) Training in commercial poultry production	Woreda livestock expert and staff from 6 FTCs .and other DA posts	Awassa Poultry Breeding Centre,
(300) Farmer training and follow up in FTCs on commercial poultry production	Interested farmers in and around 5 FTCs	FTC staff guided by Woreda livestock expert

5.4.5 Sheep and Goat (Both farming system)

Marketing

Production of sheep and goat exists in both farming system. Sheep and goat are reared in a traditional way and marketed in the local market to local traders. Private traders buy animals from the woreda for sale in Addis Ababa. The aim is for the project will provide support for the improvement of sheep and goat marketing from a commercial orientation point of view. Poor veterinary service coverage, low awareness on improved production has reduced the potential benefit from sheep and goat production. Innovative marketing strategies will be necessary. Cooperatives or marketing groups could be established to market the small ruminants.

Table 40. Project support for marketing goats and sheep

Activities	Target	Responsible
(400) Assessment of existing sheep and goat marketing to develop innovative marketing strategy	Farmers in and around 6 FTCs,	Students, Woreda OoANRD and Project staff
(200) TOT on marketing group formation/cooperative and marketing sheep and goats	6 FTCs staff, Woreda livestock experts	Regional Marketing Offices, Project staff and partners
(300) Training on sheep and goat marketing	Cooperative leaders, FTCs staff and farmers	FTC staff guided by woreda livestock experts, IPMS- TA
(300) Develop linkages with traders and potential exporters	Sheep and goats marketing groups/ Cooperatives, Farmers in and around 6 FTCs,	Regional Marketing Office,, IPMS- TA

Input supply

Veterinary services and drugs, breeds essential for fattening and fodder are lacking. Innovative input supplies system, capacity building of farmers and cooperatives, establishing of market oriented facilities are essential focus of intervention.

Table 41. Project support for goats and sheep input supply

Activities	Target	Responsible
(400) Study on existing input supply system in sheep and goat production	Farmers in and around 6 FTCs	Students, Regional Input Authority, IPMS - TA

(200) Facilitate the supply of demonstration materials (feed, breeds and veterinary drugs)	6 FTCs	Woreda OoANRD, IPMS - TA
(300) Facilitate establishment of private health services for market oriented production and provide loans if necessary	Private sectors, cooperatives	OMF through funds from the project, Woreda OoANRD staff
(300) Training for cooperatives on market oriented input supply system	Farmers in and around 6 FTCs, Cooperatives and private sectors	Project staff and OoANRD staff

Production

The production constraints of the sheep and goat production in the woreda include poor genetic base, diseases and parasites, and feed shortage. Sheep and Goat management in Alaba special woreda is traditional and the breeds are local. The current traditional management has not also focused on any improved feeding and housing system. There has never been effort by NGOs to promote neither sheep nor goat husbandry in the woreda except for the food security program of EU. Project will attempt to intervene in these areas in order to help establish an improved and market oriented production system

Table 42. Project support for goats and sheep production

Activities	Target	Responsible
(400) Study on trends of sheep production	Farmers in and around 6 FTCs and beyond	Students, Project staff and Woreda OoANRD staff
(200) TOT on modern sheep and goat production (health, production)	6 FTCs staff, woreda livestock experts	Regional livestock experts, IPMS - TA
(300) Farmers training on modern sheep and goat production (paravets, feeding techniques)	Cooperative leaders, farmers in and around 6 FTCs	FTC staff guided by woreda experst, Project staff and OoANRD staff

5.4.6 Dairy (Milk and butter) (Both farming system)

Marketing

There is a potential for commercialisation of milk in urban association (in two of the Kuilito town sub city) and butter in peasant associations. Existence of dairy cooperatives in urban association is an indicator of the existing local demand and products. Diary framing in rural area is traditional. Poor veterinary service coverage, lack of feed, poor knowledge on modern dairy production and the existence of low market oriented dairy production system have reduced the potential benefit from dairy sector.

Table 43. Project support for dairy marketing

Activities	Target	Responsible
(400) Assessment of dairy (milk and butter) marketing to develop innovative	Farmers in and around 6 FTCs and towns	Students, ILRI Theme 3, Project

production and marketing strategy		staff
(200) TOT on dairy processing, handling and marketing of milk and butter	6 FTCs staff, woreda livestock experts ,	ILRI Debre Zeit, IPMS - TA
(300) Training of farmers on dairy processing, handling and marketing of milk and butter	Farmers in and around 6 FTCs, cooperatives, private milk sellers in towns,	FTCs staff guided by woreda livestock staff and ILRI Debre Zeit, IPMS - TA
(300) Tour of farmers on modern dairy processing plants (ILRI, Genesis, Ada Dairy Cooperative)	Some cooperative leaders, Selected farmers and FTCs staff from 6 FTCs, Town milk sellers (private) staff	ILRI Debre Zeit, staff, Woreda OoANRD staff, Project staff

Input supply

Low or erratic rainfall is a problem in Alaba and hence feed/fodder is a limiting factor. In order to improve the supply of (protein rich) feed for the dairy animals the project will support innovations in the seed multiplication system. The supply of concentrates for animals is also very limited; project will attempt to facilitate the supply of concentrates. Dairy production is based on local cows, milk yield is very low. Moreover, supply of inputs and services for the dairy are mainly in the hands of government. The project needs to aim at introducing/strengthening of innovative systems for input and service supply. The supply of improved dairy breeds or crossbred cows is very limited. Innovative ways of input supply, including AI/breed supply, is critical to improve dairy production in the woreda. Innovative input supply system and training to meet the objective is essential. Moreover, the existing input supply system will be studied in order to help understand what innovative input supply systems will be required. Privatization of the existing input supply and services will be introduced/supported in the second year, including the sale of drugs and veterinary services from private (licensed) shops or cooperatives.

Table 44. Project support for dairy input supply

Activities	**Target**	**Responsible**
(400) Study on existing dairy input (improved breeds, veterinary services, feed supply) system for dairy production	Farmers in and around 6 FTCs and towns	Students, Input Authority, IPMS - TA
(300) Facilitate the establishment of private supply of input for market oriented dairy production (feed seeds, breeds and health service, AI/bull services)	Farmers in and around 6 FTCs, Private sectors,, cooperatives	Project staff and OoANRD staff
(300) Facilitate the provision of credit for market oriented dairy production	Interested farmers in and around 6 FTCs, Interested town milk sellers, cooperatives	OMF with project funds, Woreda OoANRD staff
(200) TOT on market oriented dairy input supply system	6 FTCS staff, Woreda livestock group	Regional Input Authority, Woreda OoANRD staff, IPMS - TA
(300) Training for farmers and	Farmers in and around 6	FTCs staff guided

cooperatives on market oriented input supply system (development of a farm based fodder seed multiplication scheme)	FTCs, town milk sellers, cooperatives	by woreda livestock experts, IPMS - TA
(300) Facilitate loans for purchasing of collection and processing equipments (year 2)	Farmers in and around 5 FTCs/Cooperative structures in 6 FTCs	OMF with project funds
(300) Facilitate the provision of technology for cooperatives and farmers (milk processing, handling and transporting Technology)	6 FTCs Cooperatives and farmers	Project staff and IPMS - TA OoANRD staff
(200) Supply of demonstration for market oriented diary sector (ILRI churner, etc.)		

Production

Local breeds are used for dairy production in this PLS. In addition to this, many constraints cause dairy production to be very low. As most of the farmers in this PLS are chat chewers, milk is used. Demand for milk and milk products around the woreda town is high. Local butter and cheese is sold during market and non market days in the woreda town. Milk production is very and averaged about 1-2 litres/day.

Table 45. Project support for dairy production

Activities	Target	Responsible
(400) Assess milk and butter production in the PLS	6 FTCs and surrounding	Students, Woreda OoANRD, IPMS- TA
(300) Develop linkage for output marketing	Private sectors, cooperatives, farmers	Project staff and OoANRD staff
(200) Training in improved dairy production including pest and disease management, fodder production	Woreda livestock experts and staff of 6 FTCs	Woreda OoARD/ ILRI Debre Zeit, IPMS - TA
(300) Farmer training and program follow up (in FTCs) for improved dairy husbandry (fodder, disease and pests control)	Farmers in and around 6 FTCs	FTC staff guided by Woreda/project staff and MoARD /ILRI staff
(400) Study of existing on farm fodder production system in particular spatial arrangements	Farmers in and around 6 FTCs	Students, Woreda livestock experts, and project staff
(200) Supply of demonstration materials including posters and leaflets on dairy production	6 FTCs	ILRI Debre Zeit, IPMS - TA

5.4.7 Apiculture (Pepper/livestock farming system)

Marketing

Honey production in Alaba is not market oriented. Honey from traditional beehives is much lower than the honey from modern beehives. Currently, only a few modern bee hives (about 400) have been introduced and exists no honey marketing group or else. Hence, honey marketing is an individual affair. Currently, there is a difference in price between honey produced from local and modern hives. Innovative ways of marketing the commodity is required, like creation of honey marketing

groups/cooperative formation, capacity building of farmers and making honey production a market oriented operation is essential to improve livelihoods. The project will provide support in organizing group marketing of honey, and training in handling and marketing skills of farmers and cooperatives.

Table 46. Project support for honey marketing

Activities	Target	Responsible
(400) Assessment of honey production and marketing in order to develop innovative marketing strategy	2 FTCs and beyond	Students, NARS staff, Project staff
(200) TOT on establishment of honey marketing groups (Using modern bee hives)	Woreda livestock experts, 2 FTCs staff	Regional Marketing Agency, IPMS - TA
(300) Training of farmers on establishment of honey marketing groups (Using modern bee hives)	Woreda livestock experts, 2 FTCs staff	FTCs staff guided by Regional Marketing Agency, IPMS - TA
(300) Develop linkage for output marketing	Private sectors, cooperatives and farmers in and around 2 FTCs and beyond	Regional Marketing Agency, Woreda OoANRD, IPMS - TA

Input supply

Innovative input supply system, capacity building of farmers and cooperatives, clustering of farmers for market oriented production, introduction of appropriate bee-hive, establishing of market oriented facilities are essential focus of intervention. One of the most important inputs for honey production is bee colony. Modern beehives have started to be supplied in the woreda. However, problems ranging from quality to unavailability of accessories are real concerns of farmers. The project will provide support in alleviating the input supply problem faced by honey producers.

Table 47. Project support for honey input supply

Activities	Target	Responsible
(400) Assessment on existing input system (beehives and its accessories, bee colony, bee-forage,.etc) for honey production	2 FTC and surrounding	Students, ICIPE, Input Authority, Project staff,
(300) Facilitate the provision of credit for market oriented bee-farm	Farmers in and around 2 FTCs	OMF with funds from IPMS, Woreda OoANRD
(200) Facilitate the supply of input for market based production (bee hives and accessories, forage planting materials, processing equipments, etc.)	2 FTCs	Woreda, OoANRD,ICIPE, IPMS - TA
(200) Supply of demonstration materials at	2 FTCs	ICIPE, OoANRD

FTC level (bee forages, improved bee hives, manuals on honey and wax utilization, processors, extractors, casting, mould, uncapping fork, protective etc.)		staff with funds from IPMS
(200) TOT in the introduction of improved input supply system	2 FTCs staff, Woreda livestock experts	FTC staff under guidance and supervision of woreda livestock experts, IPMS - TA
(300) Farmer training and program follow up in the introduction of improved input supply system	Farmers in and around 2 FTCs, cooperatives and private businesses	FTC staff under guidance and supervision of woreda experts and project staff

Production

There are areas where honey could be produced from which farmers could benefit. However, the production has been constrained by traditional management, lack of awareness on bee forage, expensiveness of bee-hives, and lack of market oriented honey production. In addition, pests and diseases and shortage of bee forage are contaminants in Alaba. Production of honey is confided to individual farmers and supply is seasonal. Other constraints include shortage of improved beehives and accessories, and colonies. The project will provide support to contribute to the alleviation of these constraints

Table 48. Project support for honey production

Activities	**Target**	**Responsible**
(400) Assessment on honey production systems	2 FTCs and beyond	Students, ICIPE, Woreda OoANRD, Project staff
(200) TOT on honey production, handling, processing and packaging	Woreda livestock experts and staff of 2 FTCs	ICIPE, Woreda OoARNRD, IPMS - TA
(300) Training and program follow up on improved honey handling, processing and packaging	Farmers in and around 2 FTCs	FTC staff under guidance and supervision of ICIPE
(200) Training in appropriate queen rearing and farmer to farmer supply	Woreda livestock experts and staff of 2 FTCs	ICIPE, IPMS - TA
(300) Training and program follow up on improved queen rearing practices and farmer to farmer supply system	Farmers in and around 2 FTCs	FTC staff under guidance and supervision of ICIPE

5.5 PLS Developing recommendations on Technology, Institutional and policy priority –general (RBM Code 400 Series)

The fourth component of the project is developing recommendations on technology, institutional and policy options. The objective of the fourth pillar of the project is to develop recommendations, policy options and strategies to enhance the impact of public policies and programs. Outcome of the fourth component of the project is recommendations (strategies, policies, technology options and institutional innovations) developed from both research and lessons learned.

This component has five sub components: (1) undertaking research on the adoption and impact of alternative technologies within the PLSs, (2) undertaking research on alternative and innovative institutional arrangements for extension systems, input supply, rural finance and markets, (3) conducting and synthesizing environmental studies, environmental assessments and analyses in relation to the market oriented commodities, (4) conducting gender analyses and studies related to priority commodities, technologies and services. (5) Conducting studies on the interrelationship between HIV/AIDS and agricultural productivity and production vis-à-vis the priority commodities. The project also generate knowledge on innovations mainly based on studies

Table 49. Project support for developing recommendations & Policy Options

400 Developing Recommendations on Technology, Institutional and Policy Options		
(410) Undertaking research on the adoption and impact of alternative technologies within and across the PLSs		
Activities	**Target**	**Responsible**
(410) Conduct studies on indigenous knowledge systems for priority commodities	Farmers, Community	Project staff and selected partners
(410) Conduct studies on natural resource management technologies (Current, technologies)	Woreda	Project staff and woreda staff
(410) Monitoring of the introduced technologies	PLS	Project staff
(410) Analysis of technologies impact (Institutional, livelihood, envt and gender), adoption factors	Institutions, Community	Project staff
(410) Organizing conferences / seminars at PLS / regional levels	Partners, farmers	Project staff, partner institutes
420 Undertaking research on alternative and innovative institutional arrangements for extension systems, input supply, rural finance and markets		
Activities	**Target**	**Responsible**
(420) Conduct studies on the marketing of priority commodities	Priority commodities	Project staff and partners
(420) Conduct Studies on existing input supply and credit systems	Priority commodities	Project staff and partners

(420) Conduct analysis of the impact of innovative institutional arrangements, adoption of innovation	Institutions	Project staff
430 Conducting and synthesizing environmental studies, environmental assessments and analyses in relation to the priority commodities		
Activities	**Target**	**Responsible**
(430) Prepare Initial environmental analysis	PLS	Project staff
(430) Review of status of NRM	PLS	Project and woreda staff
(430) Conduct environmental assessment and studies		Project staff and woreda staff
440 Conducting gender analyses and studies related to priority commodities, technologies and services		
Activities	**Target**	**Responsible**
(440) Conduct Studies on gender roles in production and marketing of priority commodities	PLS	Project staff
(440) Undertake case studies on technological, institutional and socio-cultural aspects (factors) hindering women participation in market oriented development	PLS	Project staff
450 Conducting studies on the interrelationship between HIV/AIDS and agricultural vis-à-vis the priority commodities		
Activities	**Target**	**Responsible**
(450) Studies on the current status of the relationships between HIV/AIDS and production (Agriculture) of priority commodities	PLS	Project staff and partners
(450) Case studies on the technological, institutional and socio-economic aspects influencing the spread of HIV/AIDS	PLS	Project staff and partners

Annex 1- Knowledge gap anlaysis

Commodity	Knowledge gap	Commodity	Knowledge gap
Pepper	• Market oriented variety • Use of water harvesting technology for production • Poor quality production • Lack of market standard and quality • Input supply and use problems	Cattle (Milk and butter)	• Lack of marker oriented production • Feed sources and availability • Total dependence of local breeds • Inadequate health service • Poor service of livestock extension service
Haricot Bean	• Marketing information (function, channels) • Lack of knowledge to consume white haricot bean at HH • Storage problems • Seeds for market oriented production •	Apiculture	• Improved Beehives and accessories • Bee-forages and management • Bee predators controlling techniques • Pest management and control • Diversified bee products and by-products • Market information (Quality requirements)
Wheat	• Ways of getting high yield • Knowledge on control of pests • Proper use of fertilizer and pest sides • Low production	Sheep and Goat	• Method of production (individual and not market oriented) • Feed sources and availability • Inadequate health service • Poor service of livestock extension service • Management of sheep and goat in modern way
Teff	• Sources of seeds • Knowledge on use and management of agro-chemicals • Bee predators controlling techniques • Pest management and control • Poor quality for high market value	Poultry	• Production method and knowledge is not market focused • Little use of feed knowledge and its use • Total dependence of local breeds • Virtually, no use of health service • Credit availability and use is absent • Farmers group based organization is lacking

Annex 2: Summary of demonstration materials identified as required for the priority commodities

Commodity	Demonstration material	Commodity	Demonstration material
Beans	•Varieties •Moisture conservation techniques •Storage equipment	Fruits	•Planting materials •Nursery practices •Irrigation technologies •Post harvest handling •Propagation methods (fruits)
Vegetables	•Seed and propagation materials •Improved varieties •On farm water management (irrigation equipments) •Fertility management •Post-harvest technologies	Apiculture	•Improved beehives and accessories •Bee-forages and management •Queen rearing techniques •Bee predators and controlling techniques •Pest management and control •Diversified bee products and by-products •Honey storage and handling
Teff	•Varieties •Herbicides	Wheat	•Varieties •Herbicides
Sheep and goat fattening	•Feed types •Fattening practices	Dairy	•Husbandry practices •Processing equipment (eg. Churner) •Cooling equipment •Containers •Milk preservation methods
Hides and skins	•Poster supported branding techniques •Preservation stands and frames •Samples of skins and hides •Preservation techniques •Pest management of skins and live animals	Spices (pepper)	Appropriate water harvesting schemes Varieties •
Poultry	•Market information* •Potential of indigenous breeds for egg production •Availability, type and variation of feed supply •New introduction of feed resources •Animal health and disease control		

Annex 2. Alaba Special woreda household heads and population data (2005) by PA

No.	Name of PA	Household heads			Population		
		Male	Female	Total	Male	Female	Total
1	Ashokka	777	274	1051	2050	2139	4189
2	Mejja	447	159	606	1138	1153	2291
3	Huletegna Mekkala	684	211	895	2080	2147	4227
4	Andegna Mekkala	357	92	449	1230	1189	2419
5	Assore	394	135	529	1150	1144	2294
6	Shekette **(weldaeya)**	321	114	435	1327	1352	2679
7	Wanjaa **(Weldeya)**	200	66	266	1279	1187	2466
8	Gubba Sherero	375	183	558	1753	1827	3580
9	Felleka **(Gubaa)**	257	97	354	1123	1148	2271
10	Debesso	268	106	374	918	944	1862
11	Gurura Buchoo	429	162	591	1437	1415	2852
12	Kunchee Yeyee	350	134	484	1227	1128	2355
13	Gufessa	366	145	511	1275	1196	2471
14	Andegna Tukka	284	110	394	1137	1146	2283
15	Huletegna Tukka	268	87	355	894	922	1816
16	Girmee	381	135	516	1019	1044	2063
17	Andegna Hanssha	251	96	347	1401	1370	2771
18	Huteletgna Hanssha	382	154	536	1268	1172	2440
19	Yanbbo	255	86	341	883	911	1794
20	Lagyigaw Lennda	422	101	523	1190	1198	2388
21	Alem Tenna	372	119	491	1034	1020	2054
22	Andegena Chorekko	407	120	527	1543	1364	2907
23	Huletegana Chorekko	251	160	411	1233	1202	2435
24	Geddaba	467	114	581	1242	1148	2390
25	Tachingaw lenda	293	138	431	1135	1198	2333
26	Hamatta	297	102	399	1135	1179	2314
27	Galleto	301	104	405	868	742	1610
28	Hayi Mele	377	144	521	1038	1055	2093
29	Kuffe	535	182	717	1708	1854	3562
30	Geremma	281	133	414	1019	1223	2242
31	Meserak Gorentacho	426	147	573	1891	1935	3826
32	Merab Gorentacho	489	140	629	1700	1593	3293
33	Wisahamo **(Mudda)**	388	102	490	1713	1642	3355
34	Tachingacw Arsho	558	206	764	2553	2467	5020
35	Lageiyganw Arsho	632	148	780	2243	2169	4412
36	Hololokka **(Muda)**	372	64	436	1730	1850	3580

No.	Name of PA	Household heads			Population		
		Male	Female	Total	Male	Female	Total
37	Chambulla	398	133	531	1532	1443	2975
38	Laygnaw bedenno	407	118	525	1307	1286	2593
39	Hulegebba Kukke	441	141	582	1648	1738	3386
40	Mudda Meyafa	400	113	513	1496	1394	2890
41	Mudda Dinokossa	366	122	488	1650	1728	3378
42	Habbibo Furena	357	127	484	1076	1044	2120
43	Tachingaw Bedenne	386	101	487	1197	1138	2335
	Total for Teff/Haricot bean FS	**16669**	**5625**	**22294**	**59470**	**59144**	**118614**
44	Teffo Chuffo	280	103	383	741	777	1518
45	Andegna Teffo	321	124	445	1119	1223	2342
46	Rokennene Teffo	265	106	371	755	729	1484
47	Layignaw Tukka	450	116	566	1563	1609	3172
48	Kullufo	370	114	484	1308	1206	2514
49	Sorrige **(Daregosa)**	387	93	480	1534	1559	3093
50	Hantezo	671	130	801	2657	2834	5491
51	Kobo Getto **(Meno)**	224	68	292	1076	1029	2105
52	Kobbo Chobore	349	107	456	1272	1297	2569
53	Andegna Konicha	226	98	324	877	982	1859
54	Huletegna Konicha	203	74	277	711	705	1416
55	Huletegna Teffo	290	106	396	834	849	1683
56	Chobbra Remmino	405	116	521	1187	1661	2848
57	Negelle Wedwessha	289	72	361	775	894	1669
58	Titta Libitora	231	92	323	661	637	1298
59	Hajjo Hulluko	361	120	481	920	971	1891
60	Askhokorra Butti	392	132	524	1134	1067	2201
61	Udanna Menno	277	121	398	720	767	1487
62	Udanna Cholokssa	312	96	408	998	1097	2095
63	Bukko Timabe	279	115	394	465	429	894
64	Metto Dubella	304	118	422	1233	1184	2417
65	Dudda Bereho	196	106	302	827	794	1621
66	Yato Bereho	307	121	428	901	864	1765
67	Wejego Yatoo	202	112	314	739	684	1423
68	Alekke Gero	183	76	259	184	175	359
69	Besheno	510	210	720	2760	2834	5594
70	Wetteta	282	131	413	1440	1439	2879
71	Kullubi	430	128	558	1657	1739	3396
72	Sinbitta	380	130	510	1267	1268	2535

No.	Name of PA	Household heads			Population		
		Male	Female	Total	Male	Female	Total
73	Bendo Cholockssa	653	161	814	1683	1653	3336
	Total for Pepper/Livestock FS	**10029**	**3396**	**13425**	**33998**	**34956**	**68954**
	Total for both farming systems	**26698**	**9021**	**35719**	**93468**	**94100**	**187568**
74	Zalla Fre sub city				6818	7998	14816
75	Zoberchame sub city				4231	3628	7859
	Urban association (sub total)				**11049**	**11626**	**22675**
	Woreda (grand total)				**104517**	**105726**	**210243**

Annex 3. Experts and farmers Crop commodity Ranking in Alaba Special Woreda

No	Crop Commodity	Income source*		Market demand		HH Consumption		Area Coverage		Drought Tolerance		SCORE SUM		Over all rank
		Expert	Farmer	Expert	Farmer	Expert	Farmer	Expert	Farmer	Expert	Farmer	Expert	Farmer	
1	Maize	6	4	3	7	1	1	1	1	5	4	16	17	7
2	Sorghum	8	7	9	13	3	3	6	5	1	1	27	29	3
3	Teff	2	2	2	2	6	11	2	2	4	5	16	22	6
4	Wheat	3	3	4	3	7	9	3	4	7	10	24	29	4
5	Finger Millet	8	8	6	12	2	2	7	6	3	2	26	30	3
6	Haricot Bean (white)	4	5	8	4	9	13	8	10	9	13	38	45	1
7	Haricot Bean (Red)	5	6	5	5	5	5	5	7	8	12	28	35	2
8	Pepper	1	1	1	1	8	10	4	3	6	9	20	24	5

*In numeric ranking the best commodity for a criterion is 1 and the worst is 9

Source: Alaba Special Woreda PLS, April 2005)

Annex 4. Experts and farmers Livestock commodity Ranking in Alaba Special Woreda

No	Livestock type/ Commodity	Income source*		Market demand		HH Consumption		Score sum		Over all rank
		Expert	Farmer	Expert	Farmer	Expert	Farmer	Expert	Farmer	
1	Cattle (heads)**	5		9		9				
2	Milk	10	11	3	11	1	1	14	37	6
3	Butter	7	5	2	9	3	3	12	29	3
4	Cheese (local)	6	6	4	10	2	2	12	30	4
5	Skin	9	9	10	5	6	9	25	48	8
6	Hide	8	7	8	6	10	8	26	47	7
7	Sheep	3	2	7	3	5	6	15	26	2
8	Goat	2	3	6	4	4	7	12	26	2
9	Poultry	1	1	1	8	8	4	10	23	1
10	Honey	4	8	5	7	7	5	16	36	5

*In numeric ranking the best commodity for a criterion is 1 and the worst is 9

** No ranking was made for cattle by farmers, hence not considered during overall ranking.

Annex 5. Cropping calendar (Eth. calendar) of some crops grown in Alaba woreda

Crop type	Land Preparation (months)	Sowing time	Weeding (months)	Harvesting (months)
Sorghum	February-March	April-May	May-June	Nov. to Dec
Maize	February-March	April-May	May-June	Nov. to Dec
Teff	May- June	July	Aug.- Sept.	Nov. – Dec.
Wheat	May- June	July	Aug.- Sept.	Nov. – Dec.
Finger millet*	February-March	April-May	May-June	Nov. to Dec
Pepper	April	May-June	July-August	Nov. to Dec
Haricot bean	February	March	April	May-June
Haricot bean	May- June	July	Aug.- Sept.	Oct.-Nov.

Source: Alaba Woreda OoANRD , Crop Production and Technology Distribution. Desk

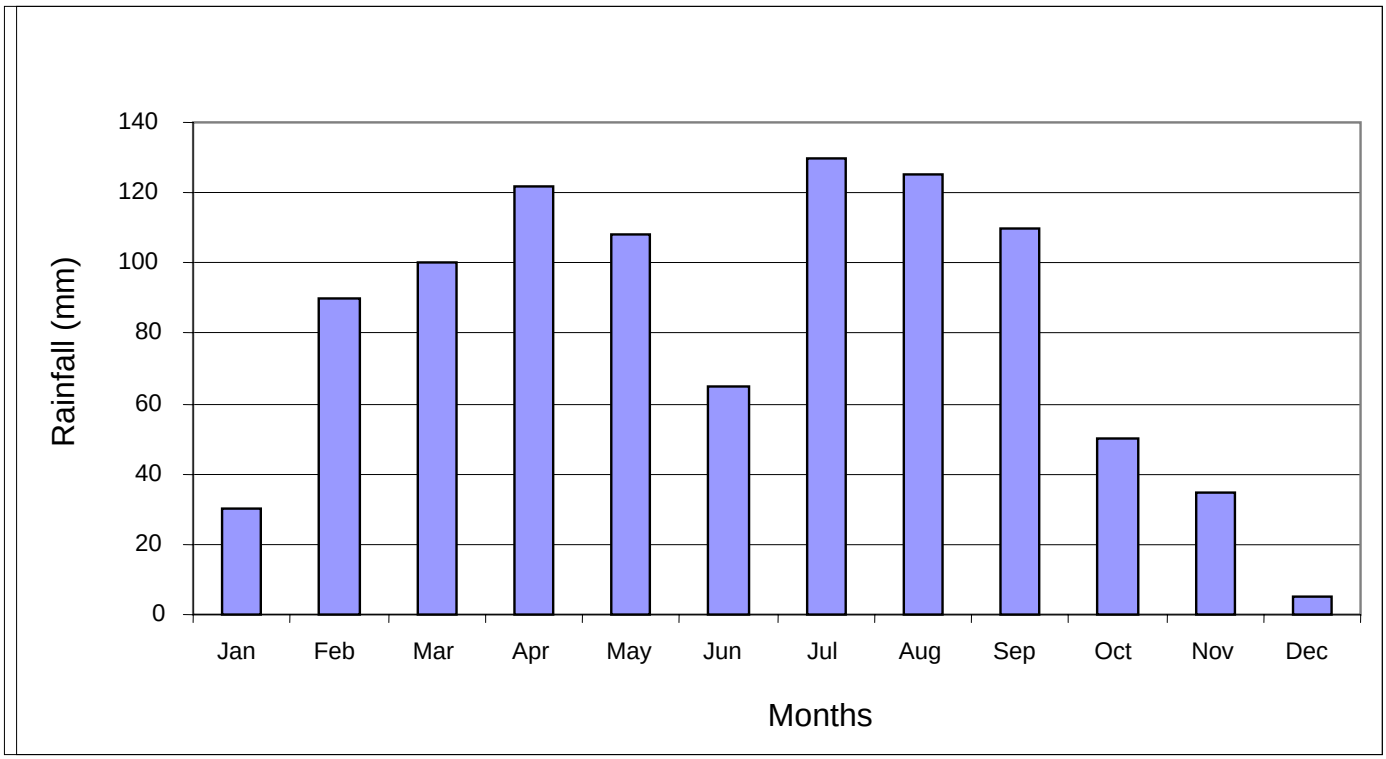
Annex 6. Proposed tree planting in three nursery sites in Alaba Special woreda, 2005

Tree species	Nursery		
	Chokro	**Chabula**	**Alemtena**
Acacia saligna	100,000	50,000	50,000
Grevillea robusta	200,000	50,000	50,000
Moringa olifera	50,000	30,000	30,000
Cordia african	20,000	10,000	10,000
Melia azadiracta	50,000	20,000	20,000
Delonix regia	10,000	10,000	10,000
Jacaranda mimisilfolia	50,000	5,000	5,000
Cupressus lusitanica	5,000	5,000	5,000
Olea europea	10,000	10,000	10,000
Persea americana	100,000	100,000	3,000
Mangifera indica	50,000	50,000	10,000
Psidium guajava	30,000	30,000	8,000
Total	675,000	370,000	211,000

Annex 7. Average market prices of major crop and livestock types in Alaba Special woreda, 1998/9-2004/5

No	Crop/livestock type	Year					
		1992 EC (1998/9)	**1993 EC (1999/1)**	**1994 EC (2001/2)**	**1995 EC (2002/3)**	**1996 EC (2003/4)**	**1997 EC (2004/5)**
1	1st grade Teff (white)	238	200	174	226	239	243
2	2nd grade Teff (Mixed)	218	167	151	202	223	230
3	Wheat	160	102	99	162	159	151
4	Barely	171	129	92	181	193	171
5	Fingermillet	129	104	64	132	114	126
6	Maize	114	53	59	123	99	123
7	Sorghum	-	-	-	136	-	96
8	Haricotbean	-	-	110	-	-	102
9	Hotpepper	-	-	425	951	827	822
10	Ox	720	633	625	827		971
11	Cow	459	401	360	421	861	567
12	Goat	98	85	100	90	524	105
13	Sheep	114	98	119	139	102	128
14	Chiken	9	7	7	9	7	10

Annex 8. Rainfall pattern (Station Alaba Kulito, Latitude 7°22’ Altitude: 1850 m.a.s.l)



Annex 9. Peasant associations, farming systems and zones in Alaba special woreda

	PA NAME	Farming System	Zone
1	ASHOKKA	Teff/Haricot Bean Livestock	Shekate/Mekalla Zone
2	MEJJA	Teff/Haricot Bean Livestock	Shekate/Mekalla Zone
3	ULETEGNA MEKKALA	Teff/Haricot Bean Livestock	Shekate/Mekalla Zone
4	ANDGENGNA MEKKALA	Teff/Haricot Bean Livestock	Shekate/Mekalla Zone
5	ASSORE	Teff/Haricot Bean Livestock	Shekate/Mekalla Zone
6	SHEKETTE	Teff/Haricot Bean Livestock	Shekate/Mekalla Zone
7	WANJAA (Weldeya)	Teff/Haricot Bean Livestock	Shekate/Mekalla Zone
8	GUBBA SHERERO	Teff/Haricot Bean Livestock	Guba Zone
9	FELLEKA	Teff/Haricot Bean Livestock	Guba Zone
10	DEBESSO	Teff/Haricot Bean Livestock	Guba Zone
11	GURURA BUCHOO	Teff/Haricot Bean Livestock	Guba Zone
12	KUNCHEE YEYEE	Teff/Haricot Bean Livestock	Guba Zone
13	GUFESSA	Teff/Haricot Bean Livestock	Guba Zone
14	ANDGEGNA TUKKA	Teff/Haricot Bean Livestock	Hansha Tuka Zone
15	ULETEGNA TUKKA	Teff/Haricot Bean Livestock	Hansha Tuka Zone
16	GIRMEE	Teff/Haricot Bean Livestock	Hansha Tuka Zone
17	ANDGENGNA HANSSHA	Teff/Haricot Bean Livestock	Hansha Tuka Zone
18	UTELETGNA HANSSHA	Teff/Haricot Bean Livestock	Hansha Tuka Zone
19	YANBBO	Teff/Haricot Bean Livestock	Hansha Tuka Zone
20	LAGYIGAW LENNDA	Teff/Haricot Bean Livestock	Hansha Tuka Zone
21	ALEM TENNA	Teff/Haricot Bean Livestock	Lenda Alem Tena Zone
22	ANDEGENA CHOREKKO	Teff/Haricot Bean Livestock	Lenda Alem Tena Zone
23	HULETEGANA CHOREKKO	Teff/Haricot Bean Livestock	Lenda Alem Tena Zone
24	GEDDABA	Teff/Haricot Bean Livestock	Lenda Alem Tena Zone
25	TACHINGAW LENDA	Teff/Haricot Bean Livestock	Lenda Alem Tena Zone
26	HAMATTA	Teff/Haricot Bean Livestock	Lenda Alem Tena Zone
27	GALLETO	Teff/Haricot Bean Livestock	Lenda Alem Tena Zone
28	HAYI MELE	Teff/Haricot Bean Livestock	Lenda Alem Tena Zone
29	KUFFE	Teff/Haricot Bean Livestock	Lenda Alem Tena Zone
30	GEREMMA	Teff/Haricot Bean Livestock	Arsho Zone
31	MESERAK GORENTACHO	Teff/Haricot Bean Livestock	Arsho Zone
32	MERAB GORENTACHO	Teff/Haricot Bean Livestock	Arsho Zone
33	WISAHAMO	Teff/Haricot Bean Livestock	Arsho Zone
34	TACHINGACW ARSHO	Teff/Haricot Bean Livestock	Arsho Zone
35	LAGEIYGANW ARSHO	Teff/Haricot Bean Livestock	Arsho Zone
36	HOLOLOKKA (Muda)	Teff/Haricot Bean Livestock	Muda Bedene Zone
37	CHAMBULLA	Teff/Haricot Bean Livestock	Muda Bedene Zone
38	LAYGANW BEDENNO	Teff/Haricot Bean Livestock	Muda Bedene Zone
39	ULEGEBBA KUKKE	Teff/Haricot Bean Livestock	Muda Bedene Zone
40	MUDDA MEYAFA	Teff/Haricot Bean Livestock	Muda Bedene Zone
41	MUDDA DINOKOSSA	Teff/Haricot Bean Livestock	Muda Bedene Zone
42	HABBIBO FURENA	Teff/Haricot Bean Livestock	Muda Bedene Zone
43	TACHINGAW BEDENNE	Teff/Haricot Bean Livestock	Muda Bedene Zone
44	TEFFO CHUFFO	Pepper/Livestock farming system	Teffo Kunico Zone
45	ANDGEGNA TEFFO	Pepper/Livestock farming system	Teffo Kunico Zone

46	ROKENNENE TEFFO	Pepper/Livestock farming system	Teffo Kunico Zone
47	LAGYIGNAW TUKKA	Pepper/Livestock farming system	Besheno Zone
48	KULLUFO	Pepper/Livestock farming system	Besheno Zone
49	SORRIGE	Pepper/Livestock farming system	Besheno Zone
50	HANTEZO	Pepper/Livestock farming system	Besheno Zone
51	KOBO GETTO (Meno)	Pepper/Livestock farming system	Teffo Kunico Zone
52	KOBBO CHOBORE	Pepper/Livestock farming system	Teffo Kunico Zone
53	ANGEGNA KONICHA	Pepper/Livestock farming system	Teffo Kunico Zone
54	HULETGENA KONCHA	Pepper/Livestock farming system	Teffo Kunico Zone
55	HULETEGNA TEFFO	Pepper/Livestock farming system	Teffo Kunico Zone
56	CHOBBA REMMINO	Pepper/Livestock farming system	Hajjo Hulluko Zone
57	NEGELLE WEDWESSHA	Pepper/Livestock farming system	Hajjo Hulluko Zone
58	TITTA LIBITORA	Pepper/Livestock farming system	Hajjo Hulluko Zone
59	HAJJO HULLUKO	Pepper/Livestock farming system	Hajjo Hulluko Zone
60	ASKHOKORRA BUTTI	Pepper/Livestock farming system	Hajjo Hulluko Zone
61	UDANNA MENNO	Pepper/Livestock farming system	Hajjo Hulluko Zone
62	UDANNA CHOLOKSSA	Pepper/Livestock farming system	Hajjo Hulluko Zone
63	BUKKO TIMABE	Pepper/Livestock farming system	Metto Zone
64	METTO DUBELLA	Pepper/Livestock farming system	Metto Zone
65	DUDDA BEREHO	Pepper/Livestock farming system	Metto Zone
66	YATO BEREHO	Pepper/Livestock farming system	Metto Zone
67	WEJEGO YATOO	Pepper/Livestock farming system	Metto Zone
68	ALEKKE GERO	Pepper/Livestock farming system	Metto Zone
69	BESHENO	Pepper/Livestock farming system	Besheno Zone
70	WETTETA	Pepper/Livestock farming system	Besheno Zone
71	KULLUBI	Pepper/Livestock farming system	Besheno Zone
72	SINBITTA	Pepper/Livestock farming system	Besheno Zone
73	BENDO CHOLOCKSSA	Pepper/Livestock farming system	Hajjo Hulluko Zone
74	ZALLA FRE **SUB CITY**		
75	ZOBERCHAME **SUB CITY**		

Annex 10 Alaba special woreda PLS consultation workshop programme,Woreda Administration office hall

April 27-28, 2005

DATE	Time	Topic	Responsible
April 27/2005	9:00-9:30	Registration	Abebe Shiferaw and Mesfine Tadele (Woreda OoANRD)
	MODERTOR – Ato Abebe Shiferaw		
	9:30-9:40	Welcome Speech	Ato Temesgene Kedir (Woreda Rural Development Coordination Office Head, WALC chair
	9:40-10:20	Project Background	Dr Azage Tegene
	10:20-10:10	PRA process	Ato Abebe Shiferaw
	10:10-10:30	**COFFEE BREAK**	
	CHAIR PERSON – Dr Azage Tegene and Dr. BerhanuGebermedhin		
	10:30-10:50	CROP PRODUCTION	Ato Kahsay Berhe
	10:50-11:00	Questions/ Discussion	
	11:00-11:30	ANIMAL PRODUCTION	Ato Abebe Shiferaw
		Questions/ Discussion	
	11:30-11:50	INSTITUTIONS	Ato Abebe Shiferaw
	11:50-12:00	Questions/ Discussion	
	12:00-12:45	General Discussion	
	1:00-2:00	**LUNCH BREAK**	
	2:00-5:30	Break up session	
		GROUP 1.Crop production	Chair: Dr. Ayele Badebo Secretary : Mohammed Urgessa
		GROUP 2.Livestock production	Chair: Dr Gebeyehu Gange Secretary; Mifta Hassen
		GROUP 3: Institution	Chair: Dr Berhanu Gebremedhin Secretary: Aschallew Cidelle
April 28/2005	9:00-10:00	Break up session continued	Group chairs
	10:00-10:30	**COFFEE BREAK**	
	10:00-12:40	Group discussion	
	1:00-2:00	**LUNCH BREAK**	
	Chair : Dr. Melkamu Tadesse		
	2:00-2:20	Group one Crop report	Presenter (Mohammed Urgessa and Khasay Berhe)
	2:20-2:40	Questions/Discussions	
	2:40-3:00	Group two Livestock report	Presenter (Dr Gebeyehu Gange)
	3:00-3:20	Questions/Discussions	
	3:20-3:50	**COFFEE BREAK**	
	3:50-4:10	Group three Institutions report	Presenter (Aschallew Cidelle and Abebe Misgana)
	4.10 4:50	Questions/Discussions	
	4:50-5.50	General Discussion	
	5:50-6:10	Wrap Up and the way forward session	Dr Azage Tegene and Dr. Berhanu Gebermedhin
	6:10-6:15	Closing	Ato Ahemed Alemu (Alaba Special Woreda Head Ofice of Finance and Economic Development Coordination)

Annex 11. Alaba special woreda WALC members and their address

No	Name	Position	Sex	ADDRESS	
				Telephone	Fax & P.O.Box
1	Temegen Kedir (Chair)	Head, Rural Development Coordination Office	M	560726(Off.) 560868 (Res)	560043 P.O.Box 21
2	Dr. Melekamu Tadesse (Member)	Head, Agriculture & Natural Resource Development Office	M	560039(Off.)	560043 P.O.Box 21
3	Abu Awel (Member)	Head, Woreda HIV/AIDS secretariat office	M	560308(Off.)	560768 P.O.Box 47
4	Giday Woldu(Member)	Rural Women Affair Expert	F	561008 (Res) 560039(Off.)	560043 P.O.Box 21
5	Genet Getachew(Member)	Head Woreda Womens' Affair office	F	560750(Off.)	560768 P.O.Box 47
6	Alemayehu Uka(Member)	Head, Input Desk	M	560726(Off.)	560043 P.O.Box 21
7	Bezuayehu YetNuro(Member)	Head, Cooperative Desk	M	560726(Off.)	560043 P.O.Box 21
8	Abebe Shiferaw (Secretary)	Research and Development Officer	M	561002(Off.) 202857 (Res)	560043 P.O.Box 21

Annex 12. Alaba special woreda PLS workshop participants

No	NAME	Organization	Position	Sex	Address (P.O.Box/Tel./e-mail)
1	Bekele Haile	Bureau of Agriculture and Natural Resource Development (RALC Member)	A/Hhead Agri.& N. R Devt Bureau	M	Tel 06-205716 205933
2	Teshome Menjour	Export products promotion agency (RALC Member)	Team leader	M	Tel 06-206582
3	Degisew Mulatu	***Bureau of Cooperative Coordination (RALC Member)***	Expert	M	Tel 06-202015 204665
4					
5	Genet Getachew	Alaba Women's Affair Office	Head and WALC member	F	Tel 06-560750
6	Hayat Nassir	Alaba Women's Affair Office	Expert	M	Tel 06-560308
7	Buzhayehu Yetnuro	Alaba RDCO	Desk Head & WALC member	M	Tel 06-56026
8	Dr Ayele Badebo	Regional Agricultural Research Institute	Director (Crop Research)	M	SARI, P.O.Box 6 arc@telecom.net.et ayele88@yahoo.com Tel 06-204000 (09-828911)
9	Dr Gebeyehu Ganga	Regional Agricultural Research Institute	Director (Animal Research)	M	SARI, P.O.Box 6 arc@telecom.net.et drgang538@yahoo.com Tel 06-204000 (09-829174)
10	Ato Endirya Geta	Regional Agricultural Research Institute	Director (Soio-economic)	M	SARI, P.O.Box 6 arc@telecom.net.et Tel 06-204000
11	Dr. Daniel Dawro	***Regional Agricultural Research Institute***	Director (RARI) & RALC chair	M	SARI, P.O.Box 6 arc@telecom.net.et Tel 06-204521 09-625996
12	Dr. Elias Urage	Awassa Agricultural Research Center	Director (AARC)	M	AARC, P.O.Box 6 arc@ethionet.com .et Tel 06-209929 (09-825679)
13	Berhanu Asfaw	VOCA-ETHIOPIA (Awassa)	Coordinator	M	Tel 06-205398
14	Zemenu Tadesse	People In Need, Awassa	Field officer	M	06-203321
15	Sr. Mekdes Sima	FGAE/Alaba	Nurse	F	06-560145
16	Zulyha Bedru	KMG	A. Coordin.	F	06-560718
17	Desta Dimse	EU	S.A	M	dimtse@yahoo.com
18	Getachew Chewe	S.S.I	Officer	M	
19	Teketel Mengesha	Omo MFI	Manager	M	06-560893
20	Faskika Yitbarek	Water ACTION	Coordinator	M	Tel 06-560752
21	Asmelash Haile	SNV	Advisor	M	snv@telecom.net.et ahaile@snvworld.net 251-06-0557/ 09-627953
22	Temam Nureye	Rikame Self Help Org	Chair		
23	Abebe Aliye	Woreda Admin Office	Secretary	M	

No	NAME	Organization	Position	Sex	Address (P.O.Box/Tel./e-mail)
24	Birhanu Kifle	Woreda Capacity Building	Expert	M	
25	Lukissa Teliha	Peasant Association Besheno	Farmer	M	
26	Shiek Hussien Mohammed	Peasant Association ***Andegna Ansha***	Farmer	M	
27	Rahmeto Hussien	Peasant Association Kufie	Farmer	M	
28	Bateno Kemal	Peasant Association Upper Tuka	Farmer	M	
29	Salo Rahmeto	Peasant Association Upper Tuka	Farmer	M	
30	Kemal Mohammed	Peasant Association Upper tuka	Farmer	M	
31	Hassien Jemal	Peasant Association Upper tuka	Farmer	M	
32	Amarech Tiloro	Peasant Association Upper tuka	Farmer	F	
33	Ayanie Hussien	Peasant Association Upper tuka	Farmer	F	
34	Bukissie Mussie	Peasant Association Buko Tibamle	Farmer	M	
35	Kedir Shikurala	Peasant Association Muda Meya	Farmer	M	
36	Bergena Ribo	Peasant Association Guba	Farmer	M	
37	***Jemal Habib***	***Peasant Association Mudadinoko***	Farmer	M	
38	***Surafel Adem***	***Peasant Association***	Farmer	M	
39	***Kedir Shikuraala***	***Peasant Association Muda***	Farmer	M	
40	***Shiek Nassir Mikorie***	***Peasant Association Guba***	Farmer	M	
41	***Abino Kaliborie***	***Peasant Association Kuffe***	Farmer	M	
42	***Hayat Ahnemed***	***Peasant Association Doda***	Farmer	M	
43	***Fatuma Sirgafa***	***Peasant Asociation*** Andegena Ansha	Farmer	F	
44	***Fate Mohamed***	***Peasant Asociation Andegena Ansha***	Farmer	F	
45	***Befekadu adella***	***Peasant Asociation Andegena Ansha***	Farmer	M	

No	NAME	Organization	Position	Sex	Address (P.O.Box/Tel./e-mail)
46	***Araya Asfaw***	Bureau of Information and Culture, ETV news	Journalist	M	Tel
47	Solomon G/Medhin	***Bureau of Information and Culture, ETV news***	Journalist	M	
48	Abiso Shanko	Woreda BoANRD	Supervisor	M	
49	Abedila Amane	Woreda BoANRD	Supervisor	M	
50	Degefa Mustefa	Woreda BoANRD	DA	M	
51	Chefa Anwar	Woreda BoANRD	DA	M	
52	Hiwot Gizaw	Woreda BoANRD	DA	M	
53	Jemal Hissien	Woreda BoANRD	Supervisor	M	
54	Mesfin Tadelle	Alaba OoANRD	Expert	M	
55	Mifta Hassen	Alaba OoANRD	Desk Head	M	
56	Temesgen Kedir	Alaba RDCO	Head and WALC Chair	M	Alaba OoANRD, P.O.Box 21 Tel 06- 560726, Fax 560043
57	Mulat Beshaw	Alaba OoANRD	Team Leader	M	06-560726
58	Ascahllew Sidelil	Alaba RDCO	Desk Head	M	06-560726
59	Mesfin Tesgaye	Alaba OoANRD	Desk Head	M	06-560039
60	Simon Kismu	Alaba OoANRD	Team Leader	M	06-560039
61	Endale Lemma	Alaba OoANRD	Expert	M	06-560039
62	Asnakecth W/Rufel	Alaba RDCO	Expert	F	06-560726
63	Tadele Wolde	Alaba RDCO	Desk Head	M	06-560726
64	Mohamed Kedir	Alaba OoANRD	Team Leader	M	06-560039
65	Simert Girma	Alaba RDCO	Expert	F	06-560726
66	Muhamed Urgessa	Alaba OoANRD	Desk Head	M	06-560039
67	Abebe Shiferaw	ILRI -Alaba	R&D Officer	M	Alaba Woreda, P.O.Box 21 a.shiferaw@cgiar.org Tel 06-561002, 09-482350
68	Kahsay Berhe	ILRI –Addis Ababa	Research .T	M	Addis Ababa, P.O.Box 5689 k.berhe@cgiar.org Tel 09-400448, 463215 –
69	Abebe Misgina	ILRI–Addis Ababa	Research .T	M	Addis Ababa, P.O.Box 5689 a.misgina@cgiar.org Tel 09-622566, 463215
70	Dr Azage Tegene	ILRI–Addis Ababa	Scientist	M	Addis Ababa, P.O.Box 5689 a.tegene@cgiar.org Tel 09-246442, 463215
71	Dr Berhanu G.Medhin	ILRI–Addis Ababa	Scientist	M	Addis Ababa, P.O.Box 5689 b.gberemedhin@cgiar.org Tel 09-406500,463215
72	Ketema Yilma	ILRI- Dale	R&D Officer	M	k.yilma@cgiar.org Kettema_yilma@yahoo.com

Annex 13. Inventory of NGOs operating in Alaba special woreda

No	NGO Name	Address	NGO history in Alaba	Staff	Intervention area	Service coverage & budget	Linkage with IPMS
1	Family Guidance Association of Ethiopia	Tel: 560145 P.o.Box 44 Contact: Alebachew Arage S/r Mekdes Simon	• Started operation on 1/10/2003	• Total 5 staff (1 nurse, 1 lab tech.,1 office girl, 1 guard and 1 youth supervisor)	• HIV/AIDS • HEALTH (Family Planning) (VCT service, Youth Center, Peer education)	• Operational area is limited to two Kebeles	• HIV/AIDS
2	Rekame Self Help Administration Project	Tel: NA P.o.Box NA Address: Tuka PA Contact: Jemal (Chair Person) Woreda Council	Founded by FHI to operate as local NGO with an objective of promoting community forest land mgt.	No professional staff Elected farmers run the project along with woreda council	• Natural Resource management (FOREST LAND MANAGEMENT = Ca 500 Ha)	The forest land covers 7 PAs	• Natural resource management
3	European Union (EU)	Tel: 06202393 P.o.Box Contact: Mr. Marcello Tenti/ Desta Dimtse	Phased in to Alaba In 2004 and has signed 3 year program on Food security. The program phased out in 2006.	No staff in Alaba but there is a contact person in BoANRD Office (Muhammed Urgessa)	FOOD SECURITY PROGRAM SUPPORT • Dairy Cattle Project for 5 PA s • Bee-hive and its accessories support • Sheep and Goat Provision in 4 PAs • Infrastructure –Bridge and road • Animal feed- (forage seed multiplication,in one site and Silo Concrete lining in 4 Kebeles	Selected PAs 1,399,825.00 Birr for 2004	• Marketing of Livestock product • Technology issues (Honey bee) • Sheep /Goat development

No	NGO Name	Address	NGO history in Alaba	Staff	Intervention area	Service coverage & budget	Linkage with IPMS
4	Water Action	Tel: 560752 P.o.Box Contact: Fassica Yitbarek	Phased in 2001. Alaba and surrounding water and environmental development program (ASWEDP). The program was for five year and withpossibility of extension. The program goal is to alleviate poverty, improve quality of life and food security	9 Total staff in Alaba (6 Program staff and 3 support staf.) working in Community devt. Health unit, water supply unit and administrative unit	PROGRAM COMPONENT • Water Supply component • Natural Resource conservation Development • Community mobilization and Health component (Water supply Hygiene and sanitation Community Development and mobilization,)	28 PAs of ALABA and Sankura Woreda Estimated 4,607,612Birr/year is from Water Action Oxfam Uk, Christian Aid (UK), Japan Embassy and WATER AID ETHIOPIA are donors	• Natural Resource management
5	People in Need (Chech Republic)	Tel: 203321 P.O.Box 734 Fax: 209418 Contact: Mr Jerco Plessity Zerihun Nigusse www.peopleinneed.cz	2003 FY Phased in. Full Program Implementation started in FY 2004	Head Office is based in Awassa with 10 main staff and 3 support staff. There is branch office in Addis Ababa	• Education • Water Resource Devt. • Natural Resource Devt. • HIV/AIDS (School construction, teachers methodology trainings, Borehole drilling, spring capping, EU funded soil and water conservation)	People in Need operates in SNNPR(Borecha , Alaba and Awassa Zuira) ALL PAs	• Soil and water conservation • Water resource development and Livestock
6	SNV Ethiopia Southern Portfolio	Tel: 208417 203368 P.o.Box 1374 Contact: Daniel Tiruneh (Coordinator)	SNV signed agreement with Alaba Special woreda administration and town administration	Total staff 10 (6 Advisors, 3 support staff and 1 coordinator) Private Sector Development team	• Capacity Building/Strengthen • Private sector Devt • NRM (Visioning and strategic development, context	Advisory cost allocated and no additional input Urban PAs are the operation areas	• MARKET linkage (farmer organization) • Strengthening Institutional capacity

No	NGO Name	Address	NGO history in Alaba	Staff	Intervention area	Service coverage & budget	Linkage with IPMS
			a one year agreement		analysis, monitoring and evaluation, institutional evaluation, gender analysis)		
7	WFP	Tel: 56 P.o.Box Contact: Simon Kismu (alaba BoANRD)	MERET project has stated long and still operational		• NRM – Soil and water conservation Fruit promotion (raising and distribution)	The project operates on 13 PAs. budget 12,000 Birr/yr and commodity (400Mt/yr)	• Natural resource management
8	Kembata Menti Gezima (KmG)	Tel: 560718 P.o.Box. N.A Contact: Sisay Gebermicale	Phased in to Alaba in2001 as a satellite office. Durame is head office and Addis office is coordination office	Alaba is satellite office and has 4 health staff 2 coordinators and 65 community conversation facilitators	• Gender Issues • Primary health • Community capacity Enhancement • HIV/AIDS • Will intervene in non formal education too	KmG Operates in 5 woredas including Alaba. In alaba KmG operates in 40 PA S.	• Gender Issues • HIV/AIDS • Natural resource management
9	AFD	Tel: NA P.o.Box NA Contact: HEAD OFFICE IS IN ADDIS		Has no staff locally but contact person from Alaba BoANRD is Endale Lemma	• Irrigation and soil and water conservation	• 2 PAs of Alaba • 15000 Birr/yr	• Crops and livestock in the irrigation area
10	UNDP	Tel: 56 P.o.Box Contact:	UNDP has resumed second phase program in 0ct 2004 for 3 woredas in SNNPR.	There is contact person in the woreda (Tagese Doboch) and Regional exert, Altaye Abenet is in charge too.	• PROGRAMS include 1) CROP PRODUCTION AND LIVESTOCK PRODUCTION -Vegetable and fruit purchase and distribution for 3 irrigable PA s 2) CAPACITY BULDING (-fuel /vehicle maintenance and DA training)	Budget for 2004/5 is 18000 and DA training cost is 20,000.	• Capacity Building • Crop and Livestock productivity

No	NGO Name	Address	NGO history in Alaba	Staff	Intervention area	Service coverage & budget	Linkage with IPMS
11	VOCA-Ethiopia	Tel: 06 205398 P.o.Box 457 Contact: Berhanu Asfaw	• VOCA - phased in to Alaba in 2000 for 5 years and there is a possibility of program extension	• The branch office in Awassa has 7 staff (program =2 and support =3)	• The over all program focuses on Cooperative Development (Major activities are in capacity building, Training HIV/AIDS, Women Issue, NRM) operates in all the woreda PAs	• VOCA supports trainings costs . guarantee loan, provides financial and material support for unions	• NRM • Marketing and Cooperatives • Capacity building
12	FHI	Head office is in Addis	• Has been operating in Alaba for 2 decades years and Phased out				
13	FAO	Regional BOARD	• Started in 2004/5 • Program focusing on Root crop (Cassava and sweet potato)	Contact person : Desta Tesfaye (OoANRD) Contact at region: Ato Simayehu (BoARD)	➢ Promotion of drought tolerant crops multiplication trials, distribution of the materials limited to selected sites		