Appendix 9

Crops Grown, Modern Cultivar Seed Use, Emergency Seed Assistance and Local Market Seed Price in Meta, Chiro and Dire Dawa

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Report

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DATA ACQUISITION

This report deals with secondary data obtained from different offices (woreda Bureau of Agriculture, BoA; Disaster Prevention and Preparedness Commission (DPPC) Bureaus and information generated through informal interviews from grain traders. Record keeping at any one of the offices was not satisfactory. Pieces of individual notes and irregularly filed papers were searched to gather meaningful data. Reasonably well-managed data was obtained from East Hararghe DPPC, Chiro BoA market price monitoring team. Due to poor data recording, processing and management, only limited information was obtained from West Hararghe zone and Dire Dawa DPPC. Concerned office staff-keep the data in their individual notes in a manner that is not comprehensible and not readily usable. Their absence from offices due to official trips or otherwise limits performance in the field. The offices complained frequent office restructuring that did not allow proper record keeping. Complaint on previous office holders, section and unit heads are frequently cited for poor record keeping. Lack of staff motivation, lack of data collection, restructuring, editing, processing knowledge, processing facility like computers and reporting format seems to be the main problem. It took time for the author to first understand, collate and then present the data in a comprehensible manner. After compiling the data, effort has been made to crosscheck with the different bureaus, although the outcome was not that satisfactory due to limited knowledge of the people consulted. Data was, however, cleaned as much as possible through different means to increase reliability.

LAND ALLOCATION TO DIFFERENT CROPS IN META AND CHIRO WOREDAS AND DIRE DAWA ADMINISTRATIVE COUNCIL

Meta and Chiro woredas

Administratively, Meta and Chiro woredas are located respectively in East and West Hararghe zones of the Oromiya National Regional State. East and West Hararghe zones are areas where the three traditionally defined agroecologies that include the Dega (highland) Woina Dega (intermediate altitude) and Kolla (low altitude) areas prevail in different proportions. As defined in relation to the growing of major crops such as sorghum and maize, the highland zone comprise areas with altitudes between 1900 and 2300 masl, the Woina Dega between 1500-1900 masl and the Kola areas with altitudes less than 1500 masl. In normal as well as in difficult years rainwater availability decreases from the Dega to Woina Dega and then Kolla zones. Different cropping systems made of different crop combinations evolved along these different climatic zones. Due to this, in both East and West Hararghe different farming systems have evolved in the different agroecologies. Various crops identified locally as highland (temperate) or lowland (tropical) crops are grown in both Meta and Chiro (Tables 1a and 1b). Growing such a large number of crops is also smallholder farmers' strategy to avert risk associated with the unpredictable regional rainfall. It has to be noted that grain production in east and west Hararghe is entirely dependent on rainwater. The different crops are mainly grown under multiple cropping-scheme either in combination (intercropping, relay cropping) or in succession. The growing of sorghum, maize and dry beans under an intercropping system and the growing of small cereals and highland pulses like peas, faba bean and lentils in succession are frequent occurrences in the intermediate altitude and highland zones. In both woredas, like in any other woreda found in east and west Hararghe, sorghum and maize are the

first and second most important cereals. Among the small cereals, barley and wheat are important in both woredas, whereas tef is prominent in Chiro than in Meta. Due to their short cycle, small cereals are also grown as catch crops in years when sorghum and maize crop performance failures are detected early in the season. Failure of major crops might happen due to early low moisture stress, armyworm or locust seedling damage, lack of labor and/or draft power to plant on time or to properly manage fields. Several other leguminous crops including dry beans, peas and faba beans are also grown in both woredas. Chickpea is recently getting prominence as a result of frequent occurrence of drought stresses. Its prominence is also related to emergency seed aids managed by several NGOs operating in the region. Due to chickpea's adaptation to less available (residual) moisture, it has become a focus crop under emergency situations. Oil crops such as linseed, sesame and rapeseed which were grown in less proportions earlier are now promoted as crops with potentials in improving smallholder farmers' livelihoods due to their high value and market attraction.

Dire Dawa

Dire Dawa, administratively recognized as Dire Dawa Administrative Council largely comprises low altitude areas. Here the greater share of agricultural land is situated in the Kolla zone. As a result, there is less diversification of crops grown. Agriculture in Dire Dawa is largely restricted to the growing of sorghum, maize and dry beans (Table 1c).

Use of Modern Cultivar Seed

Meta and Chiro Woredas

Although crop farming in the two woredas evolved towards growing large number of crops, many of the crops are grown using seed sourced from the local seed supply system. Modern Cultivar (MC) seed is made available for only a few crops, namely maize, wheat and dry beans. Even for these crops small quantity seed that only covers only a few hectares is made available (Tables 1a, 1b and 1c). Among the various reasons that contributed to limited MC seed use, the underdevelopment of the formal seed sector in Ethiopia is the major one. MCs seed is mainly supplied in credit under the Bureau of Agriculture (BoA) extension program. The other MC seed sources are Non-Governmental Organizations (NGOs) and UN institutions like the FAO that manage seed aid operation in the region. As could be seen later in the report, there are several NGOs that operate in east and west Hararghe zones and Dire Dawa Administrative council. When MC seed is made available for a crop, only one or two MCs are selected per crop for seed to be supplied. This is true for BoA extension program and NGOs that lead seed aid operations.

Wheat

For wheat the cultivars HAR-1685 (Kubsa, released in 1994) and Pavon-76 (released in 1982) are the ones supplied largely with little addition from HAR-1522 (Abola) and HAR-1595 (Magal, both released in 1997) (Table 2a). Information obtained from the bread wheat breeding center (Kulumsa Agricultural Research Center, KARC) revealed that the widely distributed cultivar HAR-1685 is almost out of production due to its break in resistance to rust diseases (Bedada Girma, Personal Communication) and is being largely replaced by other recently released MCs. Despite this in all wheat growing areas of East and West Hararghe the BoA extension program and NGOs seed programs largely promote HAR-1685. Moreover, Pavon-76

the second largely supplied cultivar is an old release mainly suitable for irrigated areas. The repeated distribution of the same MC seed in subsequent years happened despite the presence of several MCs released for production in the country. It is true that none of the wheat MCS available currently are developed for the wheat growing areas of east and west Hararghe. Therefore, lack of information on cultivar adaptation to the highland conditions of Hararghe and lack of data on farmers' preference of recently released bread wheat cultivars are among the reasons that resulted in low cultivar replacement rate under Hararghe condition. Be it in east or west Hararghe, there is no data generated through systematic cultivar performance trial regarding adaptation and farmers' preferences for wheat as well as other crops. Neither the Ethiopian Seed Enterprise nor other institutions working in the area of agricultural development endeavored to generate data that could help in selecting cultivars that are adaptable to the growing conditions and at the same time win farmers' acceptance. Whatever MCs grown in Hararghe today are identified based on blanket recommendation made by breeders and the ESE during the start of the extension package program in the mid 1990s.

Maize

Regarding maize, attempts made to supply MC seed indicate that the hybrid cultivar BH-660 (released in 1993) was supplied throughout the package years to some farmers in Meta and Chiro (Table 2b). This also holds true for other highland parts of East and West Hararghe. Supply of seed of Open Pollinated Varieties (OPVs) was insignificant due to the shift made by the ESE from producing and supplying OPV seed to supplying hybrid seed in view of profit making following its transformation to ESE in 1991. Due to its proven good performance in normal years in the highland zone, farmers cultivar preference is shifting from growing OPVs to growing BH-660. The condition has brought about abandonment of some locally grown OPVs. Problems that limit the expansion of BH-660 include the limited seed supply and the weak performance of the cultivar in years of below normal rainfall. The limited supply of BH-660 seed resulted in large unsatisfied demand in normal years. In drought or in years of low moisture stress the performance of BH-660 is poor that farmers might risk loosing the entire harvest. Due to the unpredictable nature of rainfall in both east and west Hararghe, it is hardly possible to make a realistic demand estimate for BH-660. For example following the two drought years of 2001-02 and 2002-03, Chiro BoA refrained from undertaking the maize package with BH-660 seed until detecting normal years. As a result, area planted to MC maize seed dropped from 16% of maize area in 2001-02 to 7% in 2002-03 to almost nil in 2003-04 (Table 1b). Not being able to make decision at the local level, if instructed to carry on the package with BH-660 the BoA might not have choice except considering BH-660 for its package program. Lack of other maize hybrids with better adaptation to the rainfall regime (with proven stable performance) limited the BoA's choice to BH-660. Other MCs supplied in limited quantity include BH-140 (hybrid cultivar released in 1988 and suitable for intermediate altitude rain short areas) and Awassa-511 (an OPV released in 1974 for production in rain short intermediate altitude areas). Note should be taken that the OPV seed is rather made available through emergency seed intervention programs.

Dry bean

Two white seeded export type dry bean cultivars (Mexican-142, released in 1973 and Awash-1, released in 1990) are the ones that are largely supplied in the different

woredas be it through the BoA package program or NGO seed aid programs (Table 2c). Although there are a number of food type dry bean cultivars released from breeding, neither of them are largely produced and marketed by ESE.. The supply of export type dry bean cultivars is also motivated by the current extension policy of Ethiopia that favors the promotion of export type products.

Dire Dawa

In Dire Dawa MC seed is supplied for the three major crops grown in the region, which are sorghum, maize and dry bean. Like in Meta and Chiro, the seed supplied is however of limited quantity (4c and 4d). The supply is of limited quantity due to farmers' preference to growing local cultivars of particularly sorghum compared to growing MCs. For example in 2003-04 the BoA decided to limit the quantity of MC seed to that indicated in Table 2d while it additionally purchased 12.5 MT of locally grown sorghum cultivars (Muyra, Worabi, Jeldi Amejigita) from farmers stock. In the same year the sorghum MC $76T_1$ No_{23} fetched ETB 2.65/kg, whereas the local cultivars Muyra, Worabi, Jeldi and Amejigita costed, respectively ETB 2.00, 2.50, 2.75 and 3.00/kg. Two out of four local cultivars thus fetched more than the MC seed due to farmers' preference to grow the local cultivars over the MC. As will be indicated later, HCS, the major NGO operating in Dire Dawa preferred supplying local cultivars of maize and sorghum under its aid operations. Currently, one sorghum MC ($76T_1$ No_{23}, released in 1979) and one maize MC (Katumani, released in 1974) are made available to farmers. The cultivars are selected for their better performance compared to other tried ones. For example, earlier attempts made by the BoA to supply the intermediate altitude sorghum MC Gambella-1107 was stopped due to poor performance of the cultivar under the highly unpredictable rainfall regime of Dire Dawa.

From the above presentation three elements are worth noting:

1. Among the many crops grown in Meta and Chiro woredas (east and west Hararghe for that matter) MC seed is made available only for a few crops namely wheat, maize and dry bean. For the other crops the supply of MCs is limited or inexistent that farmers largely or totally depend on seed sourced from the local seed supply system
2. The quantity of MC seed supplied is very limited that there is a large proportion of unsatisfied physical demand. Whether smallholder farmers are willing to pay for new seed or not however, requires further investigation
3. The MC seed supply is not handled in a way that improves genetic diversity on which the smallholder farming systems of the three woredas (for that matter the entire Hararghe) relies to cope with the unpredictable rainfall of the area. The supply of few cultivars of a crop under conditions of Hararghe would undermine the copping ability of the smallholder farmers, as it will limit farmers' production choice particularly in years of low moisture stress. Note should be taken that years of low moisture stress are common than being exceptions in Hararghe as a whole.

Table 1a. Type of crops grown, total crop area (ha) and area planted to Modern Cultivar (MC) seed in Meta woreda, East Hararghe zone from 2001-2002 to 2003-2004

Crop	2001-2002			2002-2003			2003-2004		
	Total area (ha)	Area planted to MC seed (ha)	% of area planted to MC seed	Total area (ha)	Area planted to MC seed (ha)	% of area planted to MC seed	Total area (ha)	Area planted to MC seed (ha)	% of area planted to MC seed
Wheat	3410	43	1.3	4113	Unknown [X]	Unknown [X]	3813	51	1.3
Sorghum	6044	Insignificant	Insignificant	10589	Insignificant	Insignificant	10580	Insignificant	Insignificant
Maize	7586	1906	25.1	9737	2072	21.3	9730	1686	17.3
Barley	2834	Nil	Nil	3014	Nil	Nil	3020	Nil	Nil
Tef	705	Nil	Nil	172	Nil	Nil	100	Nil	Nil
Oats	259	Nil	Nil	260	Nil	Nil	260	Nil	Nil
Peas	792 [w]	Nil	Nil	902	Nil	Nil	900	Nil	Nil
Faba bean	724 [w]	Nil	Nil	654	Nil	Nil	640	Nil	Nil
Dry bean	7726[x]	Unknown [y]	Unknown [y]	7726	Unknown [y]	Unknown [y]	7650	Unknown [y]	Unknown [y]
Chickpea	66	Nil	Nil	381	Nil	Nil	Unknown	Nil	Nil
Fenugreek	55	Nil	Nil	82	Nil	Nil	80	Nil	Nil
Lentils	446 [w]	Nil	Nil	419	Nil	Nil	430	Nil	Nil
Linseed	40	Nil	Nil	40	Nil	Nil	38	Nil	Nil
Groundnut	234	Nil	Nil	234	Nil	Nil	230	Nil	Nil
Roots and Veggies	2200	No data	No data	2300	No data	No data	2375	No data	No data
Total annual crop area	33124	-	-	40623	-	-	39846	-	-
Perennials	4177	-	-	4177	-	-	4177	-	-
Total crop area	37381	-	-	44800	-	-	44023	-	-

[W] Grown under double cropping scheme with small cereals largely in 'Meher' season

[X] Largely grown under intercropping with sorghum and maize

[Y] MC seed Supplied by different NGOs but difficult to separate

[Z]. Except Irish, Potato, garlic & shallot, the other vegetables are largely grown from MC seed sourced from country traders.

Source: Meta woreda BoA

Table 1b. Type of crops grown and total crop area (ha) and area planted to MC seed in Chiro woreda, West Hararghe zone from 2001-2002 to 2003-2004

Crop	2001-2002			2002-2003			2003-2004		
	Total area (ha)	Area planted to MC seed (ha)	% of area planted to MC seed	Total area (ha)	Area planted to MC seed (ha)	% of area planted to MC seed	Total area (ha)	Area planted to MC seed (ha)	% of area planted to MC seed
Wheat	766	63	8.2	613	192	31.3	1420	138	9.7
Sorghum	17934	Insignificant[X]	Insignificant[X]	26400	Insignificant[X]	Insignificant[X]	21437	Insignificant[X]	Insignificant[X]
Maize	7479	1200	16.0	6891	7.0	0.1	9187	Insignificant[X]	Insignificant[X]
Barley	1259	Nil	Nil	894	Nil	Nil	2135	Nil	Nil
Tef	2727	Nil	Nil	3117	Nil	Nil	3092	Nil	Nil
Oats	80	Nil	Nil	86	Nil	Nil	156	Nil	Nil
Millets	50	Nil	Nil	71	Nil	Nil	28	Nil	Nil
Peas [Y]	287	Nil	Nil	92	Nil	Nil	441	Nil	Nil
Faba bean [Y]	478	Nil	Nil	468	Nil	Nil	821	Nil	Nil
Dry bean [Z]	1576	Unknown[W]	Unknown[W]	1060	127	12	1417	217	15.3
Chickpea	580	Nil	Nil	1270	Nil	Nil	70	Nil	Nil
Fenugreek	18	Nil	Nil	45	Nil	Nil	40	Nil	Nil
Lentils [Y]	54	Nil	Nil	100	Nil	Nil	417	Nil	Nil
Linseed	30	Nil	Nil	38	Nil	Nil	57	Nil	Nil
Grass pea	3	Nil	Nil	14	Nil	Nil	140	Nil	Nil
Sesame	9	Nil	Nil	26	Nil	Nil	20	Nil	Nil
Rapeseed	2	Nil	Nil	12	Nil	Nil	20	Nil	Nil
Noog	2	Nil	Nil	8	Nil	Nil	4	Nil	Nil
Sunflower	5	Nil	Nil	9	Nil	Nil	5	Nil	Nil
Roots and Veggies	Unreported	Unreported	Unreported	Unreported	Unreported	Unreported	Unreported	Unreported	Unreported
Total annual crop area	32336	-	-	41211	-	-	39907	-	-
Perennials	15431	-	-	14215	-	-	14230	-	-
Total crop area	47767	-	-	55426	-	-	54137	-	-

[W] MC seed supplied by different NGO's but difficult to separate

[X] In Habro woreda some farmers are supplied with two striga resistant sorghum cultivars Gubiye & Abshir obtained through NGO operations

.[Y] Grown under double cropping scheme with small cereals largely in 'Meher' season

[Z] Largely grown under intercropping with sorghum and maize

Source: Chiro woreda BoA

Table 1c. Type of crops grown and total crop area (ha) and relation to area planted to MC seed in Dire Dawa Administrative council from 2001-2002 to 2003-2004

Crop	**2001-2002**			**2002-2003**			**2003-2004**		
	Total area (ha)	Area planted to MC seed (ha)	% of area planted to MC seed	Total area (ha)	Area planted to MC seed (ha)	% of area planted to MC seed	Total area (ha)	Area planted to MC seed (ha)	% of area planted to MC seed
Sorghum	9975	Unknown	Unknown	10691	129	1.2	10883	1429	13.1
Maize	525	Unknown	Unknown	563	116	20.6	573	176	30.7
Dry bean	IC	Unknown	Unknown	IC	175*		IC	200	Unknown
Roots and Veggies	Unreported	Unreported	Unreported	Unreported	Unreported	Unreported	Unreported	Unreported	Unreported
Total annual crop area	10500	-	-	11254	-	-	11456	-	-
Perennials	Unreported	Unreported	Unreported	Unreported	Unreported	Unreported	Unreported	Unreported	Unreported
Total crop area	-	-	-	-	-	-	-	-	-

*20 ha from BoA package program and 155 ha from HCS seed distribution

Source: Dire Dawa BoA and HCS

Table 2a. Modern crop cultivars of wheat supplied to farmers through the BoA package program between 2001-02 and 2003-04 in Meta (east Hararghe) and Chiro (west Hararghe).

Year	Meta woreda			Chiro woreda		
	Wheat cultivar name	**Quantity of seed (MT)**	**Area seed could plant (ha)**	**Wheat cultivar name**	**Quantity of seed (MT)**	**Area seed could plant (ha)**
2001-2002	HAR-1685	3.8	25.2	-	-	-
	ET-13	1.9	12.3	Pavon-76	9.4	63.0
	HAR-1595	0.9	5.5	-	-	-
Total	**-**	**6.6**	**43.0**	**-**	**9.4**	**63.0**
2002-2003	HAR-1685	Unknown*	Unknown*	Pavon-76	20.0	133.3
	-	-	-	HAR-1522	8.8	58.7
Total	**-**	**Unknown***	**Unknown***		**28.8**	**192.0**
2003-2004	HAR-1685	7.6	50.3	HAR-1522	15.0	100
	ET-13	0.2	1.0	HAR-1685	5.6	37.3
Total		**7.8**	**51.3**		**20.6**	**137.3**

*Distributed only by NGOs
Source: Meta and Chiro BoA

Table 2b. Modern crop cultivars of maize supplied to farmers through the BoA package program between 2001-02 and 2003-04 in Meta (East Hararghe) and Chiro (West Hararghe)

Year	Meta woreda			Chiro woreda		
	Maize cultivar name	**Quantity of seed (MT)**	**Area seed could plant (ha)**	**Maize cultivar name**	**Quantity of seed (MT)**	**Area seed could plant (ha)**
2001-2002	BH-660	42.9	1716	BH-660	30	1200
	BH-140	4.7	185	-	-	-
	A-511	0.2	5	-	-	-
Total	**-**	**47.8**	**1906**	**-**	**30**	**1200**
2002-2003	BH-660	50.2	2000.5	BH-660	Insignificant	Insignificant
	BH-140	1.8	69	PHB-3253	0.2	6
Total	-	52	2069.5	-	-	-
2003-2004	BH-660	37.3	1488.8	None	None	None
	BH-140	5	197	-	-	-
Total	**-**	**42.3**	**1685.8**	**-**	**-**	**-**

Source: Meta and Chiro BoA

Table 2c. Modern crop cultivars of dry bean supplied to farmers through the BoA package program between 2001-02 and 2003-04 in Chiro woredas (west Hararghe) and Dire Dawa Administrative council

Year	Chiro woreda			Dire Dawa		
	Dry bean cultivar	**Quantity of seed (MT)**	**Area seed could plant (ha)**	**Dry bean cultivar**	**Quantity of seed (MT)**	**Area seed could plant (ha)**
2001-2002	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
Total	-	-	-	-	-	-
2002-2003	Mex-142	7.6	127.2	Mex-142	17.5[Z]	175
Total	-	7.6	127.2	-	17.5	17.5
2003-2004	Mex-142	13	216.7	Mex-142	10	100
	-	-	-	Awash-1	10	100
Total	-	13	216.7	-	20	200

[Z] 2 MT from BoA extension program and 15.5 MT from HCS seed aid
Source**: Dire Dawa BoA and HCS**

Table 2d. Modern crop cultivars of maize and sorghum supplied to farmers through the BoA package program between 2001-02 and 2003-04 in Dire Dawa

Year	Sorghum			Maize		
	Name of cultivar	**Quantity of seed (MT)**	**Area seed could plant (ha)**	**Name of cultivar**	**Quantity of seed (MT)**	**Area seed could plant (ha)**
2001-2002	Unknown	Unknown	Unknown	Unknown	Unknown	Unknown
2002-2003	$76T_1No_{23}$	0.9	129	Katumani	2.9	116
2003-2004	$76T_1No_{23}$	10	1429	Katumani	4.4	176

Source: Dire Dawa BoA

EMERGENCY FOOD GRAIN AND SEED ASSISTANCE IN META, CHIRO WOREDAS AND DIRE DAWA ADMINISTRATIVE COUNCIL

Food Aid

Eastern Ethiopia in general and east and west Hararghe zones in particular are parts of Ethiopia where the livelihood of the rural population entirely depend on the performance of their agriculture (mixed crop-livestock production system). The performance of the agriculture was however poor in the past years due to, among other things, frequent occurrence of low moisture stress conditions during the cropping season. As a result, in this part of the country crop farming repeatedly failed to regenerate itself to the extent that producers have become increasingly food and seed insecure. Consequently, food and seed relief are increasingly becoming part of the agricultural system. Although seed relief handouts were meant to decrease dependence on repeated food aid by contributing to the restoration, rehabilitation or improvement of agricultural systems and farmers' self-reliance, this didi not materialize in eastern Ethiopia as a whole. Data obtained from Disaster Prevention and Preparedness Commission (DPPC) of East and West Hararghe zones and Dire Dawa Administrative Council revealed that in the past years each woreda found in the zones received emergency food aid every year (Tables 3a, 3b and 3c). Only the magnitude of the aid received varied among woredas depending on the level of vulnerability of each woreda. For example, woredas such as Fedis, Gursum and Babile which largely comprise mid and low altitude drought prone areas received the greatest share of food aid compared to those woredas which largely comprise highland areas (Fig. 1). The need for the food aid was associated with the poor performance of the crop production sector due partly to rainfall uncertainties. Note should be taken that among the several constraints rainfall uncertainty ranked top in limiting the performance of the agriculture. The woredas of interest to this work are not exceptions and, therefore, have received continuous food aid.

Wheat grain constituted the largest volume of grain handout followed by maize. In addition to food grain handouts large volume of other value added foodstuffs labeled 'supplementary food' (vitamin and mineral containing foods) and cooking oil has been donated. The amount of food grain distributed and beneficiaries targeted increased through years following repeated occurrence of low moisture stress conditions that affected the major staple crops sorghum and maize. The volume of food grain distributed to farm HH in east Hararghe zone from 1995-96 to 2002-03 is demonstrated in Fig. 2, as an example. The volume of food grain aid in east Hararghe

zone increased from 1934.4 MT in 1995/96 to 105878.2 MT in 2002-03 (Table 3_a and Fig. 2), whereas number of beneficiary HH increased from 48360 to 1067100 in the same period (Table 3_{a1} and Fig. 2).

Seed Aid

Seed aid was the other operation handled together with the food aid in east and west Hararghe zones and Dire Dawa Administrative council in the past year. According to the DPPC's of the different zones giving seed handouts to the different woredas has a long history dating back to the early 1980's. Different crop seed sourced largely from the local seed supply system (mainly major grain traders, see Mulatu, 2003) was being distributed to selected needy households since then. For a few crops, particularly wheat, maize and dry beans seed was partly or totally sourced from the formal seed supply sector (ESE and breeding centers) in certain years. According to the DPPC, the volume of seed handouts and the households (HH) targeted showed an increasing trend (Fig. 3) compared to the 1980s indicating the failure of crop farming to regenerate itself. In east Hararghe zone the volume of seed handout decreased from 1525 MT in 1999/2000 to 642 MT in 2001/02 but increased once again to 1220 MT in 2002/03 (Table 7_c and Fig. 3). In west Hararghe zone seed handout increased from 1070 MT in 2001/02 to 2166 MT in 2002/03, whereas number of beneficiary farm HH almost tripled from 99141 to 283903 in the same period (Tables 5a and 5b). Tables 4_a 4_b, 4_c, 4_d and 4_e give the data summary for emergency seed aid from 1999-2000 for east Hararghe zone by crop type, whereas Tables 5_a and 5_b give the seed aid data summary for west Hararghe zone.

The donors

Several international NGOs, UN institutions such as the WFP (World Food Program) and the FAO and few local NGOs are involved in emergency food and seed aid in east and west Hararghe zones as a whole, whereas according to the DPPC, HCS and WFP are the ones active in Dire Dawa in donating seed and food handouts, respectively. In east Hararghe FAO, MFM (Menschen für Menschen, a German based NGO), CISP (Comitato Internazionale per lo Sviluppo dei Popoli, an Italian based NGO), HCS (Hararghe Catholic Secretariat), SHDI (Self-Help Development International, an Ireland based NGO), WLF (World Lutheran Federation) and CARE International (to a limited extent) featured, whereas in west Hararghe CARE, HCS, ICRC (international Committee of the Red Cross), FAO, ERCS (Ethiopian Red Cross Society), GO-Eth (Goal Ethiopia) and ESHA featured the most. Whereas food aid was largely done by the WFP, some of the above-indicated NGOs also supply some food grain. EU (European Union) and OPEC, Belgian Government and SIDA (Swedish International Development Agency) were also involved in food aid particularly in 2002-03. In 2000-01, seven institutions (UN and NGOs) performed seed aid operations in east Hararghe zone (Tables 7_a and 7_b). The institutions include FAO, CARE, HCS, MFM, CISP, SHDI, WLF and GO-Eth. The donor institutions gave 1072 MT of seed of six crops (maize, sorghum, wheat, dry bean, tef and chickpea) to about 81221 households found in the 15 woredas of the zone (Tables 7_a and 7_b). In 2001/02 six NGOs (CARE, SHDI, HCS, CISP, MFM, WLF) and FAO donated about 642 MT seed of five crops (maize, sorghum, wheat, dry bean and chickpea (Table 8a). In **2002-03** a total of 1220.2 MT of seed of five crops (sorghum, wheat, maize, tef and dry bean) was donated to a total of 144739 farm HH distributed in16 woredas of the zone by the same NGOs though data on donor institutions is not available (Table 9). Information on crop cultivars is given as explanatory note under Table 9. More or less the same

trend is observed in 2003/04 for east Hararghe zone (Table 10). Data we were able to capture indicated that in west Hararghe zone six NGOs (ICRC, ERCS, CARE, ESHA, HCS, MFM) FAO, and the Government itself donated 2105 MT seed of six crops (maize, sorghum, wheat, dry bean chickpea and barley) to 283906 farm HH in 2002/03 (Table 11).

Some of the NGOs distributed the food and seed handouts to farm HH by themselves, whereas others operated through the DPPC. Donors, however, react based on request made by the DPPC, at the National, Regional and Zonal levels. Woredas where food and seed aid should take place, the volume to be distributed and the number of HH to be targeted is fixed by the DPPC.

Aid institutions that handled seed distribution by their own include HCS, CARE, MFM, CISP and SHDI, whereas others like ICRC, ERCS and WLF distribute through the DPPC. Even when NGOs handle distribution by their own they work in close collaboration with the grassroots development offices such as the Rural Development Bureau, Bureau of Agriculture and the like. The major food aid operator in all zones was the WFP.

Crop Cultivars Distributed under Seed Aid Operations

Generally due to lack on knowledge of varietal performance employees of the DPPC were not able to provide specific information to donors regarding required crop cultivars. As a result donors did not have opportunity to provide adapted and farmers' preferred MCs to beneficiary farm HH. As an example to this I presented data on volume of seed and cultivars supplied to farmers by HCS between 2000/01 and 2003/04 in Table 6. In all years HCS purchased and supplied local seed except for wheat and dry bean. The reason for purchasing local seed is lack of MCs that meet farmers' preferences from formal seed suppliers. For wheat and dry bean only single MC, respectively HAR-1685 and Mexican-142 were purchased. These are the cultivars that showed proven performance in the zones, according to HCS. Absence of systematic on-farm performance evaluation and readily usable recommendation by NGOs made seed supply to deal with on only those cultivars that NGOs have prior information about. The ESE does not conduct or lead the conduct of planned demonstrations and performance evaluations in any of the zones in Hararghe. EPHSI supplies small quantity seed for demonstrations to BoA. But absence of proper evaluation of cultivars by BoA and absence of follow up from EPHSI made the generation of utilizable data difficult. Moreover, NGOs are not interested to provide hybrid seed to farmers, as it does not contribute much to rehabilitation programs.

Table 3a. Quantity of food grain (MT) distributed in East Hararghe woredas as food aid between 1995-96 and 2002-03

Woreda	**1995/96**	**1996/97**	**1997/98**	**1998/99**	**1999/00**	**2000/01**	**2001/02**	**2002/03**
Fedis	12.8	43.7	941.0	19678.9	9887.7	7870.1	14014.9	16113.8
Gursum	23.7	109.5	654.9	10473.2	6544.7	6019.4	9745.5	12351.0
Babile	10.1	154.7	1000.3	5066.2	1881.5	3643.8	4828.2	7662.6
Grawa	363.1	228.9	24.1	9745.9	5036.5	3786.5	4592.8	7345.0
Kurfa Chele	50.8	56.7	110.2	1467.1	1393.9	1537.1	2563.5	4754.1
Bedeno	732.9	150.4	91.6	1353.1	727.9	1922.1	2693.6	4729.9
Golo Oda	19.5	133.8	102.9	3749.7	723.0	2598.8	3184.8	8273.3
Jarso	7.7	30.8	134.1	1004.6	1502.4	946.2	1211.0	4610.3
Kombolcha	37.8	65.4	68.7	736.7	1197.2	474.4	1591.1	3395.1
Kersa	37.1	324.7	253.6	2399.8	2907.2	1149.3	902.7	5516.7
Meta	86.5	77.2	135.1	2206.6	2196.2	2707.2	1817.0	7230.8
Goro Gutu	58.6	129.0	843.0	2153.9	1650.8	1338.9	1642.7	5989.0
Deder	240.7	42.0	55.1	544.4	746.9	504.9	296.8	4406.8
Melka Belo	121.2	91.9	325.7	486.1	1337.6	1566.8	1763.5	5179.2
Alemaya	131.8	63.9	1.5	1050.0	1101.9	465.1	917.5	3435.9
Meyu[Z]	No such woreda	No such woreda	No such woreda	No such woreda	No such woreda	No such woreda	1521.0	4884.8
Total	**1934.4**	**1702.5**	**4742.0**	**62116.1**	**38835.2**	**36530.5**	**53286.6**	**105878.2**

[Z] Recognized as a separate woreda as of 2001/02.
Source: East Hararghe Zone DPPC

Table 3_{a1}. Number of beneficiary HH targeted for food aid in East Hararghe woredas between 1995-96 and 2002-03

Woreda	**1995/96**	**1996/97**	**1997/98**	**1998/99**	**1999/00**	**2000/01**	**2001/02**	**2002/03**
Fedis	710	689	15640	160750	198946	104903	110000	127400
Gursum	639	1771	11250	81878	84878	91368	55600	78000
Babile	683	4832	25670	43726	26569	41814	53400	62700
Grawa	4779	3551	1609	99720	113920	73208	42900	47800
Kurfa Chele	938	549	3772	22457	23854	15710	26800	51500
Bedeno	17295	8582	4015	20689	25283	32924	18200	57700
Golo Oda	1987	2146	2369	39756	29567	54046	36000	62100
Jarso	510	513	2980	22985	28883	25040	16700	45100
Kombolcha	2411	1053	1405	16507	9722	4020	20500	44300
Kersa	875	14088	7483	36560	54930	22984	12500	89200
Meta	6000	836	6776	29622	44057	47044	24600	90800
Goro Gutu	2405	8333	27027	34512	30114	20196	27100	74600
Deder	4663	860	2721	14815	9953	11506	15000	55600
Melka Belo	3554	1390	15318	18374	26222	22340	21000	57400
Alemaya	911	1267	12	17500	26103	7881	11000	70900
Meyu [Z]	No such woreda	No such woreda	No such woreda	No such woreda	No such woreda	No such woreda	16500	52000
Total	**48360**	**50460**	**128047**	**659851**	**733001**	**574984**	**507800**	**1067100**

[Z] Recognized as a separate woreda as of 2001/02.
Source: East Hararghe Zone DPPC

Table 3b. Quantity of food grain (MT) aid distributed and beneficiary HH targeted in West Hararghe woredas between 2001-02 and 2003-04

Woreda	2001/02		2002/03		2003/04	
	Food grain (MT)	**Beneficiary**	**Food grain (MT)**	**Beneficiary**	**Food grain (MT)**	**Beneficiary**
Boke	1169.9	No data	10660	78000	4633.1	54000
Mesela	160	No data	7750.4	43500	4873.5	56381
Tulo	254.8	No data	6245.1	28500	3319.1	45416
Dobba	455.1	No data	8005.7	43000	6868.3	74387
Anchar	402	No data	7086.5	43000	5853.6	66907
Goba Koricha	461.4	No data	10743.8	68000	8915.7	59428
Miesso	822.4	No data	15968.1	50500	10042.6	112264
Kuni	268.9	No data	8844.3	49500	5580.4	78571
Chiro	552	No data	21528.8	166000	16439.4	174003
Habro	0	No data	8915.9	55000	4145.7	51246
Daro Lebu	1568.9	No data	10869.3	29000	4338.9	47832
Total	**6115.4**	No data	**116617.5**	**654000**	**75019.1**	**820435**

Source: West Hararghe Zone DPPC

Table 3c. Quantity of food grain (MT) aid distributed and beneficiaries targeted in Dire Dawa between 2001-02 and 2003-04

Year	Food grain (MT)	Beneficiary
2001/02	100	8000
2002/03	918.8	73500
2003/04	7411.8	91500

Source: Dire Dawa Administrative Council DPPC

Mode of Seed Supply

In view of fighting the ever increasing dependency mentality and not to contradict the currently underway credit extension package, the Government don't allow to give seed for free. As a result, seed handouts were given in credit to be returned in kind upon harvest, which will be used to establish a revolving seed scheme. Although seed was given to beneficiary HH with such an agreement, there is no any encouraging record of repayment collection. Continuously occurring drought years, lack of follow-up of harvest conditions, lack of responsible body to collect repayments, lack of law reinforcement to punish credit defaulters, etc. were among the reasons that contributed to repeated failures to establish revolving seed schemes (for further explanation see Mulatu 2002 and 2003).

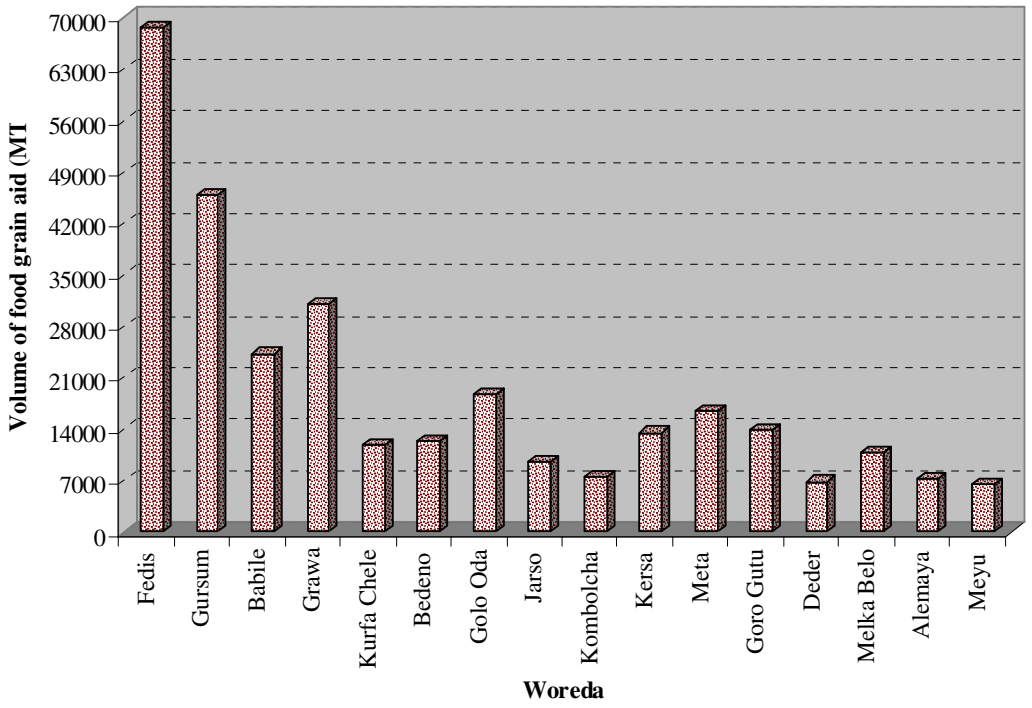

Fig. 1. Food grain aid donated to the different woredas of East Hararghe zone between 1995/96 and 2002/03 by different donors (**Source**: EHZ DPPC) (note: **Meyu** was recognized as woreda in its own right as of 2001-02)

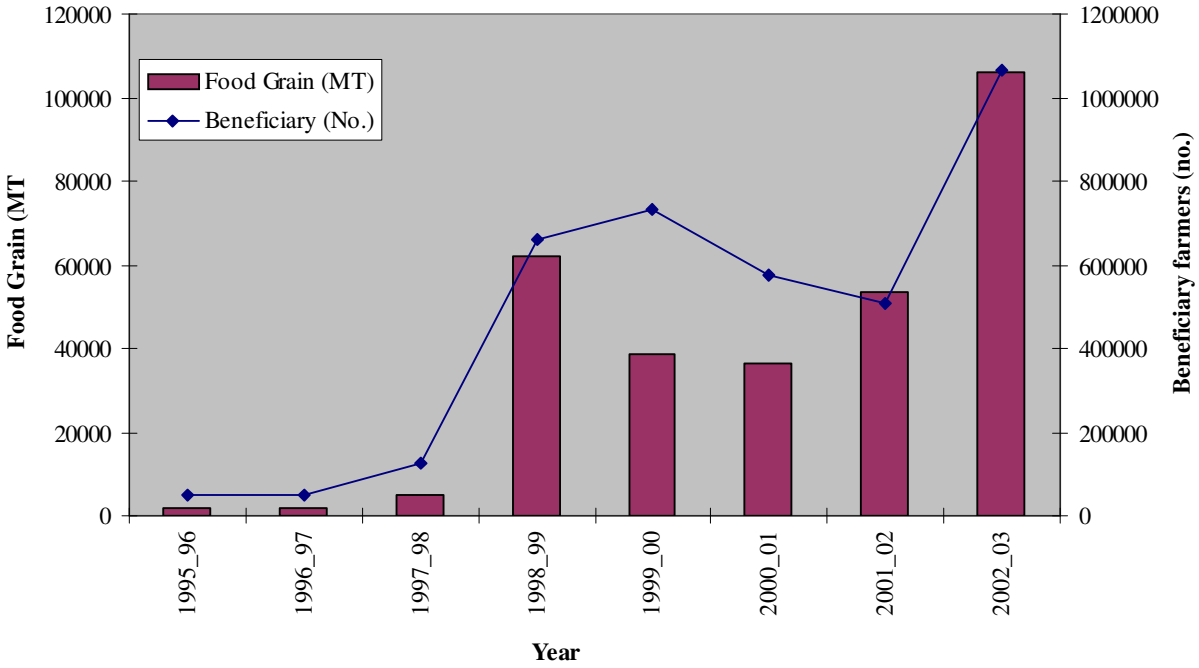

Fig. 2. Quantity of food grain distributed under aid operations by GO and NGOs in East Hararghe zone between 1995-96 and 2002-03 (**Source**: EHZ-DPPC)

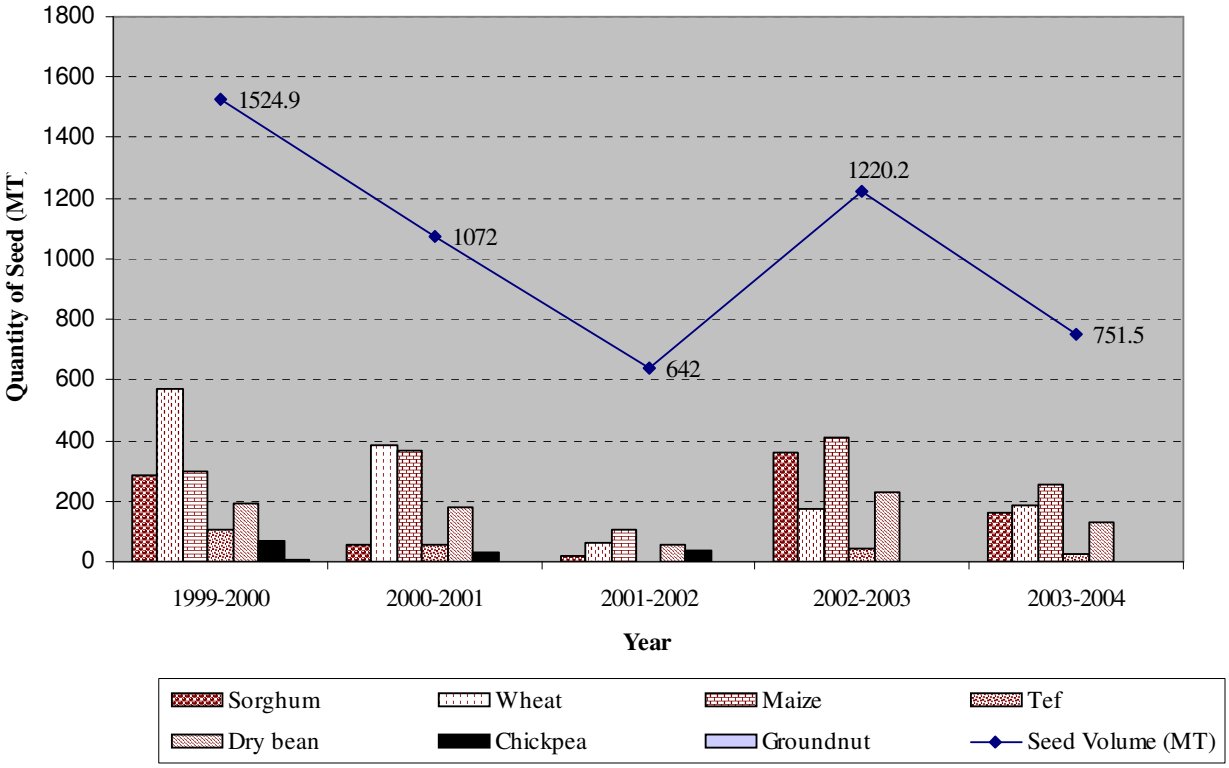

Fig. 3. Volume of emergency seed distributed to needy farmers by Government and NGOs between 1999-2000 and 2003-04 in East Hararghe Zone (**Source**: EHZ-DPPC)

Table 4a. Crop type, quantity of seed (MT) distributed and beneficiaries targeted in East Hararghe under seed aid operation in 1999-2000

Woreda	**Tef**	**HH**	**Ha**	**Wheat**	**HH**	**Ha**	**Maize**	**HH**	**Ha**	**Sorghum**	**HH**	**Ha**	**DB**	**HH**	**Ha**	**CP**	**HH**	**Ha**	**GN**	**HH**	**Ha**	**Actually targeted HH**
Golo Oda	Nil	Nil	Nil	Nil	Nil	Nil	10	800		10	2000		4.1	205		Nil	Nil	Nil	Nil	Nil	Nil	3005
Bedeno	25	3334		17.1	456		3	480		10	1600		4.4	440		Nil	Nil	Nil	Nil	Nil	Nil	6310
Grawa	20	5194		16.2	486		42.4	9343		25	6751		9.8	1633		16.3	815					24222
Kurfachele	Nil	Nil	Nil	44.1	1398		6.5	680		12.9	2264		2.5	344		9	800		3.4	319		5805
Alemaya	Nil	Nil	Nil	Nil	Nil	Nil	30.5	2293		9.8	1960					4.9	392					4645
Gorogutu	Nil	Nil	Nil	70.5	1957		Nil	Nil	Nil	Nil	Nil	Nil	30.5	1495		Nil	Nil	Nil	Nil	Nil	Nil	3452
Deder	14.2	1035		Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil				Nil	Nil	Nil	Nil	Nil	Nil	1035
Melka Belo	20	1843		10.3	321		Nil	Nil	Nil	Nil	Nil	Nil				Nil	Nil	Nil	Nil	Nil	Nil	2164
Fedis	Nil	Nil	Nil	67.3	1681		186.5	18760		150.1	17393		64.1	6507		13.6	1360					45701
Babile	Nil	Nil	Nil	Nil	Nil	Nil	10	1600		24	4033		28	2800		Nil	Nil	Nil	Nil	Nil	Nil	8433
Gursum	22.5	1500		48.9	653		10	3318		43.1	10600		19.6	980		Nil	Nil	Nil	Nil	Nil	Nil	17051
Jarso	Nil	Nil	Nil	35	729		Nil	Nil	Nil	Nil	Nil	Nil				2	154					883
Kombolcha	Nil	Nil	Nil	3.3	132		Nil	Nil	Nil	Nil	Nil	Nil				Nil	Nil	Nil	Nil	Nil	Nil	132
Kersa	Nil	Nil	Nil	162.1	6482		Nil	Nil	Nil	Nil	Nil	Nil	9.4	1880		Nil	Nil	Nil	Nil	Nil	Nil	8362
Meta	5	709		95	3344		Nil	Nil	Nil	Nil	Nil	Nil	22	1100		20	2590					7748
Total	**106.7**			**569.8**			**298.9**			**284.9**			**195.4**			**65.8**			**3.4**			
Total volume of seed (MT)				**1524.9**																		
Total number of HH				**138948**																		

Source: EHZ DPPC

Table 4b. Crop type, quantity of seed (MT) distributed and beneficiaries targeted in East Hararghe under seed aid operation in 2000-01

Woreda	**Tef**	**HH**	**Ha**	**CP**	**HH**	**Ha**	**Wheat**	**HH**	**Ha**	**Maize**	**HH**	**Ha**	**Sorghum**	**HH**	**Ha**	**DB**	**HH**	**Ha**	**Veggies**	**HH**	**Ha**
Golo Oda	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	20	1600	800	5	1000	500	Nil	Nil	Nil	Nil	Nil	Nil
Bedeno	7.8	1042		Nil	Nil	Nil	20	527	133.3	19.7	3152	788	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
Grawa	7.8	517		Nil	Nil	Nil	18.2	238	121.3	20.3	1545	812	2.8	562	280	Nil	Nil	Nil	Nil	Nil	Nil
Kurfachele	Nil	Nil	Nil	Nil	Nil	Nil	71.9	1713	479.3	15.1	2400	604	2.5	400	250	40	1334	400	Nil	Nil	Nil
Alemaya	Nil	Nil	Nil	10.4	832		Nil	Nil	Nil	Nil	Nil	Nil	2	400	200	20	1002	200	Nil	Nil	Nil
Gorogutu	Nil	Nil	Nil	Nil	Nil	Nil	15	312	100	10.9	1264	436	Nil	Nil	Nil	15	750	150	Nil	Nil	Nil
Deder	Nil	Nil	Nil	10	500		Nil	Nil	Nil	3	240	120	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
Melka Belo	10	667		10	1000		17	240	113.3	17	1360	680	3.5	700	350	Nil	Nil	Nil	Nil	Nil	Nil
Fedis	Nil	Nil	Nil	Nil	Nil	Nil	10	269	66.7	Nil	Nil	Nil	34.5	5762	3450	10	1000	100	Nil	Nil	Nil
Babile	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	114.1	9128	4564	2.5	500	250	20	1330	200	Nil	Nil	Nil
Gursum	10	533		Nil	Nil	Nil	30	400	200	85.6	6821	3424	2.5	500	250	23.9	5954	239	Nil	Nil	Nil
Jarso	Nil	Nil	Nil	Nil	Nil	Nil	69.3	2079	462	15	2000	600	Nil	Nil	Nil	15	750	150	Nil	Nil	Nil
Kombolcha	Nil	Nil	Nil	Nil	Nil	Nil	14.1	752	94	4.3	344	172	Nil	Nil	Nil	6.8	1360	68	1.1	165	
Kersa	5	667		Nil	Nil	Nil	25	835	166.7	15.2	1216	608	Nil	Nil	Nil	20	2000	200	Nil	Nil	Nil
Meta	15	3999		Nil	Nil	Nil	91.5	2440	610	27	4320	1080	Nil	Nil	Nil	10	800	100	Nil	Nil	Nil
Total	**55.6**	**7425**		**30.4**	**2332**		**382**	**9805**		**367.2**	**35390**		**55.3**	**9824**		**180.7**	**16280**		**1.1**	**165**	
Total volume of seed (MT)				**1072.3**																	
Total number of HH																					

Source: EHZ DPPC

Table 4c. Crop type, quantity of seed (MT) distributed and beneficiaries targeted in East Hararghe under seed aid operation in 2001-02

Woreda	Chickpea	HH	Ha	Wheat	HH	Ha	Maize	HH	Ha	Sorghum	HH	Ha	DB	HH	Ha	Actually targeted HH
Golo Oda	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	No data
Bedeno	10			6.1			7.5			Nil	Nil	Nil	Nil	Nil	Nil	No data
Grawa	Nil	Nil	Nil	12.1			Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	No data
Kurfachele	Nil	Nil	Nil	8.7			20			Nil	Nil	Nil	Nil	Nil	Nil	No data
Alemaya	15.3			Nil	Nil	Nil	30.5			11.8			20			No data
Gorogutu	4.9			Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	15			No data
Deder	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	No data
Melka Belo	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	No data
Fedis	Nil	Nil	Nil	Nil	Nil	Nil	6.6			2.4			4.2			No data
Babile	Nil	Nil	Nil	Nil	Nil	Nil	24.6			2.2			2.4			No data
Gursum	6.2			Nil	Nil	Nil	5.6			2.0			Nil	Nil	Nil	No data
Jarso	Nil	Nil	Nil	19.2			Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	No data
Kombolcha	Nil	Nil	Nil	2.0			7.9			Nil	Nil	Nil	Nil	Nil	Nil	No data
Kersa	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	4.2			No data
Meta	Nil	Nil	Nil	16.5			Nil	Nil	Nil	Nil	Nil	Nil	9.8			No data
Total	**36.4**			**64.6**			**102.7**			**18.4**			**55.6**			No data
Total volume of seed (MT)				**642.0**[Z]												

[Z] including 364.3 MT un accounted seed by the DPPC but distributed by HCS (See Table 6)

Source: EHZ DPPC

Table 4d. Crop type, quantity of seed (MT) distributed and beneficiaries targeted in East Hararghe under seed aid operation in 2002-03

Woreda	**Tef**	**HH**	**Ha**	**Wheat**	**HH**	**Ha**	**Maize**	**HH**	**Ha**	**Sorghum**	**HH**	**Ha**	**DB**	**HH**	**Ha**	**Actually targeted HH**
Golo Oda	Nil	Nil	Nil	Nil	Nil	Nil	28.7	4600	1148	23	4600	2300	Nil	Nil	Nil	4600
Bedeno	10	1333		Nil	Nil	Nil	30	4800	1200	10	4000	1000	10	1000	100	10133
Grawa	8.4	560		Nil	Nil	Nil	10	1600	400	14.1	2810	1410	Nil	Nil	Nil	4970
Kurfachele	Nil	Nil	Nil	Nil	Nil	Nil	50	8000	2000	20	4000	2000	Nil	Nil	Nil	12000
Alemaya	Nil	Nil	Nil	Nil	Nil	Nil	25.1	4016	1004	35.5	7100	3550	Nil	Nil	Nil	11116
Gorogutu	Nil	Nil	Nil	53.6	1429	357.3	11.8	1888	472	9.5	1900	950	11.8	1180	118	5217
Deder	Nil	Nil	Nil	Nil	Nil	Nil	14.3	2280	572	11.4	2280	1140	28.5	2850	285	4560
Melka Belo	15	2000		Nil	Nil	Nil	30	4800	4800	35	7000	3500	20	2000	200	13800
Fedis	Nil	Nil	Nil	Nil	Nil	Nil	25	4000	1000	75	15000	7500	50	5000	500	19000
Babile	Nil	Nil	Nil	Nil	Nil	Nil	27.5	4400	1100	25	5000	2500	Nil	Nil	Nil	9400
Gursum	19.6	2612		Nil	Nil	Nil	20.7	3312	828	Nil	Nil	Nil	Nil	Nil	Nil	5924
Jarso	Nil	Nil	Nil	15	400	100	20	3200	800	4.8	960	480	10	1000	100	4560
Kombolcha	Nil	Nil	Nil	28	747	186.7	21.2	3392	848	7.4	2960	740	25.5	2550	255	7099
Kersa	Nil	Nil	Nil	33	880	220	35	5600	1400	40	8000	4000	40	4000	400	14480
Meta	Nil	Nil	Nil	45	1200	300	40	6400	1600	35	7000	3500	35	2800	350	14600
Meyu	Nil	Nil	Nil	Nil	Nil	Nil	20.5	3280	820	16.4	3280	1640	Nil	Nil	Nil	3280
Total	**43**			**174.6**			**409.8**			**362.1**			**230.8**			**144739**
Total volume of seed (MT)				**1220.3**												
Total number of HH				**144739**												

Source: EHZ DPPC

Table 4e. Crop type, quantity of seed (MT) distributed and beneficiaries targeted in East Hararghe under seed aid operation in 2003-04

Woreda	**Tef**	**HH**	**Ha**	**Wheat**	**HH**	**Ha**	**Maize**	**HH**	**Ha**	**Sorghum**	**HH**	**Ha**	**DB**	**HH**	**Ha**	**Actual targeted HH**
Golo Oda	Nil	Nil	Nil	Nil	Nil	Nil	15	1200	600	15	3000	1500	Nil	Nil	Nil	4200
Bedeno	9.9	1320		Nil	Nil	Nil	20	1600	800	Nil	Nil	Nil	Nil	Nil	Nil	2920
Grawa	Nil	Nil	Nil	37	984	246.7	15	1200	600	15	3000	1500	Nil	Nil	Nil	5184
Kurfachele	Nil	Nil	Nil	25.8	688	172	15	1200	600	7.5	1500	750	13.5	2700	135	3380
Alemaya	Nil	Nil	Nil	Nil	Nil	Nil	7	560	280	8.5	1700	850	11.3	2260	113	2260
Gorogutu	Nil	Nil	Nil	24	640	160	15	1200	600	10	2000	1000	16	3200	160	3840
Deder	Nil	Nil	Nil	34.8	2000	232	25	928	1000	Nil	Nil	Nil	Nil	Nil	Nil	2928
Melka Belo	5.1	680		6.6	176	44	10	800	400	10	2000	1000	Nil	Nil	Nil	3656
Fedis	Nil	Nil	Nil	Nil	Nil	Nil	40	3200	1600	25	5000	2500	Nil	Nil	Nil	8200
Babile	Nil	Nil	Nil	Nil	Nil	Nil	15	1200	600	10	2000	1000	16	3200	160	3200
Gursum	6.9	920		Nil	Nil	Nil	20	1600	800	15	3000	1500	23	4600	230	5520
Jarso	Nil	Nil	Nil	15.6	416	104	10	800	400	7.5	1500	750	11.5	2300	115	2716
Kombolcha	Nil	Nil	Nil	9.9	264	66	6.2	500	248	7.5	1500	750	10	2000	100	2264
Kersa	Nil	Nil	Nil	19.5	520	130	10	800	400	10	2000	1000	14	2800	140	3320
Meta	Nil	Nil	Nil	14.5	392	96.7	12.5	1000	500	7.5	1500	750	12.5	2500	125	2892
Meyu	Nil	Nil	Nil	Nil	Nil	Nil	20	1600	800	10	2000	1000	Nil	Nil	Nil	3600
Total	**21.9**			**187.6**			**255.7**			**158.8**			**127.8**			**60080**
Total volume of seed (MT)				**751.8**												
Total number of HH				**60080**												

Source: EHZ DPPC

Table 5a. Crop type, quantity of seed (MT) distributed and beneficiaries targeted in West Hararghe under seed aid operation in 2001-02

Woreda	**Tef**	**HH**	**Ha**	**Chickpea**	**HH**	**Ha**	**Wheat**	**HH**	**Ha**	**Barley**	**HH**	**Ha**	**Maize**	**HH**	**Ha**
Boke	11.8	1652	393	58.1	5090	581	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
Mesela	6.8	1364	272	15.7	1395	174	10.0	927	67	84.0	820	560	Nil	Nil	Nil
Tulo	39.4	3940	1303	49.9	4990	555	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
Dobba	11.8	1180	393	21.9	2160	240	Nil	Nil	Nil	17.0	850	113	5.0	500	164
Anchar	27.2	5756	1813	49.7	5756	613	40.5	5756	270	Nil	Nil	Nil	Nil	Nil	Nil
Goba Koricha	10.6	1413	354	43.0	3876	538	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
Miesso	6.8	272	226	21.8	872	242	Nil	Nil	Nil	Nil	Nil	Nil	30.0	1200	1500
Kuni	9.8	1274	319	28.3	1867	471	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
Chiro	51.4	10710	1700	66.9	10710	743	Nil	Nil	Nil	30.0	10710	200	Nil	Nil	Nil
Habro	18.8	4406	627	41.1	2055	514	Nil	Nil	Nil	8.6	4406	57	Nil	Nil	Nil
Daro Lebu	12.2	814	407	242.0	2420	303	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil
Total	**206.6**	**32781**	**7808**	**638.4**	**41191**	**4974**	**50.5**	**6683**	**337**	**139.6**	**16786**	**930**	**35.0**	**1700**	**1664**
Total volume of seed (MT)				**1070.1**											
Total number of HH				**99141**											

Source: WH zone DPPC

Table 5b. Crop type, quantity of seed (MT) distributed and beneficiaries targeted in West Hararghe under seed aid operation in 2002-03

Woreda	**Tef**	**HH**	**Ha**	**Chickpea**	**HH**	**Ha**	**Wheat**	**HH**	**Ha**	**Barley**	**HH**	**Ha**	**Maize**	**HH**	**Ha**	**Sorghum**	**HH**	**Ha**	**DB**	**HH**	**Ha**
Boke	Nil	Nil	Nil	180	8002	2000	Nil	Nil	Nil	Nil	Nil	Nil	243	23148	8100	138.3	17561	13830	63.5	17561	635
Mesela	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	13.4	1072	447	1.7	340	170	Nil	Nil	Nil
Tulo	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	2.3	460	77	4.6	1720	460	Nil	Nil	Nil
Dobba	Nil	Nil	Nil	Nil	Nil	Nil	39	2053	256	Nil	Nil	Nil	59.0	5833	1967	15.2	21505	1520	26.2	3311	262
Anchar	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	59.9	5985	1997	5.0	1000	500	Nil	Nil	Nil
Goba Koricha	Nil	Nil	Nil	Nil	Nil	Nil	25	708	167	5.2	1060	35	67.4	6740	2247	28.0	3210	2790	45.0	4230	450
Miesso	10	2000	330	10	2000	110	Nil	Nil	Nil	Nil	Nil	Nil	84.1	4143	2803	123.3	17316	12330	50.0	8000	500
Kuni	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	80.0	8600	2667	6.7	1669	957	Nil	Nil	Nil
Chiro	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	110.4	14652	3680	24.6	24920	2460	Nil	Nil	Nil
Habro	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	14.0	2800	467	112.0	21400	11200	Nil	Nil	Nil
Daro Lebu	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	Nil	169.3	16969	5643	180.3	16969	18030	169.3	16969	1693
Total	**10**	**2000**	**330**	**190**	**10002**	**2110**	**64**	**2761**	**423**	**5.2**	**1060**	**35**	**902.8**	**90402**	**30095**	**639.6**	**127610**	**64247**	**354**	**50071**	**3540**

Total volume of seed (MT)	**2165.6**
Total number of HH	**283906**

Source: WH zone DPPC

Table 6. Crop seed purchased and distributed from 2000-2001 to 2003-2004 in West and East Hararghe zones and Dire Dawa Administrative council by HCS

Zone	Crop	Cultivar	2000-01		2001-02		2002-03		2003-04	
			Quantity (MT)	Beneficiaries	Quantity (MT)	Beneficiaries	Quantity (MT)	Beneficiaries	Quantity (MT)	Beneficiaries
East Hararghe	Wheat	HAR-1685	30.4		29.2		30.0		7.0	
	Sorghum	Local	0.0		43.3		63.9		2.1	
	Maize	Local	49.0		70.0		35.0		13.3	
	Barley	Local	12.3		1.0		0.0		0.0	
	Tef	Local	5.8		0.0		10.0		44.3	
	Faba bean	Local	0.0		0.0		0.0		3.8	
	Dry bean	Mexican-142	114.6		178.2		169.7		56.7	
	Chickpea	Local	0.0		42.5		15.0		72.3	
	Sesame	Local	0.0		0.0		0.0		0.4	
	Sub-total	**-**	**212.1**	**15855**	**364.3**	**34451**	**323.6**	**41761**	**199.9**	**26776**
West Hararghe	Wheat	HAR-1685	22.0		20.7		49.3		0.0	
	Sorghum	Local	0.0		0.3		6.6		0.0	
	Maize	Local	0.7		0.7		70.2		0.0	
	Barley	Local	0.0		0.0		0.8		0.0	
	Faba bean	Local	0.0		0.0		7.6		0.0	
	Dry bean	Mexican-142	22.1		23.2		42.8		0.0	
	Chickpea	Local	0.0		0.0		0.0		60.4	
	Sub-total		**44.8**	**4012**	**44.9**	**4076**	**177.3**	**9395**	**60.4**	**2920**
Dire Dawa	Sorghum	Local	0.0		0.0		17.4		0.0	
	Maize	Local	0.0		0.0		12.6		0.0	
	Dry bean	Mexican-142	0.0		0.0		15.5		0.0	
	Sub-total		**0.0**	**0**	**0.0**	**0**	**45.5**	**9396**	**0.0**	**0**

Source: HCS Dire Dawa

Table 7a. Seed donated by different donors to the different woredas of East Hararghe Zone (2000-01)

Woreda	Donor	Quantity (MT)						Remark on woreda
		Maize [U]	Sorghum [V]	Wheat [W]	Dry bean [X]	Tef [Y]	Chickpea [Z]	
Golo Oda	FAO	20.0	5.0	-	-	-	-	Largely mid alt drought prone
Bedeno	FAO	19.7	-	20.0	-	7.8	-	Largely mid alt drought prone
Grawa	FAO	20.4	2.8	18.2	-	7.8	-	Largely highland
Kurfachele	FAO	15.1	2.5	15.0	-	-	-	Largely highland
	CARE	-	-	50.0	40.0	-	-	
	GO-Eth	-	-	7.0	-	-	-	
Alemaya	FAO	-	2.0	-	-	-	-	-
	SHDI	-	-	-	20.0	-	10.4	
Gorogutu	FAO	5.0	-	8.0	-	-	-	Highland with drought prone lowlands
	HCS	5.9	-	-	15.0	-	-	
Deder	FAO	3.0	-	-	-	-	-	Largely highland
	WLF						10.0	
Melka Belo	FAO	17.0	3.5	17.0	-	10.0	-	
	WLF						10.0	
Fedis	FAO	-	28.9	10.0	-	-	-	Largely mid to low alt drought prone
	CISP	-	5.6	-	10.0	-	-	
Babile	FAO	17.0	2.5	-	-	-	-	Largely mid to low alt drought prone
	CISP	3.0	-	-	-	-	-	
	MFM	94.1	-	-	20.0	-	-	
Gursum	FAO	13.7	2.5	30.0	-	10.0	-	Largely mid to low alt drought prone
	MFM	71.9	-	-	24.0	-	-	
Jarso	FAO	5.0	-	10.0	-	-	-	Largely highland
	HCS	10.0	-	59.3	15.0	-	-	
Kombolcha	FAO	1.7	-	-	-	-	-	Largely highland
	HCS	2.6	-	14.1	6.8	-	-	
Kersa	FAO	15.2	-	25.0	-	5.0	-	Largely midland
	CSIP	-	-	-	20.0	-	-	
Meta	FAO	10.0	-	24.0	-	5.0	-	Largely highland
	HCS	17.0	-	68.0	10.0	10.0	-	
Total		**367.3**	**55.3**	**382.6**	**180.8**	**55.6**	**30.4**	

[U] Maize varieties include A-511 (OPV suitable for mid alt drought prone areas), BH-140 (hybrid suitable for mid alt low rainfall areas) and unidentified local cultivars
[V] All sorghum varieties were local varieties, [W] Wheat varieties include HAR-1685 (Kubsa) and ET-13, [X] Dry bean varieties include Mexican-142, Awash-1 and the local variety Red Wolayita, [Y] All tef varieties were local varieties, [Z] All chickpea varieties were local varieties
Source: EHZ-DPPC and respective donors

Table 7b. Total number of HH who received seed aid in 2000-01 in different woredas in East Hararghe zone

Woreda	**Donor**	**Crop**	**HH**
Golo Oda	FAO	Maize	1600
		Sorghum	1000
Bedeno	FAO	Tef	1042
		Wheat	527
		Maize	3152
Grawa	FAO	Tef	517
		Wheat	238
		Maize	1545
		Sorghum	562
Kurfachele	GO-Eth, FAO, CARE	Wheat	1713
	CARE	Dry bean	1334
	FAO	Maize	2400
		Sorghum	400
Alemaya	SHDI	Chickpea	832
		Dry bean	1002
	FAO	Sorghum	400
Gorogutu	FAO, HCS	Wheat	312
		Maize	1264
	HCS	Dry bean	750
Deder	WLF	Chickpea	500
	FAO	Maize	240
Melka Belo	FAO	Tef	667
		Wheat	240
		Maize	1360
		Sorghum	700
	WLF	Chickpea	1000
Fedis	FAO	Wheat	269
	CISP	Dry bean	1000
	FAO, CISP	Sorghum	5762
Babile	MFM	Dry bean	1330
	MFM, FAO, CISP	Maize	9128
	FAO	Sorghum	500
Gursum	FAO	Tef	533
		Wheat	400
		Sorghum	500
	MFM	Dry bean	5954
	MFM, FAO	Maize	6821
Jarso	HCS, FAO	Wheat	2079
		Maize	2000
	HCS	Dry bean	750
Kombolcha	HCS	Wheat	752
		Dry bean	1360
	HCS, FAO	Maize	344
	FAO	Veggies	165
Kersa	FAO	Tef	667
		Wheat	835
		Maize	1216
	CISP	Dry bean	2000
Meta	HCS, FAO	Tef	3999
		Wheat	2440
		Maize	4320
	HCS	Dry bean	800
Total			**81221**

Source: EHZ-DPPC and respective donors

Table 7c. Quantity of seed supplied to the 15 woredas in east Hararghe zone between 1999-2000 and 2003-04

Year	Crop	Quantity (MT)
1999-2000	Sorghum	284.9
	Wheat	569.8
	Maize	298.9
	Tef	106.7
	Dry bean	195.4
	Chickpea	65.8
	Groundnut	3.4
Total		**1524.9**
2000-2001	Sorghum	55.3
	Wheat	382.6
	Maize	367.3
	Tef	55.6
	Dry bean	180.8
	Chickpea	30.4
Total		**1072**
2001-2002	Sorghum	18.4 + 43.3
	Wheat	64.6 + 29.2
	Maize	102.7 + 70.0
	Dry bean	55.6 + 178.2
	Chickpea	36.4 + 42.5
	Barley	0.0 + 1.0
Total		**642**[z]
2002-2003	Sorghum	362.05
	Wheat	174.6
	Maize	409.75
	Tef	43
	Dry bean	230.8
Total		**1220.2**
2003-2004	Sorghum	158.5
	Wheat	187.6
	Maize	255.7
	Tef	21.9
	Dry bean	127.8
Total		**751.5**

[z] including 364.3 MT not accounted by the DPPC but distributed by HCS (see Tables $4_{c,}$ and 6)

Source: EHZ-DPPC and respective donors

Table 8a. Seed donated by different donors to the different woredas of East Hararghe Zone (2001-02)

Woreda	Donor	Quantity (MT)				
		Maize [V]	Sorghum [W]	Wheat [X]	Dry bean [Y]	Chickpea [Z]
Golo Oda	-	-	-	-	-	-
Bedeno	CARE	7.5	-	6.1	-	10.0
Grawa	CARE	-	-	12.1	-	-
Kurfachele	CARE	20.0	-	8.7	-	-
Alemaya	SHDI	30.5	9.8	-	20.0	15.3
	FAO	-	2.0	-	-	-
Gorogutu	HCS	-	-	-	15.0	4.9
Deder	-	-	-	-	-	-
Melka Belo	-	-	-	-	-	-
Fedis	CISP	6.6	2.4	-	4.2	-
Babile	MFM	20.0	2.2	-	-	-
	CISP	4.6	-	-	2.4	-
Gursum	CISP	5.6	2.0	-	-	6.2
Jarso	WLF	-	-	19.2	-	-
Kombolcha	HCS	6.2	-	2.0	-	-
	FAO	1.7	-	-	-	-
Kersa	HCS	-	-	-	4.2	-
Meta	HCS	-		16.5	9.8	
Total		**102.7**	**18.4**	**64.67**	**55.6**	**36.4**
Grand total		**642[Z]**				

[Z] including 364.3 MT not accounted by the DPPC but distributed by HCS (see Table 6)
Source: EHZ DPPC

Table 9. Seed donated by different donors to the different woredas of East Hararghe Zone in 2002-03

Woreda	Donor	Quantity (MT)				
		Maize [V]	Sorghum [W]	Wheat [X]	Dry bean [Y]	Tef [Z]
Golo Oda	No data	28.7	23.0-	-	-	-
Bedeno	No data	30.0	10.0	-	10.0	10.0
Grawa	No data	10.0	14.1	-		8.4
Kurfachele	No data	50.0	20.0	-		-
Alemaya	No data	25.1	35.5	-		-
Gorogutu	No data	11.8	9.5	53.6	11.8	-
Deder	No data	14.3	11.4	-	28.5	-
Melka Belo	No data	30.0	35.0	-	20.0	15.0
Fedis	No data	25.0	75.0	-	50.0	-
Babile	No data	27.5	25.0	-		-
Gursum	No data	20.7	-	-		19.6
Jarso	No data	20.0	4.8	15.0	10.0	-
Kombolcha	No data	21.2	7.4	28.0	25.5	-
Kersa	No data	35.0	40.0	33.0	40.0	-
Meta	No data	40	35.0	45.0	35.0	-
Meyu	No data	20.5	16.4	-	-	-
Total		**409.8**	**339.1**	**174.6**	**230.8**	**53.0**
Grand total		**1220.2**				

[V] Awassa-511 (maize varieties that is suitable for mid altitude rain short areas) and Katumani (variety suitable for mid and low altitude drought prone areas and several unidentified local cultivars
[W] Varieties suitable for mid altitude rain short areas because of early maturity (Gambella-1107) and striga tolerant varieties (Gubyie and Abshir) and several other local varieties were distributed
[X] The variety HAR-1685 (Kubsa) was the only MC whereas the other cultivars were local cultivars
Y The only dry bean MC distributed was Mexican-142 whereas the rest was constituted by the largely grown local cultivar Red Wolayita
[Z] What was distributed to farmers was all local cultivars collected from local traders and farmers
Source: EHZ DPPC

Table 10. Seed donated by different donors to the different woredas of East Hararghe Zone in 2003-04

Woreda	Donor	Quantity (MT)				
		Maize [V]	Sorghum [W]	Wheat [X]	Dry bean [Y]	Tef [Z]
Golo Oda	No data	15.0	15.0	-	-	-
Bedeno	No data	20.0	-	-	-	9.9
Grawa	No data	15.0	15.0	36.9	-	-
Kurfachele	No data	15.0	7.5	25.8	13.5	-
Alemaya	No data	7.0	8.5	-	11.3	-
Gorogutu	No data	15.0	10.0	24.0	16.0	-
Deder	No data	25.0	-	34.8	-	-
Melka Belo	No data	10.0	10.0	6.6	-	5.1
Fedis	No data	40.0	25.0	-	-	-
Babile	No data	15.0	10.0	-	16.0	-
Gursum	No data	20.0	15.0	-	23.0	6.9
Jarso	No data	10.0	7.5	15.6	11.5	-
Kombolcha	No data	6.2	7.5	9.9	10.0	-
Kersa	No data	10.0	10.0	19.5	14.0	-
Meta	No data	12.5	7.5	14.5	12.5	-
Meyu	No data	20.0	10.0	-	-	-
Total		**255.7**	**158.5**	**187.6**	**127.8**	**21.9**
Grand total		**751.5**				

[V] Awassa-511 (maize varieties that is suitable for mid altitude rain short areas) and Katumani (variety suitable for mid and low altitude drought prone areas and several unidentified local cultivars

[W] Varieties suitable for mid altitude rain short areas because of early maturity (Gambella-1107) and striga tolerant varieties (Gubyie and Abshir) and several other local varieties were distributed

[X] The variety HAR-1685 (Kubsa) was the only MC whereas the other cultivars were local cultivars

Y The only dry bean MC distributed was Mexican-142 whereas the rest was constituted by the largely grown local cultivar Red Wolayita

[Z] What was distributed to farmers was all local cultivars collected from local traders and farmers

Source: EHZ DPPC

Table 11. Seed donated by different donors to the different woredas of West Hararghe Zone in 2002-03

			Quantity (MT)					
Woreda	**Donor**	**Maize [V]**	**Sorghum [W]**	**Wheat [X]**	**Dry bean [Y]**	**Chickpea**	**Barley**	**Tef**
Boke	ICRC	88.1	138.3	-	63.5	180.1	-	-
	ERCS	155	-	-	-	-	-	-
Mesela	Govt	13.4	1.7	-	-	-	-	-
Tulo	Govt	2.3	4.6	-	-	-	-	-
Dobba	Govt	5.8	4.6	-	-	-	-	-
	ERCS	43.5	10	38.5	-	-	-	-
	CARE	9.7	0.6	-	1.3	-	-	-
	ESHA	-	-	-	24.9	-	-	-
Anchar	Govt	5	5	-	-	-	-	-
	CARE	50	-	-	-	-	-	-
	HCS	4.9	-	-	-	-	-	-
Goba Koricha	FAO	7.4	23.7	25	29.8	-	5.2	-
	CARE	50	-	-	-	-	-	-
	HCS	10	4.2	-	15.2	-	-	-
Miesso	ICRC	2.62	1.31	-	-	10	-	10
	CARE	50	-	-	-	-	-	-
	FAO	11.5	90.1	-	20	-	-	-
	HCS	20	31.9	-	30	-	-	-
Kuni	Govt	30	6.7	-	-	-	-	-
	CARE	50	-	-	-	-	-	-
Chiro	Govt	60.4	24.6	-	-	-	-	-
	CARE	50	-	-	-	-	-	-
Habro	Govt	14	10	-	-	-	-	-
	MFM	-	102	-	-	-	-	-
Daro Lebu	ICRC	169.3	180.3	-	169.3	-	-	-
Total	**-**	**902.9**	**639.6**	**63.5**	**354.0**	**190.1**	**5.2**	**10**
Grand total		**2165.3**						

LOCAL MARKET PRICES OF SEED

Data for Meta, Chiro and Dire Dawa is given in an attached Excel file (**File name**: LocalMarketSeedPrice). The prices are collected four times a month by the woreda BoA market price monitoring team. Prices given for each month are average of the four weekly prices. The price given refers to the direct selling price of farmers and, therefore, largely represents price received by petty grain traders (see Mulatu, 2003 for description).

References

Mulatu, E. 2003. Approaches to strengthen seed supply and marketing outlets at the local level in East Hararghe Zone. Unpublished consultancy report for the project 'Strengthening Seed Supply Systems at the Local Level' Project GCP/ETH/062/NOR, FAO Country Representative, Addis Ababa, Ethiopia