



Review and Consequences of Reduction in Agriculture Input sales in 2002

Farmers' reluctance and lack of funds to invest in improved seed, fertilizer and pesticide partially responsible for expected reduced cereal production

A situation analysis, November 2002

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1 Introduction and Background

In Ethiopia, agriculture is the mainstay of the economy from which 85% of the population earns its living. However, agriculture production has been affected by fast increasing population numbers leading to reduced arable land surface per capita, as well as by environmental degradation, increasing top soil erosion, and desertification, impacting negatively on overall rainfall cycles resulting in decreasing soil fertility. These factors have prompted the need to mobilize farmers to move from a sector characterized by predominant subsistence farming, towards promoting increased agriculture production through applying better technologies and extend the use of inputs (improved seeds, fertilizers, and pesticides). Therefore, promoting the use, and ensuring the availability and financial accessibility of sufficient amounts of inputs is a paramount element when striving to ensure national food self-sufficiency.

The Government of Ethiopia in 1993 introduced policies to support the agriculture input sector with the objective to organize as well as liberalize the seed, fertilizer and pesticide sector distribution and marketing for both private and public entities. Furthermore, these policies should facilitate import and distribution of commodities in a conducive and competitive market environment. Therefore, the National Seed, Fertilizer and Pesticide Agencies were established. Since July 2002, these three entities were regrouped under the National Agriculture Input Authority (NAIA) in charge of ensuring the overall coordination of the sector.

The use of agriculture inputs was promoted through the Extension Package Program of the Ministry of Agriculture (MoA). The financial components of the Program were and still are supported by the Commercial Bank of Ethiopia (CBE) as well as other lending institutions in providing credits to importers, distributors and users of agricultural inputs.

As of its launch in 1995 till 2000, the Extension Package Program experienced increased annual interest from the farmers in rain fed agriculture production areas, and proved Ethiopia's capacity to reach near national food self-sufficiency. This led, in 2000 and 2001 to cereal productions generating buffer stocks. However, the production increment was not accompanied by the necessary mechanisms to ensure market price stabilization, resulting in a collapse of cereal prices between November 2000 and May 2002. Consequently, further asset depletion of the rural population occurred as farmers were compelled to refund the credits and loans contracted for the purchase of those input packages (Guinand 2002, Lemessa 2001).

Through the information gathered during previous field assessments and by reviewing existing literature, this paper will review the use of inputs as well as credit and loan schemes in 2002 versus previous years, provide a forecast for the inputs situation for 2003, assess the possible consequences the findings may have on food security, and provide a set of recommendations to further address the need to revitalize the agriculture input sector.

2 Certified Improved Seed Performance

2.1 Certified Improved Seed sales performance in 2002

The Ethiopian Seed Enterprise (ESE) is the main single certified improved seed producer and supplier in the country. Pioneer Hy-breds Seeds Ethiopia (PHSE) as well as certified Farmer Based Seed Production and Marketing Schemes (FBSPMS) ensure the increase of improved seed production and availability on the national market¹.

In early 2002, ESE reported a stock of 20,171.6MT of 14 types of seeds, of which maize hybrids and composite seeds amounted to 7,828.4MT, and wheat seeds amounted to 11,401MT, or 38.8% and 56.5% of the total amount respectively. PHSE reported 1,517.6MT of hybrid maize seeds available, and FBSPMS reconciled numbers indicated 9,216.4MT of mainly maize seeds available, bringing the total of certified improved seeds available through those channels for marketing during the 2002 season to 30,905.6MT.

However, in 2002 sales and distribution of certified improved seeds was a disaster. ESE reported a sale of 3,611.1MT² or 18% of its available stock (See table 1 next page). Compared to the sales figures of previous years of ESE, this performance only represents 18% and 32% of the quantities sold in 2000 and 2001 respectively. PHSE reported a sale of 250.9MT or 16.5% of its available stock. This is PHSE lowest sales performance for the last 10 years of operation and represents a mere 19.6% compared to 2001 and 17.3% compared to its best performance year of 1999. As for the 9,216.4MT stocks available through FBSPMS, no sales data for 2002 has been reconciled. However, field investigations indicate that sales performance percentages by FBSPMS are probably better than those of ESE and PHSE, considering the flexibility these smaller seed distributors have in adapting prices to reduced demand to secure sale of their available stocks. Also, farmers having witnessed the increase in cereal prices as of May-June 2002 while being compelled to re-sow their fields twice or even three times, have purchased improved seeds at a later stage in the planting season. It is very likely that the FBSPMS stocks will have benefited the most of these late seasonal purchases³. Therefore, in the unlikely event that 100% of the FBSPMS stock was sold, the maximum amount of certified improved seeds sold in 2002 would be 130,784MT, or 42% of the available stocks, or 61% compared to certified improved seeds sold by ESE and PHSE combined for 2000 (excluding the FBSPMS seed sales).

¹ ESE grows seeds on 4 farms totalling 4,300 hectares (1 in Awassa, 1 in Gojam and 2 in Arsi). Also, in previous years, ESE and PHSE have sub-contracted part of their seed production to private farmers that were then assisted through the necessary certification process. Furthermore, private farmers can produce seeds independently and seek certification of their product by accessing the laboratory services of the ESE or NAIA (National Agriculture Input Authority).

² From the 3,611.1MT, 2,285.7MT was hybrid maize, 286.9MT was composite maize, 793.3MT was wheat seed. The balance 245.2MT was barley, Tef, Sorghum, Haricot beans, Soya beans, Faba beans, Chick peas, Field peas, Lentils, Rape seed or Noug.

³ Emphasized by the opportunistic nature of agriculture activities, the delays in and erratic rainfall experienced in 2002 has led to 2nd and 3rd planting sessions across the country. Farmers, factoring in the cereal price increases of May-June and thus anticipating more revenue from their Meher proceeds, decided eventually to purchase improved seeds in limited quantities when they had sufficient financial means to do so. This re-sowing process contributed to increase the sale of FBSPMS improved seeds during June-August '02.

Table1: ESE and PHSE certified improved seed sales for the last 7 years

Year	ESE Seed sales (MT)	ESE % 2002 sale versus previous Yrs	% share maize versus total annual sale	% share wheat versus total annual sale	PHSE seed sale (MT)	PHSE % 2002 sale versus previous yrs
1996	12,172.2	30%	15.5%	77%	742	33.8%
1997	10,578.6	34 %	15.8%	77.3%	740	34%
1998	15,565.1	23%	27.1%	71.2%	472	53.2%
1999	13,348.3	27%	34.1%	63.3%	1,450	17.3%
2000	20,154.3	18 %	35.3%	62.2%	1,194	21%
2001	11,278.4	32 %	48.6%	49.3%	1,276	19.6%
2002	3,611.1	NA	71.1%	22%	250.9	NA

(Source: ESE and PHSE activity report 2002)

Considering the apathy seed markets underwent this year, ESE decided to reduce their prices for wheat from 245 ETB/Qt in 2001 to 197 ETB/Qt in 2002, and for maize hybrids from 630 ETB/Qt in 2001 to 560 ETB/Qt in 2002. PHSE also reduced their prices by 15% from 878.22 ETB/Qt in 2001 to 746.55 ETB/Qt in 2002. In addition to this price cut, PHSE also offered regular and prospective clients a 90 days payment delay without interest. However, these price reductions and preferred payment modalities were insufficient to boost the market sufficiently to represent a real turn-around in the use of improved seeds by farmers⁴.

Table 1 also indicates the regular increase of the share of maize hybrid and composite seed sales versus the total sales, and the respective reduction of the share of wheat seeds. Whereas improved maize seeds lose part of their genetic properties every planting season resulting in deterioration of their quality and reduction of their production capacity, wheat seeds do not. Farmers can thus keep part of their wheat harvest as seeds without this resulting in reduced production in the next seasons. However, maize hybrid and composites have to be purchased anew for every season, otherwise farmers will experience a loss of up to 30% even in ideal production conditions.

2.2 Certified Improved Seed availability for 2003

Since the sale of seeds in 2002 was so disastrous, consequently the quantities of carry over stocks for 2003 are very large. ESE and PHSE have 16,577.3MT and 1,259.2MT of carry over stocks respectively, out of which wheat and maize seeds combined represent 96%. Therefore, this year ESE decided only to produce seeds on their own 4 farms, and not, as was done in the previous years, sub-contract certified seed production to private farms. Since the seed production is also expected to be affected by this year's moisture stress, ESE estimates that a 20 to 30% seed production reduction will be registered compared to its annual per hectare average. This should still represent about 9,000MT of wheat seeds and 2,400MT of maize seeds. PHSE will not produce more certified seeds for 2003. As the carry over stocks are of 1,259.1MT, PHSE estimates this quantity to be sufficient to provide for their 2003 requirements. The total amount of improved seeds available for 2003 will then be close to 30,000MT. This quantity still excludes the FBSPMS and seed

⁴To plant 1 hectare of maize a farmer will have to invest approximately 600 ETB for the purchase of 25kg of improved maize seed at 130 ETB, and 100 kg of each DAP and UREA fertilizers at 280 ETB and 218 ETB respectively. Such investment combined with adequate rainfall, land preparation and seed variety should provide for a yield of over 5,000kg/ha. In comparison, a farmer can avoid investing and either use 2nd generation hybrids or traditional seed without inputs which will yield between 1,300kg/hc and 2,000kg/hc, assuming adequate rainfall and land preparation.

imports, which for the 2002 were of about 300MT of mainly pulses and vegetable seeds. It is therefore anticipated that the expected stocks for 2003 will be sufficient to cover demand.

2.3 Availability of certified improved seeds for 2004 and onwards

Certified seeds are obtained through various stages of reproduction and multiplication: from breeder, to pre-basic, to basic, to finally certified seeds. Pre-basic and basic seeds are produced under the auspices of the Bako Research Center (West-Shoa). To produce sufficient quantities of certified seeds, sufficient quantities of basic seeds have to be available. The production of Pre-basic and Basic seeds has suffered from moisture stress in the same way as the normal cereal production has. Although not yet fully assessed, this will result in less basic seeds available in 2003 for the production of certified seeds for 2004. However, certified seeds can also be reconditioned to serve as basic seeds ensuring the production and availability of seeds for the coming years. Nevertheless, if consumer confidence is not restored, improved seeds use might only nominally increase from its disastrously low 2002 consumption levels.

3 Fertilizer Performance

3.1 Fertilizer use performance in 2002

The Ethiopian fertilizer sector is a strategic element in striving to achieve food self-sufficiency and alleviate poverty in the country, and has been supported by the Government of Ethiopia through the development of policies that support and strengthen the inputs distribution and marketing sector. Nearly all fertilizer commodities are imported⁵. The quantities of fertilizers sold and consumed have experienced a steady rise through the years to peak in 2000 with 297,907mt sold.

Each year, based on commonly applied trend projection techniques, the fertilizer demand for the next year is evaluated. The fertilizer demand for 2002 had been set at 440,000MT (280,000MT of DAP⁶ and 160,000MT of Urea⁷) during the 6th Annual National Fertilizer Workshop of 2001. With a carry over stock from 2001 of 89,118MT and actual imports of 368,424MT, the total amount of fertilizers available for 2002 finally was 457,542MT. However the total sales as per 31 August 2002 only amounted to 232,270MT (155,941MT of DAP and 76,329MT of Urea), or 51% of the available stock.

Table 2 shows the fertilizer sales per region for the last 8 years. It indicates that the 2002 fertilizer sales reduced by 20.3% compared to 2001, and by 28.3% versus the peak sale year of 2000. Also, the Oromiya region, which is the most populous region benefiting from the largest areas of rain fed arable land, has consistently consumed around 50% of the total nationwide fertilizers consumption. It is also noteworthy that over the course of those 8 years, fertilizer use in Oromiya and Amhara has only fluctuated by a maximum of about 40%. This can be explained by the fact that those 2 regions are traditionally the biggest cereal surplus producers. However, in Tigray fertilizer use in 2002 is nearly ½ of the region's 2001 peak quantity. For SNNPRS also the use of fertilizer dropped more dramatically over the years, with 2002 quantities only representing 1/3 to 1/4 of the peak year of 1998 for the region. This reduction for SNNPRS also can be compared to the reduction in credits and loans contracted in SNNPRS as is indicated under chapter 5.

⁵ Only 1 company in Ethiopia processes bone meal into nitrogen and phosphorus, representing an annual production of 2,000 to 4,000MT.

⁶ Dap stands for Di-Ammonium Phosphate and is a fertilizer used at sowing time.

⁷ Urea is a fertilizer that contains nitrogen and is used for top application at varying stages after germination.

Table 2: Fertilizer sales per region in 2002 in MT

Region	1995	1996	1997	1998	1999	2000	2001	2002	Available stocks for 2002	Carry-over into 2003
Oromiya	132,522	134,184	105,642	132,262	147,950	137,208	151,755	113,379	137,966	24,587
Amhara	57,023	64,056	57,223	70,698	73,507	83,853	79,921	60,471	77,436	16,965
SNNPRS	34,333	38,730	30,405	40,006	38,587	33,719	15,281	12,187	25,539	13,352
Tigray	4,491	6,950	12,080	14,576	15,108	12,718	16,616	8,976	23,071	14,095
A.A.	7,996	1,046	2,556	1,577	1,754	1,791	1,858	1,880	1,880	0
Others	10,358	8,186	12,525	22,252	13,358	28,618	14,171	35,377	191,650	156,273 ⁸
Total	246,723	253,152	220,431	281,371	290,264	297,907	279,602	232,270	457,542	225,272
% yr sale vs. 2002 sale	106.2%	109%	94.9%	121.1%	125%	128.3%	120.3%	100%	197%	97%

(Source: National Agriculture Input Authority)

Despite adequate and timely imports and availability, particularly in areas of the country where fertilizers are applied more intensively, fertilizer use registered sharp declines in 2002. Significant commodity price reductions (See table 3 on next page) and improved access to credit and loans schemes for those farmers having settled their debts were insufficient measures to alter the declining trend of fertilizer use. First the diminishing number of importers and the limited participation of private retailers induces monopolistic practices⁹. Such practices do not correspond with the Government's policy advocating a competitive fertilizer market sector with increased participation of the private sector. Second, due to all-time low cereal prices over a period of 18 months until May 2002, farmers had difficulties to repay their credits and loans that led to asset depletion, weakened their financial capacity, and generated a loss of confidence to continue to buy-into the credit schemes. Third, this year's erratic and insufficient rains as well as unusually long periods of moisture stress between April and August 2002 did not provide for optimal planting and agriculture production conditions. These climatic conditions did not motivate farmers to buy fertilizers despite their precarious financial situation.

3.2 Estimated fertilizer demand for 2003

The trend projection techniques used to evaluate the demand for fertilizers for 2003 have set the total requirement at 413,000MT. With an estimated carry over stock of 225,272MT, the import requirements are of 187,728MT. This is close to half the fertilizer imports achieved for the 2002 planting season (368,424MT). However, 413,000MT is still much higher than the highest sales figure achieved in Ethiopia (i.e.297,907MT in 2000). The fertilizer distribution and marketing sector therefore remains confident that farmers will turn away from their negative attitude towards inputs use, generate interest and confidence as to buy-into the schemes again, repay their outstanding loans and regain access to credits. If not, importers and distributors risk to have to carry the costs for storage and extended interest fees for unsold stocks.

3.3 Fertilizer prices

During the last 6 years, the import CIF price per metric ton for fertilizers has experienced significant reductions. For DAP, the price fell from 274.65 \$US/MT in 1997 to 184

⁸ This includes 156,197MT located at different transit warehouses of the respective fertilizer importers/distributors.

⁹ Three companies are presently involved in fertilizer importation. These are Agricultural Inputs Supply Enterprise, Ambassel Trading house and Wondo Trading Company with 56%,34% and 10% market shares respectively. Until 2002, these companies could access soft loans, credits and grants from IDA (International Development Association), ADF (African Development Foundation), FDRE (Federal Democratic Republic of Ethiopia) or embassies to facilitate and ensure the purchase of their stocks. Studies show that usually only 2 of the 3 companies end up competing on bids announced by regions, cooperatives and input coordination units (source: NAIA).

\$US/MT in 2002, or a 33% reduction. For Urea, the price fell from 244.27\$US/MT in 1997 to 152 \$US/MT in 2002, or a reduction of 38%. The table below compares retail prices for DAP and Urea and highlights variations through percentage calculations for the last 6 years. Since commodities were purchased by the importers and distributors in US dollars, one needs to factor in both the reduction in import wholesale prices of the commodities as well as the ETB/\$US exchange rate fluctuation over the same period. Whereas the commodities import wholesale prices fell by between 33% and 38% and the exchange rate ETB/\$US changed by 28.7% over the last 6 years, for the fertilizer to follow the same trend commodity prices should have reduced by between 4.3% (33% -28.7%) to 9.3% (38-28.7%). Comparatively, the retail prices for fertilizers changed from a 6.35% increase to a 19% decrease for the same period, factoring in the wholesale price reduction into the retail prices applied.

Table 3: Fertilizer retail price variations in ETB/Qt per region from 1997 to 2002

Product	Year/ Region	1997	1998	1999	2000	2001	2002	1997- 2002 price diff.	1997- 2002 diff. in %	2001- 2002 diff. in %
UN June ETB/\$US exchange rate		6.65	7.087	7.906	8.185	8.417	8.558	1.908	28.7%	+1.7%
DAP	Oromiya	249	243	254	283	268	239	-10	4%	-11%
	Amhara	249	247	262	286	281	260	+11	4.42%	-7.5%
	Tigray	252	255	272	308	282	268	+16	6.35%	-5%
	SNNPRS	246	243	252	288	284	243	-3	-1.2%	-14.5%
UREA	Oromiya	234	182	162	189	209	189	-45	-19%	-9.5%
	Amhara	234	201	184	195	204	198.5	-35.5	-15.2%	-2.7%
	Tigray	237.5	210	182.5	201	202	217.5	-20	-8.42%	+7.6%
	SNNPRS	231	185	169	193.5	196.5	187	-44	-19%	-4.8%

(Source: NAIA)

Furthermore, similar to seed prices, fertilizer prices were reduced by the distributors in 2002 in an attempt to boost sales, and reduce the fertilizer carry over stocks into 2003. In table 3, when comparing 2001 to 2002, distributors reduced prices of fertilizers between 2.7% and 14.5% in all regions (well above exchange rate and import price variations). The only exception is for Urea in Tigray region where more expensive transportation costs kept prices higher. Nevertheless, price reductions were not sufficient to convince consumers and to make such agriculture inputs accessible to farmers.

4 Pesticide performance

Though Ethiopia is endowed with diversified agricultural resources, it has not been able to meet national food demands due to appallingly low yield of food crops. The causes of shortfall and food insecurity are attributed to a number of factors among which crop pests play a key role. Annual losses due to various insect pests, diseases, weeds and vertebrate pests such as birds and rodents are believed to be 30-40%. Pest management in Ethiopian smallholder agriculture heavily relies on cultivation methods. These include complex mixed cropping systems, timely planting, intercropping, crop rotation, sanitation and local pest control measures. Generally pesticide use on small farms is limited. However among the various pest control methods, pesticides when used appropriately reduce crop losses.

Commercial farms are the major users of pesticides in Ethiopia. Pesticide use in state farms is estimated at 7.76kg/ha/year while in smallholder farms, it is less than 0.1 kg/ha/year (Gordon et al, 1995). The biggest share of imported pesticides is used for cotton in commercial farms where 38% of the total pesticides imports and 90% of the insecticides

imported are applied. The use of pesticide in smallholder agriculture is usually limited to herbicide. The other pesticides that are widely used in smallholder farms are migratory pest control pesticides, which are provided for free by the government. The import of pesticides in the 1980s averaging 4,100MT annually was much higher than in the 1990s when the annual average dropped to 1,452MT. The reason for the drop was the closure of many state farms.

During the 2002 crop season, a total of 1,357 MT of pesticides was imported (See table 4 below). The increase in herbicide imports stems in part from continued demand at state farms for the treatment of cereals. An apparent increase in smallholder demand for use on wheat and teff has been recorded. By contrast, insecticide volumes stagnated due to drastic reduction in the surface of cotton cultivation (Woldeamanuel, 2002).

Table 4: Volume Pesticide imports in MT over the past 5 years and forecast for 2003

Year	Insecticide	Herbicide	Fungicide	Others	Total
1998	767.90	417.58	5.50	35.9	1,226.88
1999	302.39	602.86	63.26	2.02	970.53
2000	300.33	517.43	73.71	3.44	894.91
2001	244.56	1,078.27	47.42	3.02	1,373.27
2002	426.22	840.84	70.64	19.67	1,357.37
Total	2,041.4	3,456.98	260.53	64.05	5,822.59
Average	408.28	691.39	52.10	12.81	100%
% Share	35%	59.4%	4.5%	1.1%	100%
Forecast 2003	449.59	1,135.59	60.85	24.94	1,670.97

(Source: Ministry of Agriculture)

5 Performance of Agriculture Input Credit Schemes

5.1 The Commercial Bank of Ethiopia and the Regional Governments inter-action in the implementation of the Agricultural Input Credit Schemes

The Commercial Bank of Ethiopia (CBE) has been the major financier of input credit to smallholder farmers since 1994-1995. From 1994 to 1996, credits were given to farmers through their cooperatives without the Regional Government providing guarantees for full loan refunding. From that period the CBE still remains with 46 million ETB long overdue input credit repayments (table 5).

Table 5: Amount of Long Overdue Input Credit repayment for 1994-96 period

Region	Amount (ETB) Long Overdue Input Credit Repayment for 1994-1996 period
Oromiya	30,601,641
Amhara	1,020,823
SNNPRS	13,114,718
Tigray	222,243
Addis Ababa	1,033,122
Harari	81,709
Total	46,074,257

(Source: CBE)

As of 1996, the CBE began to sign loan contracts with the Regional Governments directly. Table 6 shows the amounts that CBE approved for disbursement by the Regional governments under the Agricultural Input Credit and Loan Schemes. For the last 7 years a cumulative 3.8 Billion ETB were approved. However, only 68.57% or 2.6 Billion ETB

were disbursed to beneficiaries (table 7). This tied up a cumulative 1.2 Billion ETB for a one year period, sum on which some form of interest had to be paid.

Table 6: Agriculture Input Credit Approved for Regional expenditure in ETB ‘000

Region	1997	1998	1999	2000	2001	2002	2003	Total Approved	% of Total
Oromiya	214,024	200,330	256,540	317,904	297,810	383,901	346,570	2,017,079	53%
Amhara	50,620	142,500	150,000	150,000	170,000	170,000	130,000	963,120	25.3%
SNNPRS	50,398	75,639	192,177	196,070	100,000	56,417	41,319	712,020	18.7%
Tigray	0	0	0	10,000	22,000	26,891	23,001	81,892	2.2%
A.A.	3,568	4,477	4,197	3,831	4,153	4,715	4,172	29,113	0.76%
Harari	0	0		0	0	0	721	721	0.02%
Total	318,610	422,946	602,914	677,805	593,963	641,924	545,783	3,803,945	

(Source: CBE)

Due to the lack of collateral held by rural households and as to guarantee loan repayments, the CBE requested the Regional Governments to use their budgets as collateral. In doing so, the Regional Governments vouched for the beneficiaries of the loans, and thus became responsible to collect loan repayments from farmers. To implement the loan schemes Regional Governments work through the Cooperative Promotion Bureaus, the Bureaus of Agricultural Development and established Credit and Savings Institutions¹⁰. These institutions are responsible to implement the loan disbursements and repayment mechanisms. This involves establishing the necessary infrastructure and staffing as well as the production of a manual stipulating the guidelines through which credits will be provided¹¹. To diminish overhead costs, the institutions have sought collaboration with existing government structures at zonal, woreda and kebele level, and Development Agents have taken predominant parts in facilitating credit schemes. To diminish management problems, these entities have sought to contract out credits and loans to groups of beneficiaries rather than individuals. Therefore, the trend has been that increasing proportions of loans disbursed have been through the Cooperative Promotion Bureaus, rather than through the Credits and Savings Institutions or the Bureaus of Agricultural Development.

Table 7: Agricultural Input Credits Disbursed by Regional Governments in ETB ‘000

Region	June 1996	June 1997	June 1998	June 1999	June 2000	June 2001	June 2002	Total Disbursed	Outstanding repayments ¹²
Oromiya	179,053	143,278	216,044	247,147	247,114	261,498	152,967	1,447,101	74,618
Amhara	35,585	116,273	105,891	149,510	149,209	160,713	48,847	766,028	
SNNPRS	29,226	43,768	82,468	79,254	68,006	15,123	5,904	323,749	72,002
Tigray	0	0	0	5,473	16,217	17,303	9,801	48,794	
A.A.	3,568	3,652	3,445	3,445	4,152	4,413	0	22,675	
Total	247,432	306,971	407,848	484,829	484,698	459,050	217,519	2,608,347	146,620
% disbursed vs previous .year	NA	+24%	+32.9%	+18.9%	-0.03%	-5.3%	-53%		

(Source: CBE)

¹⁰ For example, the Amhara National Regional State established ADSI (Amhara Credit and Saving Institution), the Tigray region established DECSI (Dedebit Credit and Saving Institution), or the Oromiya region established OCSSCO (Oromiya Credit and Saving Share Company).

¹¹ These guidelines include issues such as prioritization of beneficiaries per gender/location/food security situation etc., provide loans on individual or on group basis, establish the credit terms, conditions & modalities, and the repayment schedules.

¹² Oromiya Region has the largest absolute outstanding repayment with over 74 million ETB (4,939,000ETB for 2001 and 69,679,000ETB for 2002), but in relative terms it only represents 5.15% of the total disbursements. For SNNPRS the outstanding repayments is 72 million ETB (32,694,000ETB for 2000, 34,498,000ETB for 2001, and 4,810,000ETB for 2002) and represent 22.24% of the total disbursements for the region.

Table 7 above shows the amount of CBE funds disbursed by the Regional governments for the Agriculture Input Credits, and the cumulative outstanding loan repayments from the Regions to the CBE from 1996 to 2002¹³. One can note the steady rise in interest the Agriculture Input Credit schemes have experienced from 1996 to 2000, with Oromiya Region, being the most populous and largest agriculture producer, using the scheme the most (55.5% of the total national credit disbursements). However, the amount of credits contracted dropped slightly by 5.3% in 2001, but by a staggering 53% in 2002.

The reduction in credits contracted in 2002 has various reasons. First, the price drop of agriculture products resulted in low loan recovery rates. If a farmer or a group of farmers defaulted on their credit repayment, they were not entitled to contract a new loan the following year. Such policy is found in guidelines of some of the credit providing institutions. For example in ANRS, the Rural Development Bureau issued a circular stipulating that “if a certain woreda has more than 5% arrears from previous years loans, it will be excluded from current year loans”, or similarly “if a certain kebele has settled less than 85% of the past year loan, no loan will be allocated for that particular kebele” (ACSI, 2002). Second, the late rainfall distribution at the time of planting, especially maize, did not incite farmers to invest in inputs since the outcome of their harvests was uncertain already early in the season. Third, from multiple interviews conducted with farmers during field trips to Oromiya, SNNPRS and Amhara, it seems that farmers lost confidence and are finally not capable of pursuing the agriculture extension package program due to the collapse of cereal prices, the problems to repay credits for agriculture inputs, and asset depletion. This has led to a substantial reduction in the use of improved seeds and fertilizers during 2002. Farmers have substituted improved seeds for less yielding traditional seeds or 2nd generation hybrids, phenomenon that will also substantially affect the total cereal production in the country, and resulted in less credits being requested.

5.2 The Regional Governments to Beneficiaries relation for Input Credit schemes

If farmers default on their loan repayment, Regional Governments are bound through contract to refund CBE on their behalf anyway. Therefore, even though Regional Governments have repaid the majority of their loans to the CBE, this does not mean that farmers have fulfilled their repayment commitments to their credit institutions.

Table 8: Agriculture Input Credit disbursements recovery performances in %

Year/ Region	1997	1998	1999	2000	2001	2002 ¹⁴
Oromiya	84.5%	86.8%	83.8%	91.2%	75.6%	NA
Amhara	96.2%	93.8%	95.5%	89.1%	75.2%	NA
Tigray	92.3%	90.7%	99.2%	99.6%	88.1%	NA
SNNPRS	79.4%	82.9%	70%	53.8%	73.3%	NA

(Sources: regional Cooperative Promotion Bureaus, Bureaus of Agriculture development, and Credit and savings Institutions)

Table 8 above reconciles the relative loan recovery performances of credit providing institutions. The better than average recovery performance rates in 2000 for Oromiya and Tigray reflect the better crop yields achieved that year. Since farmers sell their production to traders immediately after harvesting¹⁵, in Oromiya and Tigray they still benefited of good cereal market prices. However, the establishing of buffer stocks in late 2000 was

¹³These amounts exclude the 46 million ETB of long overdue input credit repayments (Table 5).

¹⁴No data on repayment performances is yet available for 2002 since the loans are still ongoing.

¹⁵The lack of storage space available to farmers forces them to sell their stocks very soon after production.

translated more rapidly into the cereal market price reduction in ANRS and SNNPRS, which explains the mitigated or poor repayment performances of ANRS (89.1%) and SNNPRS (53.8%) respectively. In 2001, farmers continued to contract similar amounts of loans and credits as in 2000, except in SNNPRS where farmers who had defaulted on their loan repayment did not have access to new credits, reducing the sums of credits contracted from 68 million ETB in 2000 to 15 million ETB in 2001. In 2001, all loan repayment performances diminished drastically except SNNPRS¹⁶. Oromiya, ANRS and Tigray credit beneficiaries were only able to repay 75.6%, 75.2%, and 88.1% respectively.

Although in 2002 less credits have been contracted, the effects of the drought and resulting reduced production will not only be hard felt in the national and household food security, but might also impact on the credit repayment performance. Farmers having contracted loans might have to further deplete their remaining assets, or sell part of their probably meagre harvests rather than keeping them to feed their families. Only the fact that market prices have been increasing steadily since May 2002 will be beneficial to farmers selling their production, at least if they have been fortunate enough to produce something.

6 Challenges and Recommendations for the Agriculture Input sector:

While humanitarian stakeholders are bracing themselves to answer the most pressing needs in the most drought affected areas of Ethiopia, it is already judicious to ensure that the necessary means are available to kick start a recovery process that will assist the rural population asset regeneration and that will work towards producing national food requirements for the 2003-2004 season.

6.1 The use of agriculture inputs necessary to reach food self-sufficiency

The data above indicates a substantial reduction of agriculture input use in Ethiopia in 2002. Improved seeds sold by commercial companies (ESE & PHSE) reduced from 21,348MT in 2000 and 12,554MT in 2001 to 3,862MT in 2002, or an 82% and 70% reduction respectively¹⁷. In 2002, fertilizer sales dropped by 28% and 20% versus 2000 and 2001 performances respectively, whereas credits and loans contracted in 2002 dropped by 53% and 55% versus 2001 and 2000 performances respectively. Pesticide imports and sales stagnated compared to previous years. These reductions and the planting of poorer quality seeds (2nd generation hybrids or traditional seeds) combined with extended dry spells are the main reasons for the reduction in crop production in 2002.

For poverty alleviation in general and food production in particular, the use of agricultural inputs is indispensable. The limited access and capacity of the farmers to internalise the returns from the utilization of agricultural technologies is one of the basic factors contributing for the low level of agricultural production and productivity. The use of agriculture inputs coincides with the long-term policies of the Government of Ethiopia that are further elaborated in the Food Security, Rural Development, and Poverty Reduction Strategies. However, the implementation of these strategies requires a lot of funds and strong governance that will establish structures and guidelines to streamline conducive environments for the further implementation of schemes promoting the extensive use of agriculture inputs.

¹⁶ Those still accessing loans being in better financial situations, this impacting positively on the relative loan repayment performances (73.3% in 2001 instead of 53.8% for 2000 in SNNPRS)

¹⁷ These quantities exclude performances of Farmer Based Seed Production and Marketing Schemes for which no consolidated sales data is available.

6.2 Confidence building of farmers necessary to boost input use in the future

Even more worrying however is that very important efforts will be needed to rebuilt surplus producing farmer confidence into using agriculture inputs. Having felt the consequences of structural setbacks that increased their asset depletion and impoverishment, farmer participation into the schemes remains uncertain. Cash crop farmers are now indicating their preference to return to subsistence farming. This production system will at least feed their families, even if this does not produce the necessary surpluses to feed the neighbouring urban centres and chronic food insecure areas.

Promoting the use of inputs through all means possible accompanied by the necessary market system adjustments is an absolute necessity to strive again to national food self-sufficiency. Ways of achieving this are multiple, but flexibility in financial incentives or subsidies is essential. Secondly, free or subsidized seeds and fertilizer provision to farmers can help regenerate confidence in the use of inputs and increase future cereal production. Third, periods of increase in agricultural production are in general faced with sharp decline in grain producer market prices. Thus, the fall in agricultural producer prices following good harvest season has become a common phenomenon in the country. This market trend has to be reversed and farmers need to see structural changes in the agriculture sector. Those changes would improve market price stability and build confidence. Establish structures that guarantee that revenue does not fall below production costs will motivate cash crop farmers to produce the necessary surpluses. Forth, the farmers' inability to repay loans also reduces future access to credits. This in turn reduces the use of inputs. Fifth, forcing farmers to repay credits when they have no money does not help to achieve food self-sufficiency. This kind of practice discourages rather than encourages the buy-in of farmers into schemes. Sixth, the credit repayment period is usually set at one year with a 10.5% interest rate applied. Applying more favourable interest rates or extending the loan repayment period, which would spread the risks and make the farmers less vulnerable for one bad cropping season or slumps in the market prices, could possibly help farmers more. Since March 2002 some instances have already made efforts in this regard by lowering interests rates to 7.5%. However, more needs to be done. Seventh, surplus productions are being marketed mostly in urban areas, but a trickle down effect from surplus to food deficit rural areas also occurs. Mechanisms to deliver surplus to chronic food deficient areas need to be strengthened through decreasing road taxes for grains and cereals.

6.3 Improve access and use of adapted improved technologies

The Food Security, Rural Development, and the Poverty Reduction Strategies already recommend a variety of activities. The diversification of input packages, supporting sustainable seed production schemes, specifically for open pollinated seeds (not for cross-pollinated or hybrids), improve the capacity of farmers to produce better quality seeds themselves, increase research to develop more drought resistant short cycle varieties and provide the means for farmers to access improved technologies must be supported.

6.4 Facilitate import procedures, and a conducive and competitive input sector

Whereas the availability of seeds is nearly exclusively dependent on local seed productions, the availability of fertilizers and pesticides depend on imports. The Government of Ethiopia in 1993 introduced policies with the objective to organize as well as liberalize the agriculture inputs sector distribution and marketing for both private and public entities through facilitating import and distribution of commodities in a competitive market environment. However, the main market shares remain with public entities involved in the inputs sector. Competing with these subsidized entities is very difficult for private business ventures that will always be faced with higher overhead costs and are thus unable to

establish commodity prices that can compete with those of the public sector. Such disincentive limits the number of suppliers active in the inputs sector and thus generates monopolistic practices not conducive for a healthy competitive sector.

6.5 Immobilizing assets through tying up funds and stocks

The fertilizer and credit demand forecast need to be more realistic at both regional and national level. Over estimation is leading to important carry over stocks of seeds and fertilizers, and dormant funds allocated to credit institutions. This all leads to sleeping stocks and funds for which both storage costs and interests have to be covered.

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The designations employed and the presentation of material in this document do not imply the expression of any opinion whatsoever of the UN concerning the legal status of any country, territory, city or area of its authorities, or concerning the delimitation of its frontiers or boundaries.

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7 Glossary

Meteorological Drought Defined

Drought is a period of insufficient water initiated by reduced precipitation. The impacts of drought on crops and society are critical but not easily quantified. The result is that "drought" does not have a universal definition. "Meteorological drought" is defined as a sustained period of deficient precipitation with a low frequency of occurrence. While crops may be damaged by lack of precipitation and high temperatures in just a few days, such short periods are not considered to be meteorological droughts. A three-month period is defined by the American Meteorological Society to be the shortest period that can be defined as a drought. (Source: *The American Meteorological Society*)

Ethiopia's *Kiremt* or *Meher* Rains Defined

Since Ethiopia is in the tropics, physical conditions and variations in altitude have resulted in a great diversity of climate, soil, and vegetation. Rainfall is seasonal, varying in amount, space, and time. There is a long and heavy summer rain, normally called the big rain or *kiremt*, which falls from June-September. It is followed by the *baga* hot, dry period from October through February. In some areas there are short and moderate spring rains in March and April known as the little rains or *belg*. These rainy periods correspond to Ethiopia's primary and secondary agricultural seasons, known as the *meher* and *belg*. (Source: *FEWS*)

Ethiopia's *Belg* Rains Defined

In spring, a strong cyclonic centre develops over Ethiopia and Sudan. Winds from the Gulf of Aden and the Indian Ocean highs are drawn towards this centre and blow across central and southern Ethiopia. These moist, easterly and southeasterly winds produce the main rain in southeastern Ethiopia and the little spring rains to the east central part of the northwestern highlands. The little rains of the highlands are known as *belg* rains, referring to the second most important sowing season of the region. (Source: *FEWS*)

8 Abbreviations

ADF	African Development Foundation
ANRS	Amhara National Regional State
ADSI	Amhara Credit and Saving Institution
CBE	Commercial Bank of Ethiopia
CIF	Cost Insurance Freight
DAP	Di-Amonium Phosphate
DECSI	Dedebit Credit and Saving Institution
ESE	Ethiopian Seed Enterprise
ETB	Ethiopian Birr
FBSPMS	Farmer Based Seed Production and Marketing Schemes
FDRE	Federal Democratic Republic of Ethiopia
FEWS	Famine Early Warning System
Ha	Hectares
IDA	International Development Association
MoA	Ministry of Agriculture
MT	Metric Tons
NAIA	National Agricultural Input Authority
NA	Not Applicable
OCHA	Office for Coordination of Humanitarian Affairs
OCSSCO	Oromiya Credit and Saving Share Company
PHSE	Pioneer Hy-bred Seed Enterprise PLC
Qt	Quintal
SNNPRS	Southern nations nationalities Peoples Regions States
UN-EUE	United Nations Emergency Unit for Ethiopia
WFP	World Food Programme

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