

ASSESSMENT – 2 (September up-date)

OF THE NEGATIVE IMPACT OF THE 2000 DROUGHT

IN THE REPUBLIC OF MOLDOVA

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USAID Contract No. EPE-I-00-95-00076-00
Task Order # OUT-EPE-I-802-95-00076-00

Chișinău, September 19, 2000

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Introduction

This work and the ensuing report was financed by the United States Agency for International Development (USAID) under the terms of Contract # EPE-I-00-95-00076-00, Task Order # OUT-EPE-I-802-95-00076-00 with East-West Management Institute, Inc. (EWMI); 575 Madison Ave., 25th floor; New York, New York 10022; Tel: (212) 843-7660; Fax: (212) 843-1485.

The work reported herein is a continuation and follow-up to the first drought survey and report "Assessment of the negative impact of the 2000 drought in the Republic of Moldova," which was carried-out between June 20th and July 12th with the final report distributed to state bodies and offices of international organizations in mid-July. Within days of completing the first field survey in early July, and before the first drought report was issued, heavy rains with hail and strong winds were experienced throughout a large part of Moldova. For this reason it was decided to undertake a second survey in late August or early September to ascertain the climatic impact throughout a greater part of the growing season. Following the July rains, a second "drought wave" took place in August, which was accompanied by very high and prolonged daytime temperatures between 35-38°C.

The report which follows has been prepared from data gathered in the second field survey undertaken between August 11th to 25th. Its principal purpose is to up-date the crop situation at the end of the summer so as to aid Government planners, international donor organizations that may be contemplating drought-related assistance to Moldova, and other interested parties.

This work as well as previous report was carried out in Moldova by the Center for Strategic Studies and Reforms (CISR) and the Center for Private Business Reform (CPBR), the EWMI presence in Moldova implementing the National Land Program (farm privatization and debt restructuring). The data and opinions contained herein are the sole responsibility of the authors and do not reflect the opinion or policy of the USAID, the Government of the United States, nor the Government of the Republic of Moldova.

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September 19, 2000

Executive Summary

Polling and monitoring specialists from the Center for Private Business Reform (CPBR) conducted interviews randomly throughout the country: *549 peasant farms, 230 limited liability firms, 32 production cooperatives and associations, and 12 joint-stock companies (total 823 units)* in 283 mayoralties (primării). The overall surveyed planted area represented 267,960 hectares, which accounts for approximately 19.9% of the total sown area of the country. The present study covers 8 mayoralties, 145 agricultural enterprises and 60 thousand hectares of sown area more than the previous survey. Similar questionnaires were used; however improvements based on the previous experience were incorporated.

The evaluation of losses as a result of drought from this survey is different from the previous survey by a number of methodological particularities. Given the fact that the data from the agricultural enterprises on projected crops were a bit exaggerated, it was corrected as follows: in the event the data from agricultural enterprises on projected yield for a certain crop exceeded the median yield of this crop for the last 5 years (1995 - 1999), then the calculation of losses used the average yield data.

Small-scale farming operations without access to credit and more modern technology are unable to follow crop rotational patterns and employ recommended technology and therefore suffered disproportionately more from the drought.

July, in terms of temperature and rainfall throughout Moldova, can be characterized as “normal.” August is different, however. The beginning of the second part of August was characterized by the lack of rain throughout Moldova and high average air temperatures (23 - 26°C), which exceeded the norm by 4 - 5°C. The highest temperatures were recorded in the second half of August, on separate days the air temperature reached 37 - 40°C. These high temperatures during the later part of August were registered for the first time in the last 50 years.

Survey results are summarized in the following table on a national level, which combines final results from several tables in one.

Crop	Losses/Gains in average yield	Losses/Gains in total tonnage expected	Losses/Gains in expected incomes
Winter wheat	-22.7%	-22.6%	+36.9%
Barley	-11.2%	-11.4%	+22.6%
Maize	-25.6%	-25.9%	-8.7%
Leguminous Plants	-31.2%	-31.4%	-15.6%
Sugar Beets	-2.2%	-2.2%	-2.2%
Sunflower	+6.2%	+6.2%	+6.2%
Soybeans	+15.2%	+15.3%	+15.3%
Tobacco	+6.2%	+6.4%	+6.4%
Vegetables	+16.7%	+17.5%	+17.5%
Fruits & Berries	-50.0%	-50.1%	-45.1%
Grapes	+3.0%	+3.0%	+3.0%

In terms of production and using the data from the second field survey, **winter wheat** recorded the most losses in Chişinău, Edinet, Soroca, Ungheni, Orhey, Lapushna, Tighina and Cahul counties. In terms of **barley** most losses are expected in the Tighina county, Chişinău county and Gagauzia. In terms of **maize** the southern zone was hardest hit – Chişinău, Tighina, Gagauzia, Lapushna, Taraclia, and Cahul. In terms of **fruits** most losses are forecasted in all counties of Moldova, but particularly in Soroca, Ungheni, Orhey, Tighina, Gagauzia, Taraclia, and Cahul. The shortage of harvest for the whole country will be approximately **22 %** (on tonnage basis) when compared to adjusted expectations.

Drought-related losses are likely to be compensated by the increase in the market prices for wheat and some other crops. As a result of this, producers from the Northern and Central parts of the country will obtain more positive financial returns from farming. Commercial farms in Edinet and Balti counties project to obtain 20 - 22% **more** income than originally planned since the “drought factor” caused increased prices. Commercial farms from Lapushna, Tighina and Cahul counties project to obtain 9 - 10% **less** than what they planned. Farmers from the Gagauzia believe they will earn approximately 5.8% **less** this year than projections. For the above four counties, the total foregone income will exceed 130 million lei (US\$10.4 million).

Recommendations included in the report are related to shortages of wheat which are usually experienced in the spring, domestic and international wheat prices, the strategic grain reserve, the wheat export ban, confiscation of wheat by cereal-collecting units in order to pay taxes and Social Fund contributions, recent tenders of flour and attempts of the GOM to purchase wheat to replenish the state reserve, bread prices to consumers in Chişinău and suggestions to promote new entrants into the bread market, the VAT-rate for imported grains, barter vs cash transactions on the part of the GOM,

As for drought-related assistance to agricultural producers and/or vulnerable groups, it should be provided on a selective basis, because in the majority of cases low yields may be compensated by a considerable increase of prices for wheat crops. Recommendations for specific drought-related assistance were included in the previous drought report and remain the same, i.e., targeted assistance needs for vulnerable groups will increase and should be provided and assistance should be provided for the fall and spring crops, particularly in terms of seeds, fertilizer and other in-kind assistance.

1. External conditions.

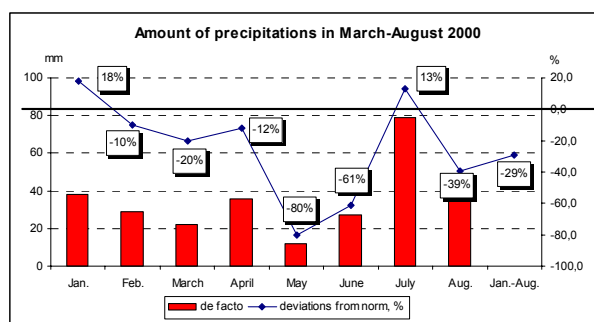
Decline in production for the main agricultural crops in the year 2000 was caused by the impact of some external factors: organizational-technological, financial and climate-related. Organizational-technological factors exacerbated by an almost total lack of lending to agriculture, impacted to a greater degree on small-scale farmers than on larger, commercially oriented farmers. Small-scale farming operations without access to credit and more modern technology are unable to follow crop rotational patterns and employ recommended technology and therefore suffered disproportionately more from the drought. These small scale farming enterprises were created primarily as a result of the National Land Program (NLP) and generally represent individuals or small groups of individuals who did not join a leader-farmer and lease-in their lands to a commercial producer/enterprise. Notwithstanding the aforesaid, it should be noted that farms with the area more than 100 hectares have been formed on over 68.6 % of all land distributed in the NLP, or 719,459 hectares out of the 1,047,713 hectares in the NLP as of June 1, 2000. Moreover, a general lack of financial resources, i.e., *money*, and the high cost of borrowed capital from banking institutions, plus constantly increasing input (machinery services, quality seed, fertilizer, herbicides, pesticides, etc.) costs, coupled with low purchasing power of the Moldovan buyers and continued government intervention in the market place does not result in very positive financial returns to investments in production agriculture and livestock industries. Add a serious drought on top of these constraints, and even the layman can understand the reasons Moldovan agriculture is stagnant at best, but generally is declining in all the indicators usually used to measure the sector!

The previous survey described the *seasonable conditions* in the March-June. In *July*, the average air temperature was within normal temperatures for this period, i.e., between 18.5 - 23°C but the maximum air temperature over the largest part of the country reached 30 - 37°C. The highest temperature (39 - 40°C) for the last 50 years was registered in the south of Moldova in July.

Total precipitation in July constituted 70-170 mm over most of the country, or up to twice the norm. But in the majority of the South, precipitation did not exceed 15-30 mm, which constitutes 30 - 50% of the average for the month of July. The July rains created considerable humidity reserves in the soil in the North and Center of the country and significantly improved crop growth conditions. In the country as a whole, precipitation in July exceeded the norm by 13% (Graph 1).

August. During the first part of August the average air temperature was 20 - 24°C throughout most of the country, which insignificantly exceeded the norm. The beginning of the second part of August was characterized by the lack of rain on the whole territory of Moldova and high average air temperature (23 - 26°C), which exceeded the norm by 4 - 5°C. These high temperatures during the later part of August were registered for the first time in the last 50 years. In the last ten days of the month the average air temperature dropped to 20 - 23°C, which exceeded the norm by 3°C. The highest temperatures were recorded in

Graph 1



the second half of August, on separate days the air temperature reached 37 - 40°C. This was the highest temperature registered for the first time over the biggest part of the country.

In the first part of August, precipitation was registered mainly in the North and Central regions of the country. Totals of rain for the given period did not exceed 2 - 12 mm, or 10 - 60% of the norm. During the last week of the month, rain was registered throughout Moldova and exceeded the norm by 1.5 - 3 times and constituted 15 - 35 mm, for the biggest part of the country. In Fălești, Chișinău and Leova counties (judets), the total rainfall reached 45 - 75 mm, which was 80 - 130% of the monthly norm. The late August rain contributed substantially to increasing the level of humidity in the soil and improved crop growth conditions.

2. Fieldwork (August): evaluation of the economic impact of the drought

In the framework of the present survey, the evaluation of the drought consequences were performed in terms of an analysis of the data collected from interviews conducted by CPBR monitoring and polling specialists on randomly selected agricultural businesses: *549 peasant farms, 230 limited liability firms, 32 production cooperatives and associations, 12 joint-stock companies (total 823 units)*.

The survey comprised all 10 counties (Judets) and the autonomous territorial unit Gagauzia. Also, it included the farms located in 283 mayoralities (primării). The overall surveyed planted area represented 267,960 hectares, which accounts for approximately 19.9% of the total sown area of the country. The present study covers 8 mayoralities, 145 agricultural enterprises and 60 thousand hectares of sown area more than the previous survey. (See **Table 1**).

Table 1

Number of the surveyed agricultural enterprises by judetses										
Judets	Total number of the surveyed city halls	Number of the surveyed agricultural enterprises	Including					Total sown area (excluding fobber crops), thou ha	Surveyed sown area (excluding fobber crops), thou ha	Share of the surveyed sown area in the total sown area, %
			Peasant farms	Limited liability firms	Joint-stock company	Cooperatives	Kolkhozes and agricultural			
1 Edinets	32	97	58	35		2	2	149.1	23.3	15.6
2 Soroca	33	96	67	26		2	1	139.1	27.4	19.7
3 Baltsi	25	79	49	29			1	220.2	32.7	14.9
Total in Northern zone	90	272	174	90	0	4	4	508.4	83.4	16.4
1 Ungheni	18	58	45	12			1	75.8	8.55	11.3
2 Orhei	33	93	59	28	1	3	2	161	25.33	15.7
3 Chisinau	45	158	114	39	1	3	1	97.3	37.85	38.9
4 Lapusna	28	92	67	23			1	124.5	23.83	19.1
Total in Central zone	124	401	285	102	2	7	5	458.6	95.56	20.8
1 Tighina	23	54	35	18			1	141.7	24.6	17.4
2 Cahul	23	66	51	13			2	129.7	24	18.5
3 Taraclia	5	7	2	1	2	2		29.6	9.5	32.1
4 Gagauzia	18	23	2	6	8	3	4	78	30.9	39.6
Total in Southern zone	69	150	90	38	10	6	6	379	89	23.5
Moldova	283	823	549	230	12	17	15	1346	267.96	19.9

The evaluation of losses as a result of drought from this survey is different from the previous survey by a number of methodological particularities. Given the fact that the data from the agricultural enterprises on projected crops were a bit exaggerated, it was corrected as follows: in the event the

data from agricultural enterprises on projected yield for a certain crop exceeded the median yield of this crop for the last 5 years (1995 - 1999), then the calculation of losses used the average yield data. The present survey did not include potato, given that no data was collected for this crop. The losses, calculated as a share of the projected losses, are presented in **Table 2**.

Table 2

Yield of main agricultural crops of all categories of farms (centner/ha) and losses (%) due to drought 2000

	Crops	Average for 1991-1999	Average for 1995-1999	Planned for 2000		Expected in 2000	Losses from, %	
				By agricultural enterprises	Adjusted plan		Agricultural enterprises plan	Adjusted plan
1	Winter wheat	2.94	2.70	2.88	2.70	2.09	-27.5%	-22.7%
2	Barley	2.51	1.96	2.18	1.96	1.74	-20.0%	-11.2%
3	Maize	3.22	3.15	2.98	2.98	2.22	-25.6%	-25.6%
4	Leguminous plants	1.23	1.05	1.30	1.05	0.72	-44.6%	-31.2%
5	Sugar beet	22.8	21.52	20.07	21.52	21.04	4.8%	-2.2%
6	Sunflower	1.28	1.23	1.48	1.23	1.31	-11.5%	6.2%
7	Soy-bean	0.96	0.96	1.28	0.96	1.11	-13.5%	15.2%
8	Tobacco	1.42	1.25	1.57	1.25	1.33	-15.5%	6.2%
9	Vegetables	7.7	7.64	10.92	7.64	8.92	-18.4%	16.7%
10	Fruits and berries	3.8	3.39	2.92	2.98	1.49	-48.9%	-50.0%
11	Grapes	3.92	3.31	2.82	2.98	3.07	9.1%	3.0%

It was inferred that because of several factors, not the least of which are technology-related, production volumes for the main crops will differ from projections (See **Table 3**). According to the data of the present survey, 711 thousand metric tones of wheat will be harvested nationwide, which is 208 thousand tones less than the adjusted projections and lower than 1999 by 86 thousand tones. Food wheat is expected to constitute not more than 350-380 thousand tones, while the need of the country is 440-460 thousand tones. Thus, in the year 2001 there will be a lack of food wheat (not considering balances left from 1999 crops), especially in May - June. During this period of time, there will very likely be wheat shortages again (until the 2001 crop is in - mid-August).

Table 3

Output of main agricultural products in all categories of farms (thou tons)

	Crops	1995	1996	1997	1998	1999	Planned for 2000, adjusted average for 1995-1999	Expected in 2000
2	Barley	337.6	117.7	233.4	215.6	182.6	198.4	175.7
3	Maize	908.2	988.6	1717	1239	1140.3	1268.7	940.7
4	Leguminous plants	50	29	58.2	71.2	58	63.2	43.3
5	Sugar beet	1916	1807.1	1748.5	1451.9	1008.8	1398.2	1367.4
6	Sunflower	203.4	276.7	175.3	199.4	285.6	247.2	262.5
7	Soy-bean	2.9	2.4	2.7	5.9	13.7	16.3	18.8
8	Tobacco	27	19.3	23.6	24.5	22.4	27.4	29.2
9	Vegetables	486	319.1	354.8	500.9	488.8	372.0	437.0
10	Fruits and berries	528.2	521.3	946.6	367.2	136.3	418.1	208.7
11	Grapes	852.2	767.3	300.8	342.7	464.9	417.0	429.5

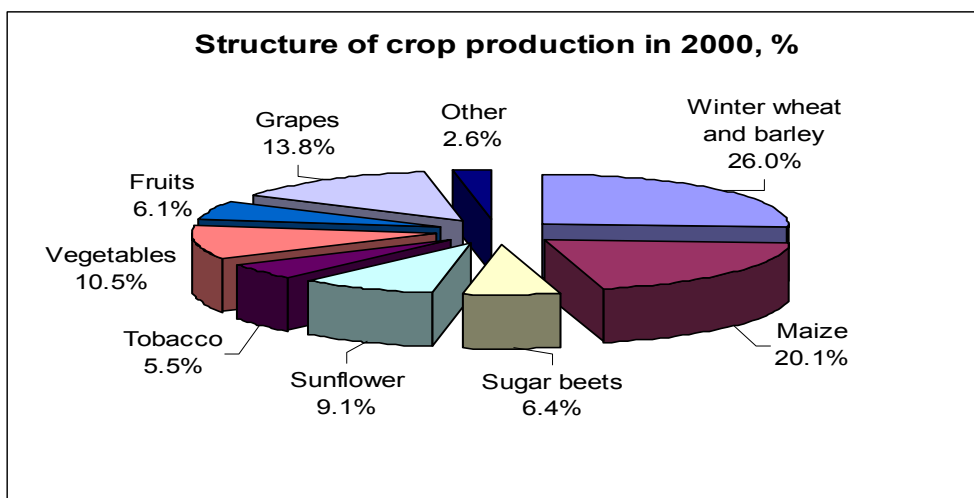
The owners and/or managers of the surveyed farms also project a significant decrease (in comparison to the planned indices) in corn (by 330 thousand tones) and fruits (by 210 thousand

tones). With a very reduced fruit harvest several canning enterprises may be forced to announce bankruptcy, although a recent BASA-Press news article indicated a lack of financial resources to buy fruit from farmers may also be a factor impacting the processing industry, which also faces the high cost of money and lack of enthusiasm on the part of the banking industry towards the agricultural sector in general. It should be pointed out that low yields of fruit last year led a number of these enterprises to the edge of bankruptcy.

This year, over all, owners/managers and peasant farmers project a relatively good picture for yields of sugar beets, sunflower, tobacco, vegetables and grapes, which are being harvested in the South now and which have an excellent sugar content as grapes resist drought conditions better than most other fruits.

Crops which are easily marketed and have low investment requirements are more popular amongst farmers. These include commodities such as wheat and barley, corn and sunflower, which make up more than 55% of the total volume of production (**Graph 2**). Other crops require more working capital and once harvested have undeveloped marketing systems and processing infrastructure (except tobacco and sugar beets). Furthermore, growers experience pressure by processors to reduce the sales prices or are impacted by government-imposed price structures (tobacco). This in turn is caused by a lack of processor working capital and low profitability due to problems marketing abroad as well as low demand/purchasing power in the domestic market.

Graph 2



Losses experienced by farming enterprises in relation to their production costs were calculated taking into consideration the changes in market prices (in relation to projected ones) for different types of agricultural production. The low demand on the local market also is an important factor.

Given that the economy of Moldova is a rather open and foreign goods can be found throughout the country, the projection of market prices for the year 2000 considered the dynamics of the local prices, re-calculated in US \$, as well as the dynamics of the European market (**Table 4**). The expected prices, projected by the producers when making their decision on what to plant, are usually based on the local market in Moldova, since export of perishables isn't really an option (many Moldovan vehicles cross the borders to Romania and the Ukraine with trunks full of fruit and vegetables, but these undocumented sales are not significant). With the drought, however, local

prices of some fruits and vegetables have increased above farmer spring projections and this may allow some producers to obtain higher prices for uncontrolled products.

Table 4

Producer's prices of the main crops of agricultural enterprises, \$US/Metric ton

	Crops	1995	1996	1997	1998	1999	Planned prices for 2000	Expected market prices in 2000
1	Winter wheat	50,5	102,0	95,2	62,1	56,0	65,0	115,0
2	Barley						65,0	90,0
3	Maize	170,0	83,3	74,2	61,0	57,0	65,0	80,0
4	Leguminous plants						130,0	160,0
5	Sugar beet	22,0	23,3	22,8	17,6	16,0	17,5	17,5
6	Sunflower	145,0	134,6	138,8	121,4	124,0	130,0	130,0
7	Soy-bean						130,0	130,0
8	Tobacco	540,0	773,9	881,1	749,3	658,0	700,0	700,0
9	Vegetables	87,0	139,3	138,6	94,2	86,0	90,0	90,0
10	Fruits and berries	95,1	105,2	75,3	71,7	106,0	100,0	110,0
11	Grapes	83,3	109,6	144,9	140,1	116,0	120,0	120,0

The results of the survey for different judets (counties) are presented in **Annex II (Table 2.2 - 2.12)**. As mentioned earlier, losses were calculated using the planned level of production in comparison with average levels for the period 1995 - 1999.

Based on the above methodology and circumstances and using the data from the second field survey, **winter wheat** recorded the most losses (20 - 30%) and these are anticipated in Edinet, Soroca, Ungheni, Orhey, Lapushna, Tighina and Cahul counties. Chişinău Judet recorded the greatest loss in winter wheat, i.e., 37.2%. In terms of **barley** most losses are expected in the Tighina county – 34.2%, Chişinău county – 41.9% and Gagauzia – 33.3%. In terms of **maize** the southern zone was hardest hit – Chişinău, Tighina– 37 - 43%, Gagauzia –50.9%, Lapushna and Taraclia - 56%, and – Cahul -68%. In terms of **fruits** most losses are forecasted in all counties of Moldova, particularly in - Soroca, Ungheni, Orhey, Tighina, Gagauzia, Taraclia, and Cahul (50 - 70%). The shortage of harvest for the whole country will constitute **22 %** when compared to adjusted expectations.

Table 5 illustrates that losses due to the drought vary from the North to the South, with general impact being greater in the South. However, even in Edinet, Soroca and Balti, some farmers suffered substantial losses in one crop. Grape growers in Edinet and Soroca, for example, reported losses of about 45.7% and 60.2%.

Table 5 presents an illustration of losses at the 15, 30 and 40 percent levels.

Table 5

Summary of losses by Judet due to 2000 drought

Losses >40% of Crop	Edinet	Soroca	Balti	Ungheny	Orhey	Chisinau	Lapushna	Tighina	Cahul	Taracila	Gagauzia
Winter Wheat											
Barley						41.9					
Maize							56.4	43.3	68.3	56.7	50.9
Leguminous Plants		50.6		58.0		67.8	56.5		42.0	40.0	52.1
Sugar Beets								72.3	56.1		
Sunflower											
Soybeans											
Tobacco											
Vegetables										52.1	
Fruits		67.5		65.0	69.3	44.9	43.0	63.9	49.8	60.2	70.5
Grapes	45.7	60.2									

Losses >29-30% of Crop	Edinet	Soroca	Balti	Ungheny	Orhey	Chisinau	Lapushna	Tighina	Cahul	Taracila	Gagauzia
Winter Wheat					29.5	37.2			29.2		
Barley						41.9		34.2			33.3
Maize						37.3	56.4	43.3	68.3	56.7	50.9
Leguminous Plants		50.6		58.0		67.8	56.5		42.0	40.0	52.1
Sugar Beets								72.3	56.1		
Sunflower											
Soybeans									38.7		38.7
Tobacco											38.8
Vegetables										52.1	
Fruits		67.5		65.0	69.3	44.9	43.0	63.9	49.8	60.2	70.5
Grapes	45.7	60.2									

Losses >15% of Crop	Edinet	Soroca	Balti	Ungheny	Orhey	Chisinau	Lapushna	Tighina	Cahul	Taracila	Gagauzia
Winter Wheat	21.8	24.9		21.7	29.5	37.2	24.0	26.7	29.2		16.7
Barley		20.3				41.9	26.5	34.2		17.1	33.3
Maize						37.3	56.4	43.3	68.3	56.7	50.9
Leguminous Plants		50.6		58.0		67.8	56.5	22.9	42.0	40.0	52.1
Sugar Beets					24.6	17.4		72.3	56.1		
Sunflower											
Soybeans						20.0			38.7		38.7
Tobacco											38.8
Vegetables										52.1	
Fruits	15.6	67.5	26.3	65.0	69.3	44.9	43.0	63.9	49.8	60.2	70.5
Grapes	45.7	60.2									

The losses caused by the drought are likely to be significantly compensated by the increase in the market prices for wheat crops. As a result of this, producers from the Northern and Central parts of the country will obtain positive financial results from farming this year on average. Commercial farms in Edinet and Balti counties project to obtain 20 - 22% income more than planned as a result of the "drought factor" causing increased prices. Commercial farms from Lapushna, Tighina and Cahul counties project to obtain 9 - 10% less than what they planned. Farmers from the Gagauzia believe they will earn approximately 5.8% less this year than projections. For the above four counties, the total foregone income will exceed 130 million lei (US\$10.4 million). Sky-rocketing

fuel prices diminished the effect from added cash income of agricultural enterprises. Loss of cash income of commercial farms is basically caused by a low yield of fruits, which cannot be compensated by the corresponding increase of market prices for this product. Market prices for fruits in 1999 and, consequently, projected prices are already corresponding to the international level.

Total data on evaluation of losses due to the drought 2000 are presented in **Table 6** below.

3. Possible actions to reduce the drought negative impacts

As the result of the May - June, 2000 drought, the production of wheat crops in Moldova was reduced to the critical level. The alarming symptoms relating to the provision of the local market with sufficient wheat appeared after the 1999 harvest, which turned out not as high as needed. According to Customs Department statistics, about 34 thousand tones of wheat were exported from Moldova from September 1999 to May 2000 (but between January and May 2000 approximately two thousand tones). In May, wheat farmers realized that the year will be lean and that local grain resources will be insufficient to cover the internal needs of the country. They knew wheat will have to be imported in order to meet domestic food – particularly bread - needs.

Private farmers, many farming their own and leased-in land for the first complete agricultural cycle, made a business decision to increase their prices up to what they considered international levels. Their calculations turned to be very simple: the prices for wheat in European countries were at approximately US\$90 - \$100/ton. Delivery to Moldova would add up to US\$15/ton. Value Added Taxes (VAT) on imports would add another US\$20 ton. Therefore, the price for the imported wheat in Moldova will amount to US\$125 - 135/ton (1560 – 1680 lei/ton) and this is exactly the price local wheat traders and/or producers are going to sell their wheat for until international pricing structures causes them to change. It should be agreed on, because in conditions of the market economy, the price for the good (even for wheat and bread) is determined by the balance of supply and demand.

Given these current conditions as a result of the drought, the Government of Moldova is trying to restrain the increasing prices for bread, which will have an impact on the vulnerable layers of society with low income (retired people, unemployed, etc). At the end of August Moldova's largest bakery, Franzeluta JSCo, increased the price for first and second quality bread by 29% and 20%, respectively. Government declared the inflation rate for august was 0.8% (9.6% annual rate). This included a 15.5% increase in the price of beef and a 27.2% increase in the price of pork. Increased bread prices were not included in the GOM's inflation calculations, because the increasing was at the end of month. This bread prices increasing will influence on September inflation. In June, the Government requested drought assistance from other countries and multi-lateral agencies. Now, humanitarian aid in wheat and flour of different kinds is arriving from a number of donors, including significant assistance from the US Government. The Swiss Government is providing grain seeds and recent delegations from the United Nations are also considering drought-related assistance.

Table 6

Assessment of agricultural output losses due to 2000 drought registered by the farms of **Moldova** judets, according to extraordinary study, as on 11-25.08.2000

	Crops	Surveyed area, thou ha	Yield (ton per ha)		Total area in judet, thou ha	Total harvest in judet (thou t.)		Shortage in harvest (thou t.)	Share of harvest shortage to plan, %	Total value of output (mil. MDL)		Shortage in income (mln MDL)	Share of income shortage in plan, %
			Planned for 2000 (adjusted)	Expected in 2000		Planned for 2000 (adjusted)	Expected in 2000			Planned for 2000 (adjusted)	Expected in 2000		
A	B	1	2	3	4	5	6	7	8	9	10	11	12
1	Winter wheat	108.3	2.70	2.09	341.0	919.0	711.3	-207.7	-22.6%	746.7	1022.5	275.8	36.9%
2	Barley	20.2	1.96	1.74	101.0	198.4	175.7	-22.7	-11.4%	161.2	197.7	36.5	22.6%
3	Maize	42.7	2.99	2.22	424.0	1268.7	940.7	-328.1	-25.9%	1030.8	940.7	-90.2	-8.7%
4	Leguminous plants	9.7	1.05	0.72	60.0	63.2	43.3	-19.9	-31.4%	102.7	86.7	-16.0	-15.6%
5	Sugar beets	16.6	21.51	21.04	65.0	1398.2	1367.4	-30.8	-2.2%	305.9	299.1	-6.7	-2.2%
6	Sunflower	54.7	1.23	1.31	201.0	247.2	262.5	15.3	6.2%	401.7	426.6	24.9	6.2%
7	Soybeans	3.15	0.96	1.11	17.0	16.3	18.8	2.5	15.3%	26.5	30.5	4.1	15.3%
8	Tobacco	6.2	1.25	1.33	22.0	27.4	29.2	1.8	6.4%	240.0	255.4	15.5	6.4%
9	Vegetables	6	7.59	8.92	49.0	372.0	437.0	65.1	17.5%	418.5	491.7	73.2	17.5%
10	Fruits	25.7	2.98	1.49	140.1	418.1	208.7	-209.4	-50.1%	522.6	286.9	-235.7	-45.1%
11	Grapes	27.92	2.98	3.07	139.9	417.0	429.5	12.5	3.0%	625.6	644.3	18.7	3.0%
	<i>Total annual plants</i>	267.55			1280.00				-22.3%	3433.93	3750.92	316.99	9.2%
	<i>Total perennial plants</i>	53.62			280.00				-22.4%	1148.17	931.18	-216.99	-18.9%
	Total crops	321.17			1560.00				-22.4%	4582.10	4682.10	100.00	2.2%

On September 6th, the National Agency for Public Acquisitions held a tender on sale of 4,020 tons of wheat flour, received within humanitarian assistance program offered by the U.S. Agriculture Department. The bids for flour varied from US\$140 to US\$170/ton, nevertheless the price for flour on the internal market constitutes approximately US\$210 – US\$240/ton. But there is a question: why did the tender receive only 7 bids and why the bids are considerably lower than the market prices? Thanks to the humanitarian assistance, the Government will be able to maintain the prices for bread, but the flour sold on the tender will be enough for Franzeluta JSCo only for a month of work. Moreover, it should be noted that the low tender prices offered create the suspicion of not adequate competition in this market (a polite way to say they may have been collusion). *The tender prices should be close to market prices. In this case, an important task of the Government is to correctly, equally and transparently distribute the flour donations as compensation for the poor.*

The final tender results are that Toros SRL will buy 4,020 tons of wheat flour at US\$145 per ton. At the same time over the last two weeks (from the beginning to middle of September) the wheat price rose by 20 percent from 1.5 to 1.8 lei per kilogram (\$120-145/MT), as a result the flour prices went up from 2.7-2.8 lei/kg to 3.2-3.4 lei/kg (\$260-275/MT).

With the aim to decrease the prices of wheat and flour, the Government should plan to amend the legislation to lower the VAT-rate for import of agricultural production (it constitutes 20 % now) to the internal VAT-rate for agricultural production, currently 5% (pursuant to the Law on Budget for 2000). Accordingly, these changes have to be contemplated in the Law on Budget for 2001, currently under discussion. Moreover, the existence of double standards for VAT taxation for local and imported production may be defined as “hidden” tariffs for import. Dropping the VAT for wheat imports by 15% will encourage Moldovan sellers to decrease their prices. This type of action is likely to yield better and quicker results than prohibiting the export of wheat and feed grains, which only alienates multi-lateral financial entities resulting in other negative consequences for the country. Market price for wheat may be projected at the level of US\$100/ton.

Assuming the Government goes ahead with its plans to reconstitute the Strategic State Reserve of wheat, it must budget and provide financial resources to acquire appropriate quantities of food wheat to the level of approximately 35-50 thousand tones. These reserves, if properly managed, are useful to prevent artificial price increase during periods of scarcity, e.g., in May - July, 2001. If the GOM is willing to propose the market price for wheat (approximately US\$100/ton¹), then the existence of a ban on wheat export becomes useless. With the price for wheat at the European market, which is approximately US\$100/ton, the exporters are forced to purchase Moldovan wheat as a maximum of between US\$ 70 - 80 USD/ton (cleaning, transport, VAT, etc. must be considered to deliver wheat at world market prices). Under these conditions, the export of wheat becomes unprofitable. Extension of ban for wheat export contradicts market principles, requirements of the World Bank and WTO and, according to recent declarations of the resident representative of the World Bank, may contribute to delaying assistance to the agricultural sector of Moldova.

¹ Closed Black Sea Port (Odessa, Constanta, Varna) prices are for milling quality wheat \$120-130/MT, for feed quality – \$90-110/MT. On-farm wheat prices in the region are calculated as FOB prices minus 15% (Information obtained by CPBR with assistance from the U.S. Department of Agriculture and private grain traders).

An estimated 770,000 tons of wheat were harvested in Moldova in 2000. That seems to be sufficient to cover the needs of the Moldovan market. Bread producers complain, however, that farmers do not want to sell their wheat, waiting for a rise in prices. The same reason is to blame for the failure of the September, 16th tender, organized by the government, to purchase 5,000 tons of wheat for the state reserve. No offer was submitted for the tender. This reflects a lack of Government credibility on the part of wheat traders/farmers concerning the willingness of the GOM To pay the real market price for wheat. Traders and/or farmers may also be expressing their desire for real cash rather than payment through netting operations or against taxes owed.

In terms of maintaining a state reserve under government control, reserve managers and government officials must realize that storage costs, losses, etc. need to be factored-in when selling the reserve in times of scarcity. Furthermore, thousands of tons of grain under government control becomes a disincentive for private storage of grains, unless the government manages its reserves on a commercial basis, something rarely seen in government circles the world over! The government might consider accumulating cash reserves rather than storing grain. Cash reserves can be lent through the banking system to enable importation of wheat on a timely basis from world markets by private importers. This would be less troublesome and an action which would also stimulate the private sector.

Regulation of prices for bread may be implemented through creation of a competitive environment on the market as opposed to the imposition of penalties and restrictions. At present, Franzeluta JSCO is a monopolist in the Chişinău market, and prices of this enterprise are the indicators for the other producers. With the aim to decrease the costs of production at the Franzeluta bakery, the Government would be well advised to open the bread market to the maximum for other new participants. Incentives such as tax holidays, few bureaucratic challenges, easily obtained financing, exemption from duties and taxes on imported or locally manufactured equipment, and other incentives might be offered for new investors in the baking industry. Likewise, bakery specialists should analyze Franzeluta's operations to see if there are ways they might improve their efficiency to reduce costs of production. Then, provide incentives (not penalties) so that Franzeluta may make the necessary investments in exchange for holding prices within a given range. Provision of flour from humanitarian assistance to Moldova to any enterprise at prices lower than market prices can only strengthen monopolistic positions, promote inefficiencies and result in excess profits at the expense of the taxpayers.

On August 30, cereal-collecting units were instructed to confiscate wheat from producers with heavy debts in taxes and social contributions. The Agriculture Ministry estimated debts owed by farms to the budget and the Social Fund at 300 million lei (over 24 million dollars). Representatives of cereal units, bakeries and local authorities, who met at the Agriculture Ministry, were ordered to ensure the fulfillment of the decision. The collector enterprises were ordered to pay off taxes and debts to the budget and other economic agents by December 20, 2000. However, until the present the Government failed to set up acquisition prices for wheat in 2000. Officials say the acquisition price would be negotiated with producers and, as a result, would be dictated by the market. In the event the Government confiscates wheat from producers and/or traders to pay debts, which are in most cases controversial, and, at the same time, dictate its "market" prices, then, the extension of ban for wheat export becomes clear.

The Government should *never* use forceful collection of supposed debts, including tax debts which are calculated by individual tax inspectors in accord with his/her interpretation of the numbers and events, without due process of law. *From any point of view, the issue of payment of debts to the state or to private persons must be resolved through application of the Law on Bankruptcy or the Debt Law used by the National Land Program. If the Bankruptcy Law is unworkable, then the government must amend it to make it workable.* The confiscation of property without due process of law and before the situation of an enterprise's debts are known completely is reminiscent of the darkest days of the former Soviet Union. Through due process, restructuring and in an ultimate scenario, bankruptcy, enterprises can be made to pay all or part of what is due to the state. But this must be a process that will not break a private enterprise unless there is no other alternative. In a bankruptcy scenario, after volumes of production have been determined, creditors and debtors have been prioritized and amounts reconciled, and due process of law has been followed, grain or other commodities might be delivered to a creditor, including the state, to pay-off a percentage of debts fairly and in a transparent manner. Failure to proceed in this manner will violate other creditor's rights, possibly including employees and disabled workers and other priority creditors – such as banks – and expose the government and certain officials to legal (and just) claims. All of these issues are rather complicated to be resolved through confiscation.

We believe the GOM is well advised to eliminate these kinds of actions, including settlement of debts to the budget through barter transactions. Taxpayers should be required to pay cash to the budget and likewise, the GOM should pay cash for its purchases of wheat for the strategic reserve or other government needs. Barter is highly inefficient, is usually able to escape taxation, and is prejudicial to both parties. Furthermore, farmers need cash and the sooner the rural areas and the GOM are on a cash-basis the better for all concerned, we believe. Confiscation of private property without due process of law is not only illegal but exposes both the government and the responsible officials to legal action and possible civil and penal actions and other consequences.

As for drought-related assistance to agricultural producers and/or vulnerable groups, it has to be provided on a selective basis, because in the majority of cases low yields may be compensated by a considerable increase of prices for wheat crops.

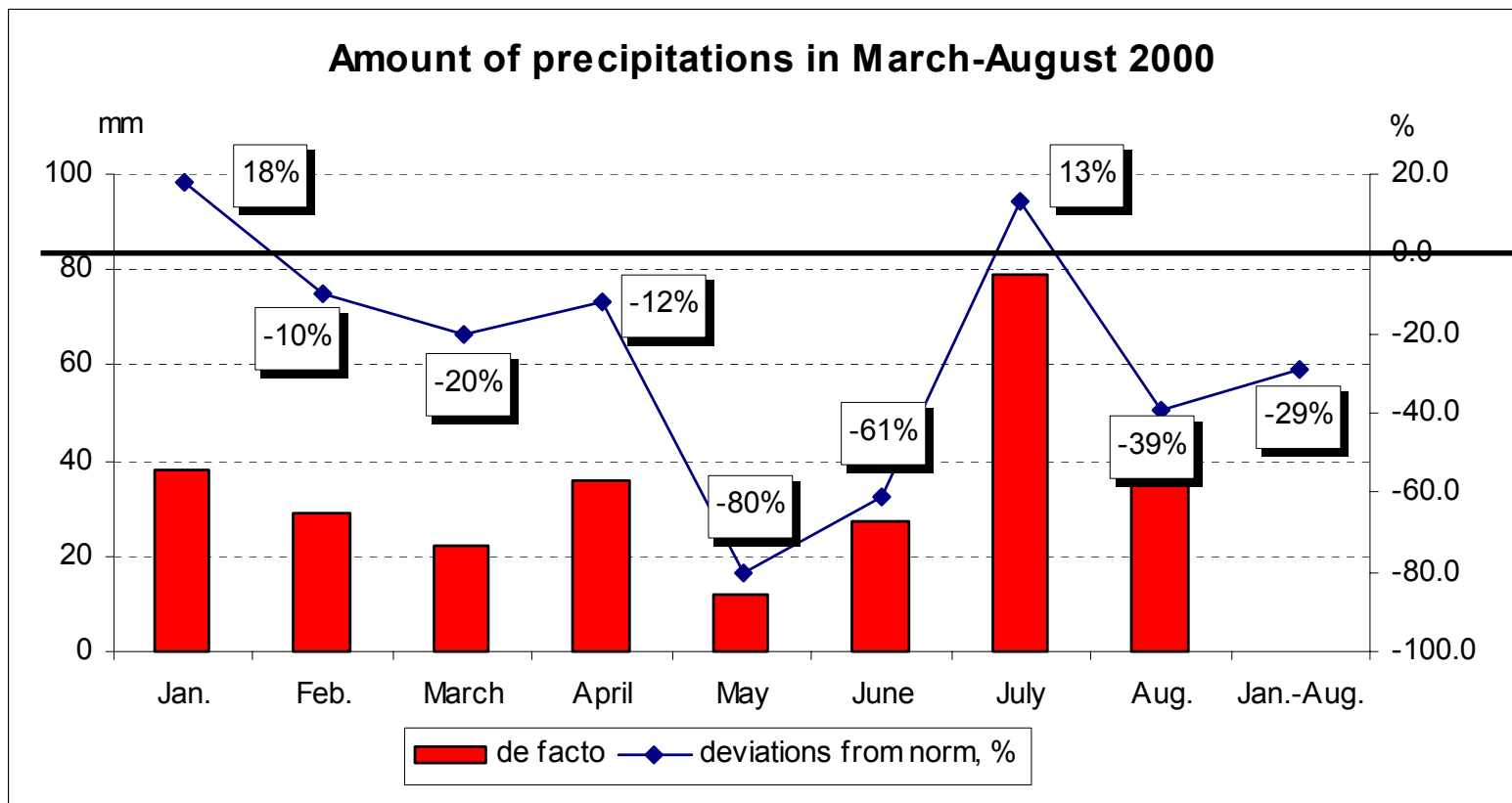
Recommendations for specific drought-related assistance were included in the previous report.

More detailed information for individual judets (counties) is presented in Annex II (Tables 2.2 - 2.12).

Annexes: Statistical measurement, analytical and forecast tables

1. Natural peculiarities

Graph 1.1



2. Assessment made by surveyed agricultural enterprises

Table 2.1

Forecast of market prices for main agricultural products up to the end of 2000

	Crops	Planned average market prices, 1 t.		Expected average market prices, 1 t.	
		In MDL	In USD*	In MDL	In USD*
1	Winter wheat	812.5	65.0	1437.5	115.0
2	Barley	812.5	65.0	1125	90.0
3	Maize	812.5	65.0	1000	80.0
4	Leguminous plants	1625	130.0	2000	160.0
5	Sugar beet	218.75	17.5	218.75	17.5
6	Sunflower	1625	130.0	1625	130.0
7	Soybean	1625	130.0	1625	130.0
8	Tobacco	8750	700.0	8750	700.0
9	Vegetables	1125	90.0	1125	90.0
10	Fruits	1250	100.0	1375	110.0
11	Grapes	1500	120.0	1500	120.0

*exchange rate – 12.5 MDL per USD

Table 2.2

Assessment of agricultural output losses due to 2000 drought registered by the farms of *Edineț* judets, according to extraordinary study, as on 11-25.08.2000

A	Crops	Surveyed area, thou ha	Yield (ton per ha)		Total area in judet, thou ha	Total harvest in judet (thou t.)		Shortage in harvest (thou t.)	Share of harvest shortage to plan, %	Total value of output (mil. MDL)		Shortage in income (mln MDL)	Share of income shortage in plan, %
			Planned for 2000 (adjusted)	Expected in 2000		Planned for 2000 (adjusted)	Expected in 2000			Planned for 2000 (adjusted)	Expected in 2000		
	B	1	2	3	4	5	6	7	8	9	10	11	12
1	Winter wheat	10.1	2.62	2.05	36.3	95.1	74.4	-20.7	-21.8%	77.3	107.0	29.7	38.4%
2	Barley	1.4	1.91	1.82	26.3	50.2	47.9	-2.4	-4.7%	40.8	53.8	13.0	31.9%
3	Maize	1.9	3.17	3.03	23.2	73.5	70.3	-3.2	-4.4%	59.8	70.3	10.5	17.6%
4	Leguminous plants	0.5	0.97	1.15	1.5	1.5	1.7	0.3	18.6%	2.4	3.5	1.1	45.9%
5	Sugar beets	3.1	19.74	20.30	12.6	248.7	255.8	7.1	2.8%	54.4	56.0	1.5	2.8%
6	Sunflower	4.2	1.16	1.35	19.7	22.9	26.6	3.7	16.4%	37.1	43.2	6.1	16.4%
7	Soybeans	1.3	0.90	1.12	6.0	5.4	6.7	1.3	24.4%	8.8	10.9	2.1	24.4%
8	Tobacco	0.3	1.19	1.47	1.3	1.5	1.9	0.4	23.5%	13.5	16.7	3.2	23.5%
9	Vegetables	0.4	8.35	12.20	6.8	56.8	83.0	26.2	46.1%	63.9	93.3	29.5	46.1%
10	Fruits	2.9	3.77	3.18	12.0	45.2	38.2	-7.1	-15.6%	56.6	52.5	-4.1	-7.2%
11	Grapes	0	1.86	1.01	0.1	0.2	0.1	-0.1	-45.7%	0.3	0.2	-0.1	-45.7%
	<i>Total annual plants</i>	23.20			133.70				-10.6%	357.94	454.71	96.77	27.0%
	<i>Total perennial plants</i>	2.90			12.10				-15.7%	56.83	52.62	-4.21	-7.4%
	Total crops	26.10			145.80				-11.2%	414.77	507.33	92.56	22.3%

Table 2.3

Assessment of agricultural output losses due to 2000 drought registered by the farms of **Soroca** judets, according to extraordinary study, as on 11-25.08.2000

A	Crops	Surveyed area, thou ha	Yield (ton per ha)		Total area in judet, thou ha	Total harvest in judet (thou t.)		Shortage in harvest (thou t.)	Share of harvest shortage to plan, %	Total value of output (mil. MDL)		Shortage in income (mln MDL)	Share of income shortage in plan, %
			Planned for 2000 (adjusted)	Expected in 2000		Planned for 2000 (adjusted)	Expected in 2000			Planned for 2000 (adjusted)	Expected in 2000		
	B	1	2	3	4	5	6	7	8	9	10	11	12
1	Winter wheat	10	2.81	2.11	38.5	108.2	81.2	-27.0	-24.9%	87.9	116.8	28.9	32.8%
2	Barley	2.1	1.82	1.45	3.5	6.4	5.1	-1.3	-20.3%	5.2	5.7	0.5	10.3%
3	Maize	3.6	3.30	2.98	37.7	124.4	112.3	-12.1	-9.7%	101.1	112.3	11.3	11.1%
4	Leguminous plants	0.1	1.62	0.80	2.7	4.4	2.2	-2.2	-50.6%	7.1	4.3	-2.8	-39.2%
5	Sugar beets	4	21.62	20.50	17.1	369.7	350.6	-19.2	-5.2%	80.9	76.7	-4.2	-5.2%
6	Sunflower	6.3	1.33	1.48	22.3	29.7	33.0	3.3	11.3%	48.2	53.6	5.4	11.3%
7	Soybeans	0.2	0.98	1.15	2.4	2.4	2.8	0.4	17.3%	3.8	4.5	0.7	17.3%
8	Tobacco	0.6	1.35	1.52	2.8	3.8	4.3	0.5	12.6%	33.1	37.2	4.2	12.6%
9	Vegetables	0.5	9.05	9.50	6.6	59.7	62.7	3.0	5.0%	67.2	70.5	3.3	5.0%
10	Fruits	3	3.35	1.09	18.7	62.6	20.4	-42.3	-67.5%	78.3	28.0	-50.3	-64.2%
11	Grapes	0.02	2.11	0.84	0.3	0.6	0.3	-0.4	-60.2%	0.9	0.4	-0.6	-60.2%
	<i>Total annual plants</i>	27.40			133.60				-20.0%	434.43	481.73	47.30	10.9%
	<i>Total perennial plants</i>	3.02			19.00				-60.0%	79.26	28.40	-50.85	-64.2%
	Total crops	30.42			152.60				-23.7%	513.68	510.13	-3.55	-0.7%

Table 2.4

Assessment of agricultural output losses due to 2000 drought registered by the farms of **Bălți** judets, according to extraordinary study, as on 11-25.08.2000

	Crops	Surveyed area, thou ha	Yield (ton per ha)		Total area in judet, thou ha	Total harvest in judet (thou t.)		Shortage in harvest (thou t.)	Share of harvest shortage to plan, %	Total value of output (mil. MDL)		Shortage in income (mln MDL)	Share of income shortage in plan, %
			Planned for 2000 (adjusted)	Expected in 2000		Planned for 2000 (adjusted)	Expected in 2000			Planned for 2000 (adjusted)	Expected in 2000		
A	B	1	2	3	4	5	6	7	8	9	10	11	12
1	Winter wheat	12.9	2.76	2.68	42.1	116.2	112.8	-3.4	-2.9%	94.4	162.2	67.8	71.8%
2	Barley	2.4	1.91	1.78	12.4	23.7	22.1	-1.6	-6.8%	19.2	24.8	5.6	29.0%
3	Maize	3.5	3.30	3.26	78.9	260.4	257.2	-3.2	-1.2%	211.6	257.2	45.7	21.6%
4	Leguminous plants	0.8	1.21	1.27	7.2	8.7	9.1	0.4	5.0%	14.2	18.3	4.1	29.2%
5	Sugar beets	6.5	23.19	23.85	25.9	600.6	617.7	17.1	2.8%	131.4	135.1	3.7	2.8%
6	Sunflower	4.9	1.33	1.52	24.5	32.6	37.2	4.7	14.3%	53.0	60.5	7.6	14.3%
7	Soybeans	0.8	1.12	1.36	4.6	5.2	6.3	1.1	21.4%	8.4	10.2	1.8	21.4%
8	Tobacco	0.1	1.59	1.55	4.8	7.6	7.4	-0.2	-2.5%	66.8	65.1	-1.7	-2.5%
9	Vegetables	0.8	6.26	9.20	8.8	55.1	81.0	25.9	47.0%	62.0	91.1	29.1	47.0%
10	Fruits	3.5	3.35	2.47	19.3	64.7	47.7	-17.0	-26.3%	80.8	65.5	-15.3	-18.9%
11	Grapes	0.3	2.53	2.59	5.2	13.2	13.5	0.3	2.4%	19.7	20.2	0.5	2.4%
	<i>Total annual plants</i>	32.70			209.20				-5.5%	660.82	824.51	163.69	24.8%
	<i>Total perennial plants</i>	3.80			24.50				-21.0%	100.55	85.75	-14.80	-14.7%
	Total crops	36.50			233.70				-7.2%	761.38	910.26	148.88	19.6%

Table 2.5

Assessment of agricultural output losses due to 2000 drought registered by the farms of *Ungheni* judets, according to extraordinary study, as on 11-25.08.2000

A	Crops	Surveyed area, thou ha	Yield (ton per ha)		Total area in judet, thou ha	Total harvest in judet (thou t.)		Shortage in harvest (thou t.)	Share of harvest shortage to plan, %	Total value of output (mil. MDL)		Shortage in income (mln MDL)	Share of income shortage in plan, %
			Planned for 2000 (adjusted)	Expected in 2000		Planned for 2000 (adjusted)	Expected in 2000			Planned for 2000 (adjusted)	Expected in 2000		
	B	1	2	3	4	5	6	7	8	9	10	11	12
1	Winter wheat	3.3	2.81	2.20	12.4	34.8	27.3	-7.6	-21.7%	28.3	39.2	10.9	38.5%
2	Barley	0.4	1.30	1.60	2.7	3.5	4.3	0.8	23.1%	2.9	4.9	2.0	70.4%
3	Maize	1.7	3.00	2.58	38.3	114.9	98.8	-16.1	-14.0%	93.4	98.8	5.5	5.8%
4	Leguminous plants	0.1	1.62	0.68	0.3	0.5	0.2	-0.3	-58.0%	0.8	0.4	-0.4	-48.3%
5	Sugar beets	0.7	27.64	26.40	2.5	69.1	66.0	-3.1	-4.5%	15.1	14.4	-0.7	-4.5%
6	Sunflower	1.7	1.33	1.65	9.7	12.9	16.0	3.1	24.1%	21.0	26.0	5.0	24.1%
7	Soybeans	0.05	0.98	1.10	0.6	0.6	0.7	0.1	12.2%	1.0	1.1	0.1	12.2%
8	Tobacco	0.3	1.11	1.35	1.1	1.2	1.5	0.3	21.6%	10.7	13.0	2.3	21.6%
9	Vegetables	0.3	7.66	10.50	2.7	20.7	28.4	7.7	37.1%	23.3	31.9	8.6	37.1%
10	Fruits	1.1	3.77	1.32	13.2	49.8	17.4	-32.3	-65.0%	62.2	24.0	-38.2	-61.5%
11	Grapes	1.6	4.22	3.92	14.2	59.9	55.7	-4.3	-7.1%	89.9	83.5	-6.4	-7.1%
	<i>Total annual plants</i>	8.55			70.30				-12.6%	196.29	229.70	33.41	17.0%
	<i>Total perennial plants</i>	2.70			27.40				-31.9%	152.09	107.45	-44.64	-29.3%
	Total crops	11.25			97.70				-19.9%	348.39	337.16	-11.23	-3.2%

Table 2.6

Assessment of agricultural output losses due to 2000 drought registered by the farms of **Orhei** judets, according to extraordinary study, as on 11-25.08.2000

	Crops	Surveyed area, thou ha	Yield (ton per ha)		Total area in judet, thou ha	Total harvest in judet (thou t.)		Shortage in harvest (thou t.)	Share of harvest shortage to plan, %	Total value of output (mil. MDL)		Shortage in income (mln MDL)	Share of income shortage in plan, %
			Planned for 2000 (adjusted)	Expected in 2000		Planned for 2000 (adjusted)	Expected in 2000			Planned for 2000 (adjusted)	Expected in 2000		
A	B	1	2	3	4	5	6	7	8	9	10	11	12
1	Winter wheat	10.4	2.34	1.65	36.0	84.2	59.4	-24.8	-29.5%	68.4	85.4	16.9	24.8%
2	Barley	1.6	1.30	1.12	6.1	7.9	6.8	-1.1	-13.8%	6.4	7.7	1.2	19.3%
3	Maize	3.3	2.80	2.50	63.7	178.4	159.3	-19.1	-10.7%	144.9	159.3	14.3	9.9%
4	Leguminous plants	0.5	0.81	0.70	1.6	1.3	1.1	-0.2	-13.6%	2.1	2.2	0.1	6.4%
5	Sugar beets	1.6	15.79	11.90	5.3	83.7	63.1	-20.6	-24.6%	18.3	13.8	-4.5	-24.6%
6	Sunflower	5.5	1.16	1.35	24.6	28.5	33.2	4.7	16.4%	46.4	54.0	7.6	16.4%
7	Soybeans	0.4	0.90	0.85	0.8	0.7	0.7	0.0	-5.6%	1.2	1.1	-0.1	-5.6%
8	Tobacco	1.2	1.11	1.35	5.0	5.6	6.8	1.2	21.6%	48.6	59.1	10.5	21.6%
9	Vegetables	0.8	5.57	7.87	3.6	20.1	28.3	8.3	41.3%	22.6	31.9	9.3	41.3%
10	Fruits	2.7	2.93	0.90	16.4	48.1	14.8	-33.3	-69.3%	60.1	20.3	-39.8	-66.2%
11	Grapes	0.7	2.95	3.20	8.9	26.3	28.5	2.2	8.5%	39.4	42.7	3.3	8.5%
	<i>Total annual plants</i>	25.30			146.70				-15.6%	358.88	414.37	55.49	15.5%
	<i>Total perennial plants</i>	3.40			25.30				-40.1%	99.45	63.02	-36.43	-36.6%
	Total crops	28.70			172.00				-19.9%	458.33	477.38	19.05	4.2%

Table 2.7

Assessment of agricultural output losses due to 2000 drought registered by the farms of **Chişinău** judets, according to extraordinary study, as on 11-25.08.2000

	Crops	Surveyed area, thou ha	Yield (ton per ha)		Total area in judet, thou ha	Total harvest in judet (thou t.)		Shortage in harvest (thou t.)	Share of harvest shortage to plan, %	Total value of output (mil. MDL)		Shortage in income (mln MDL)	Share of income shortage in plan, %
			Planned for 2000 (adjusted)	Expected in 2000		Planned for 2000 (adjusted)	Expected in 2000			Planned for 2000 (adjusted)	Expected in 2000		
A	B	1	2	3	4	5	6	7	8	9	10	11	12
1	Winter wheat	15.2	2.90	1.82	32.8	95.1	59.7	-35.4	-37.2%	77.3	85.8	8.5	11.0%
2	Barley	4.2	2.17	1.26	4.3	9.3	5.4	-3.9	-41.9%	7.6	6.1	-1.5	-19.6%
3	Maize	6	3.00	1.88	23.6	70.8	44.4	-26.4	-37.3%	57.5	44.4	-13.2	-22.9%
4	Leguminous plants	0.6	1.21	0.39	1.7	2.1	0.7	-1.4	-67.8%	3.3	1.3	-2.0	-60.3%
5	Sugar beets	0.2	20.23	16.70	0.5	10.1	8.4	-1.8	-17.4%	2.2	1.8	-0.4	-17.4%
6	Sunflower	8.4	1.25	1.25	18.2	22.8	22.8	0.0	0.0%	37.0	37.0	0.0	0.0%
7	Soybeans	0.2	0.75	0.60	0.5	0.4	0.3	-0.1	-20.0%	0.6	0.5	-0.1	-20.0%
8	Tobacco	1.6	1.27	1.39	1.6	2.0	2.2	0.2	9.4%	17.8	19.5	1.7	9.4%
9	Vegetables	1.3	10.44	9.50	10.8	112.8	102.6	-10.2	-9.0%	126.8	115.4	-11.4	-9.0%
10	Fruits	4	1.67	0.92	21.5	35.9	19.8	-16.1	-44.9%	44.9	27.2	-17.7	-39.4%
11	Grapes	3.6	2.53	3.20	22.7	57.4	72.6	15.2	26.5%	86.1	109.0	22.8	26.5%
	<i>Total annual plants</i>	37.70			94.00				-35.9%	330.15	311.77	-18.38	-5.6%
	<i>Total perennial plants</i>	7.60			44.20				0.5%	131.03	136.16	5.13	3.9%
	Total crops	45.30			138.20				-28.0%	461.18	447.93	-13.25	-2.9%

Table 2.8

Assessment of agricultural output losses due to 2000 drought registered by the farms of *Lăpușna* judets, according to extraordinary study, as on 11-25.08.2000

A	Crops	Surveyed area, thou ha	Yield (ton per ha)		Total area in judet, thou ha	Total harvest in judet (thou t.)		Shortage in harvest (thou t.)	Share of harvest shortage to plan, %	Total value of output (mil. MDL)		Shortage in income (mln MDL)	Share of income shortage in plan, %
			Planned for 2000 (adjusted)	Expected in 2000		Planned for 2000 (adjusted)	Expected in 2000			Planned for 2000 (adjusted)	Expected in 2000		
	B	1	2	3	4	5	6	7	8	9	10	11	12
1	Winter wheat	10.7	2.62	1.99	40.4	105.8	80.4	-25.5	-24.0%	86.0	115.6	29.6	34.4%
2	Barley	2	1.65	1.21	9.2	15.2	11.1	-4.0	-26.7%	12.3	12.5	0.2	1.5%
3	Maize	4.1	2.50	1.09	45.7	114.3	49.8	-64.4	-56.4%	92.8	49.8	-43.0	-46.3%
4	Leguminous plants	0.5	0.85	0.37	3.3	2.8	1.2	-1.6	-56.5%	4.6	2.4	-2.1	-46.4%
5	Sugar beets	0	0.00	0.00	0.0	0.0	0.0	0.0		0.0	0.0	0.0	
6	Sunflower	5.7	1.16	1.08	19.4	22.5	21.0	-1.6	-6.9%	36.6	34.0	-2.5	-6.9%
7	Soybeans	0	0.00	0.00	0.0	0.0	0.0	0.0		0.0	0.0	0.0	
8	Tobacco	0.2	1.23	1.40	1.0	1.2	1.4	0.2	13.8%	10.8	12.3	1.5	13.8%
9	Vegetables	0.6	4.18	5.17	2.2	9.2	11.4	2.2	23.7%	10.3	12.8	2.5	23.7%
10	Fruits	2.7	2.93	1.67	13.2	38.7	22.0	-16.6	-43.0%	48.3	30.3	-18.0	-37.3%
11	Grapes	5.1	2.95	2.66	29.1	85.8	77.4	-8.4	-9.8%	128.8	116.1	-12.7	-9.8%
	<i>Total annual plants</i>	23.80			121.20				-36.3%	253.40	239.44	-13.96	-5.5%
	<i>Total perennial plants</i>	7.80			42.30				-19.7%	177.11	146.42	-30.69	-17.3%
	Total crops	31.60			163.50				-30.9%	430.51	385.86	-44.65	-10.4%

Table 2.9

Assessment of agricultural output losses due to 2000 drought registered by the farms of *Tighina* judets, according to extraordinary study, as on 11-25.08.2000

	Crops	Surveyed area, thou ha	Yield (ton per ha)		Total area in judet, thou ha	Total harvest in judet (thou t.)		Shortage in harvest (thou t.)	Share of harvest shortage to plan, %	Total value of output (mil. MDL)		Shortage in income (mln MDL)	Share of income shortage in plan, %
			Planned for 2000 (adjusted)	Expected in 2000		Planned for 2000 (adjusted)	Expected in 2000			Planned for 2000 (adjusted)	Expected in 2000		
A	B	1	2	3	4	5	6	7	8	9	10	11	12
1	Winter wheat	9.5	2.81	2.06	33.3	93.6	68.6	-25.0	-26.7%	76.0	98.6	22.6	29.7%
2	Barley	2.4	2.43	1.60	9.6	23.3	15.4	-8.0	-34.2%	19.0	17.3	-1.7	-8.8%
3	Maize	4.6	3.00	1.70	43.3	129.9	73.6	-56.3	-43.3%	105.5	73.6	-31.9	-30.3%
4	Leguminous plants	0.3	1.05	0.81	18.7	19.6	15.1	-4.5	-22.9%	31.9	30.3	-1.6	-5.1%
5	Sugar beets	0.2	14.80	4.10	0.5	7.4	2.1	-5.4	-72.3%	1.6	0.4	-1.2	-72.3%
6	Sunflower	6.3	1.25	1.28	26.5	33.1	33.9	0.8	2.4%	53.8	55.1	1.3	2.4%
7	Soybeans	0.1	0.98	1.22	0.6	0.6	0.7	0.1	24.5%	1.0	1.2	0.2	24.5%
8	Tobacco	0.6	1.19	1.40	1.0	1.2	1.4	0.2	17.6%	10.4	12.3	1.8	17.6%
9	Vegetables	0.6	7.10	8.90	1.6	11.4	14.2	2.9	25.4%	12.8	16.0	3.2	25.4%
10	Fruits	1.6	3.35	1.21	10.0	33.5	12.1	-21.4	-63.9%	41.9	16.6	-25.2	-60.3%
11	Grapes	2.3	2.53	2.40	12.3	31.1	29.5	-1.6	-5.1%	46.7	44.3	-2.4	-5.1%
	<i>Total annual plants</i>	24.60			135.10				-32.5%	312.03	304.82	-7.21	-2.3%
	<i>Total perennial plants</i>	3.90			22.30				-34.2%	88.55	60.92	-27.64	-31.2%
	Total crops	28.50			157.40				-32.8%	400.58	365.74	-34.84	-8.7%

Table 2.10

Assessment of agricultural output losses due to 2000 drought registered by the farms of **Cahul** judets, according to extraordinary study, as on 11-25.08.2000

	Crops	Surveyed area, thou ha	Yield (ton per ha)		Total area in judet, thou ha	Total harvest in judet (thou t.)		Shortage in harvest (thou t.)	Share of harvest shortage to plan, %	Total value of output (mil. MDL)		Shortage in income (mln MDL)	Share of income shortage in plan, %
			Planned for 2000 (adjusted)	Expected in 2000		Planned for 2000 (adjusted)	Expected in 2000			Planned for 2000 (adjusted)	Expected in 2000		
A	B	1	2	3	4	5	6	7	8	9	10	11	12
1	Winter wheat	8.9	2.53	1.79	30.5	77.2	54.6	-22.6	-29.2%	62.7	78.5	15.8	25.2%
2	Barley	1.6	2.17	2.42	17.8	38.6	43.1	4.5	11.5%	31.4	48.5	17.1	54.4%
3	Maize	6.2	3.00	0.95	44.4	133.2	42.2	-91.0	-68.3%	108.2	42.2	-66.0	-61.0%
4	Leguminous plants	1.5	0.81	0.47	10.0	8.1	4.7	-3.4	-42.0%	13.2	9.4	-3.8	-28.6%
5	Sugar beets	0.3	14.80	6.50	0.6	8.9	3.9	-5.0	-56.1%	1.9	0.9	-1.1	-56.1%
6	Sunflower	4.8	1.16	1.10	20.1	23.3	22.1	-1.2	-5.2%	37.9	35.9	-2.0	-5.2%
7	Soybeans	0.1	0.75	0.46	0.9	0.7	0.4	-0.3	-38.7%	1.1	0.7	-0.4	-38.7%
8	Tobacco	0.1	0.80	0.80	0.6	0.5	0.5	0.0	0.0%	4.2	4.2	0.0	0.0%
9	Vegetables	0.4	4.18	4.50	3.7	15.5	16.7	1.2	7.7%	17.4	18.7	1.3	7.7%
10	Fruits	1.7	2.51	1.26	8.1	20.3	10.2	-10.1	-49.8%	25.4	14.0	-11.4	-44.8%
11	Grapes	4.8	2.95	3.34	23.3	68.7	77.8	9.1	13.2%	103.1	116.7	13.6	13.2%
	<i>Total annual plants</i>	23.90			128.60				-40.4%	277.99	238.91	-39.09	-14.1%
	<i>Total perennial plants</i>	6.50			31.40				-0.4%	128.52	130.77	2.25	1.8%
	Total crops	30.40			160.00				-30.6%	406.51	369.67	-36.84	-9.1%

Table 2.11

Assessment of agricultural output losses due to 2000 drought registered by the farms of **Taraclia** judets, according to extraordinary study, as on 11-25.08.2000

	Crops	Surveyed area, thou ha	Yield (ton per ha)		Total area in judet, thou ha	Total harvest in judet (thou t.)		Shortage in harvest (thou t.)	Share of harvest shortage to plan, %	Total value of output (mil. MDL)		Shortage in income (mln MDL)	Share of income shortage in plan, %
			Planned for 2000 (adjusted)	Expected in 2000		Planned for 2000 (adjusted)	Expected in 2000			Planned for 2000 (adjusted)	Expected in 2000		
A	B	1	2	3	4	5	6	7	8	9	10	11	12
1	Winter wheat	4.1	2.81	2.55	11.0	30.9	28.1	-2.9	-9.3%	25.1	40.3	15.2	60.6%
2	Barley	0.7	2.17	1.80	3.1	6.7	5.6	-1.1	-17.1%	5.5	6.3	0.8	14.9%
3	Maize	1.7	3.00	1.30	6.3	18.9	8.2	-10.7	-56.7%	15.4	8.2	-7.2	-46.7%
4	Leguminous plants	1	0.85	0.51	4.0	3.4	2.0	-1.4	-40.0%	5.5	4.1	-1.4	-26.2%
5	Sugar beets					0.0	0.0	0.0		0.0	0.0	0.0	
6	Sunflower	1.7	1.00	0.95	4.2	4.2	4.0	-0.2	-5.0%	6.8	6.5	-0.3	-5.0%
7	Soybeans					0.0	0.0	0.0		0.0	0.0	0.0	
8	Tobacco	0.2	0.83	0.77	0.6	0.5	0.5	0.0	-7.2%	4.4	4.0	-0.3	-7.2%
9	Vegetables	0.1	8.35	4.00	0.4	3.3	1.6	-1.7	-52.1%	3.8	1.8	-2.0	-52.1%
10	Fruits	0.4	2.51	1.00	1.7	4.3	1.7	-2.6	-60.2%	5.3	2.3	-3.0	-56.2%
11	Grapes	2.1	3.54	3.37	6.0	21.2	20.2	-1.0	-4.8%	31.9	30.3	-1.5	-4.8%
	<i>Total annual plants</i>	9.50			29.60				-30.6%	66.40	71.20	4.79	7.2%
	<i>Total perennial plants</i>	2.50			7.70				-13.2%	37.19	32.67	-4.53	-12.2%
	Total crops	12.00			37.30				-25.9%	103.60	103.86	0.27	0.3%

Table 2.12

Assessment of agricultural output losses due to 2000 drought registered by the farms of **Găgăuzia** judets, according to extraordinary study, as on 11-25.08.2000

	Crops	Surveyed area, thou ha	Yield (ton per ha)		Total area in judet, thou ha	Total harvest in judet (thou t.)		Shortage in harvest (thou t.)	Share of harvest shortage to plan, %	Total value of output (mil. MDL)		Shortage in income (mln MDL)	Share of income shortage in plan, %
			Planned for 2000 (adjusted)	Expected in 2000		Planned for 2000 (adjusted)	Expected in 2000			Planned for 2000 (adjusted)	Expected in 2000		
A	B	1	2	3	4	5	6	7	8	9	10	11	12
1	Winter wheat	13.2	2.81	2.34	27.7	77.8	64.8	-13.0	-16.7%	63.2	93.2	29.9	47.3%
2	Barley	1.4	2.25	1.50	6.0	13.5	9.0	-4.5	-33.3%	11.0	10.1	-0.8	-7.7%
3	Maize	6.1	2.65	1.30	18.9	50.1	24.6	-25.5	-50.9%	40.7	24.6	-16.1	-39.6%
4	Leguminous plants	3.8	1.21	0.58	9.0	10.9	5.2	-5.7	-52.1%	17.7	10.4	-7.3	-41.0%
5	Sugar beets					0.0	0.0	0.0		0.0	0.0	0.0	
6	Sunflower	5.2	1.25	1.08	11.8	14.8	12.7	-2.0	-13.6%	24.0	20.7	-3.3	-13.6%
7	Soybeans		0.75	0.46	0.6	0.5	0.3	-0.2	-38.7%	0.7	0.4	-0.3	-38.7%
8	Tobacco	1	1.03	0.63	2.2	2.3	1.4	-0.9	-38.8%	19.8	12.1	-7.7	-38.8%
9	Vegetables	0.2	4.18	4.04	1.8	7.5	7.3	-0.3	-3.3%	8.5	8.2	-0.3	-3.3%
10	Fruits	2.1	2.51	0.74	6.0	15.1	4.4	-10.6	-70.5%	18.8	6.1	-12.7	-67.6%
11	Grapes	7.4	2.95	3.03	17.8	52.5	53.9	1.4	2.7%	78.8	80.9	2.1	2.7%
	<i>Total annual plants</i>	30.90			78.00				-36.0%	185.59	179.78	-5.82	-3.1%
	<i>Total perennial plants</i>	9.50			23.80				-12.6%	97.59	87.01	-10.58	-10.8%
	Total crops	40.40			101.80				-29.9%	283.18	266.78	-16.40	-5.8%

Table 2.13

Assessment of agricultural output losses due to 2000 drought registered by the farms of **Moldova** judets, according to extraordinary study, as on 11-25.08.2000

	Crops	Surveyed area, thou ha	Yield (ton per ha)		Total area in judet, thou ha	Total harvest in judet (thou t.)		Shortage in harvest (thou t.)	Share of harvest shortage to plan, %	Total value of output (mil. MDL)		Shortage in income (mln MDL)	Share of income shortage in plan, %
			Planned for 2000 (adjusted)	Expected in 2000		Planned for 2000 (adjusted)	Expected in 2000			Planned for 2000 (adjusted)	Expected in 2000		
A	B	1	2	3	4	5	6	7	8	9	10	11	12
1	Winter wheat	108.3	2.70	2.09	341.0	919.0	711.3	-207.7	-22.6%	746.7	1022.5	275.8	36.9%
2	Barley	20.2	1.96	1.74	101.0	198.4	175.7	-22.7	-11.4%	161.2	197.7	36.5	22.6%
3	Maize	42.7	2.99	2.22	424.0	1268.7	940.7	-328.1	-25.9%	1030.8	940.7	-90.2	-8.7%
4	Leguminous plants	9.7	1.05	0.72	60.0	63.2	43.3	-19.9	-31.4%	102.7	86.7	-16.0	-15.6%
5	Sugar beets	16.6	21.51	21.04	65.0	1398.2	1367.4	-30.8	-2.2%	305.9	299.1	-6.7	-2.2%
6	Sunflower	54.7	1.23	1.31	201.0	247.2	262.5	15.3	6.2%	401.7	426.6	24.9	6.2%
7	Soybeans	3.15	0.96	1.11	17.0	16.3	18.8	2.5	15.3%	26.5	30.5	4.1	15.3%
8	Tobacco	6.2	1.25	1.33	22.0	27.4	29.2	1.8	6.4%	240.0	255.4	15.5	6.4%
9	Vegetables	6	7.59	8.92	49.0	372.0	437.0	65.1	17.5%	418.5	491.7	73.2	17.5%
10	Fruits	25.7	2.98	1.49	140.1	418.1	208.7	-209.4	-50.1%	522.6	286.9	-235.7	-45.1%
11	Grapes	27.92	2.98	3.07	139.9	417.0	429.5	12.5	3.0%	625.6	644.3	18.7	3.0%
	<i>Total annual plants</i>	267.55			1280.00				-22.3%	3433.93	3750.92	316.99	9.2%
	<i>Total perennial plants</i>	53.62			280.00				-22.4%	1148.17	931.18	-216.99	-18.9%
	Total crops	321.17			1560.00				-22.4%	4582.10	4682.10	100.00	2.2%