



**ENERGIE
ȘI BIOMASĂ**

Resurse energetice alternative pentru Moldova

Estimation of the energy potential of biomass for briquetting from agricultural crops at regional and rayon levels for 2009-2010

Chișinău 2012

Proiectul Energie și Biomasă în Moldova

Proiectul este finanțat de Uniunea Europeană și co-finanțat, implementat de Programul Națiunilor Unite pentru Dezvoltare.



agenția pentru eficiență energetică

Study prepared by IDIS “Viitorul” under the Moldova Energy and Biomass Project funded by the European Union, co-funded and implemented by UNDP Moldova.

Coordinator: Nicolae Zaharia

Authors, experts of IDIS „Viitorul”:

Liubomir Chiriac

Angela Secrieru

Ion Tornea

Gheorghe Costandachi

Ion Munteanu

Ana Znaceni

Eugenia Stancu

This paper can be used as didactical material in schools and universities to study relevant technical disciplines.

Author: “IDIS Viitorul”

Electronic version of the publication www.aee.md

Cover: Andrei Ichim

Design/Layout: Andrei Ichim

Prepress & Print: „Bons Offices” SRL

Design of Bons Offices

4/6 Feredeului Str. - , Tel.: 0-22-500-895

www.bons.md, e-mail: ion@bons.md

Cuprins

Estimation of the energy potential of biomass for briquetting from agricultural crops at regional and rayon levels for 2009-2010.....	1
Introduction	4
Research methodology	6
Characteristics of biomass potential by regions.....	11
Energy potential of biomass derived from pruning of pome and stone fruit plantations.....	13
Potential of biomass derived from forestry and wood processing residues	17
Methodological clarifications	19
Potential of biomass derived from residues of pulses, oilseeds and technical crops	24
Estimating the energy potential of biomass derived from grain crops	30
Assessment of energy potential from corn biomass	33
Estimating the total potential of biomass by region and rayon	35
About 48% of natural gas imports could be reduced due to biomass resources.....	37
Conclusions and recommendations.....	38
References:.....	42
Anexes	43

Introduction

Study prepared by IDIS “Viitorul” under the Moldova Energy and Biomass Project funded by the European Union, co-funded and implemented by UNDP Moldova

Biomass in Moldova is considered one of the most important sources of renewable energy. In general, we can say that biomass covers a wide range of materials, such as: agricultural and technical crops, agricultural and forestry residues, etc.

According to the definition provided in the European Directive 2003/30/EC, *biomass is the biodegradable fraction of products, waste and residues from agriculture, forestry, and industrial and municipal waste.*

In this context, it should be mentioned that biomass is the main fuel used in rural areas. As an agricultural country, the Republic of Moldova faces a major challenge - the use of its existing potential of biomass.

Since the objective of the study was to establish a top of districts according to the biomass potential from agricultural wastes, we would like to mention the fact that the results of the analysis reflect a more conservative scenario (pessimistic) for several reasons. Thus, calculations were performed with the available data, taken from the National Bureau of Statistics (NBS), for 2009 and 2010 regarding the surfaces of farms and peasant households in possession of agricultural land of at least 10 hectares. From this point of view, it is obvious that land areas which are less than 10 ha were not taken into consideration for the simple reason that there is no accurate statistics performed in this area. For these reasons, one can easily notice that there are considerable reserves which could increase the total biomass potential for production of briquettes and pellets.

According to the drafted methodology, at the first stage, we identified the biomass residues obtained after collecting agricultural crops, which were conventionally included in **Group 1** (wheat, barley, rye, oats, corn, sunflower, peas, rapeseed, soybean, buckwheat, beans and tobacco) or crops conventionally included in **Group 2** (vine, fruit trees, trees) that are usually pruned in the spring. At the second stage, these results were used to estimate the energy potential of biomass derived from above

mentioned crops by region and rayon for 2009 and 2010. Information that was used to make the necessary calculations, was taken exclusively from the NBS and was further processed by the authors involved in the research.

After analyzing the potential of biomass for each separate rayon at national level, a total potential of about **21,042 TJ** per year was obtained based on average values for 2009 and 2010. While comparing this result with domestic consumption of energy resources of the Republic of Moldova, which was about **92,544 TJ** in 2010, we found that 22% of total needs of energy resources can be covered by biomass. Moreover, this is a rather essential finding, given that the Republic of Moldova is 95% dependent on imported energy resources, therefore, theoretically, approximately 48% of natural gas imports could be reduced due to biomass resources, taking into consideration the fact that natural gas imports in 2010 amounted to about 43,295 TJ. These are key findings of the study prepared by experts of IDIS „Viitorul”.

In order to have an overview of the current potential of biomass by rayon and region, one can explore the “electronic map of the potential of biomass”, made on the basis of findings from this study: <http://www.biomasa.aee.md/potentialul-energetic-din-biomasa-total-pe-rm/>. Later on, it will be transferred on the web-site of the Agency for Energy Efficiency – www.aee.md

IDIS „Viitorul” extends its sincere appreciation to all the experts and companies that cooperated in the development of this study.

The study was contracted by Moldova Energy and Biomass Project to be used as an argument for piloting the briquetting business in Republic of Moldova.

Research methodology

In order to estimate the biomass potential of agricultural crops, it is necessary to estimate the amount of biomass residues obtained after collecting agricultural crops, which were conventionally included in **Group 1** (wheat, barley, rye, oats, corn, sunflower, peas, rapeseed, soybean, buckwheat, beans and tobacco) or crops conventionally included in **Group 2** (vine, fruit trees, trees) that are usually trimmed in the spring. To estimate the amount of agricultural residues and subsequent energy potential for agricultural crops in Group 1 and Group 2, we will use the following table:

Table 1.1. **Coefficients for production of dry matter (biomass), heat capacity and availability factor**

Crop	Biomass residue	Production of dry matter ^[1,2,3]		Reference Heat Capacity ^[2,3,4]	Availability factor ^[5,6]
		t/t of grain, t/ha (vineyards, orchards, forests)			
		Min	Max	MJ/kg	%
Wheat	Straw	1 [1]	1.8 [1]	14	25 [5]
Barley	Straw	1.5 [1]	1.8 [1]	14	25 [5]
Rye	Straw	1.8 [1]	2 [1]	14	25 [5]
Oat	Straw	1.8 [1]	1.8 [1]	14	25 [5]
Corn	Stalk + cob	1.2 [1]	2.5 [1]	14	65 [5]
Sunflower	Stalk + hat	1.2 [1]	2.1 [1]	15	95 [5]
Peas	Stalk	5 [1]	5 [1]	14	70
Beans	Stalk	5 [1]	5 [1]	14	70
Rapeseed	Straw	3.7 [1]	4 [1]	18	70
Soybean	Straw	3.7 [1]	4 [1]	14	70 [6]
Tobacco	Stalk	3 [2]	3 [2]	14	70
Buckwheat	Straw	0.9 [1]	1.2 [1]	14	70
Fruit trees	Branches	1.2 [1]	1.5 [1]	15	95 [5]
Vine	Branches	0.8 [1]	1.1 [1]	15	97 [5]

Note 1. References that were used to compile the table are shown in brackets.

Note 2. Conversion factors for forestry and wood processing residues can be found in Table 4.2

Comment 1. Reference heat capacity of straw is shown at humidity below 20%. Given that the heat capacity is shown for different levels of humidity in different sources, we will use conservative data approximated to whole numbers. The same is proposed for other types of biomass for which data taken from references relate to a certain level of humidity and the reference heat capacity values were estimated with a small reserve (by allowing for a higher humidity level) by rounding down to the whole number.

Comment 2. For straw derived from peas, rapeseed and buckwheat, the same availability factors are proposed for consideration as those for soybean, according to source [6].

Comment 3. According to statistical data (from NBS), information on residues from wood industry was collected, based on reports submitted by economic operators.

As shown in Table 1.1, in order to get biomass residues in tons per 1 ha of agricultural crops, for crops in **Group 1**, coefficients should be applied within the following range: K_1 t/t of grains – K_2 t/t of grains. While for crops in **Group 2**, in order to estimate the amount of residues in tons per 1 ha, coefficients will be applied within the following range: K_1 t/ha – K_2 t/ha.

Next, we will estimate the amount of biomass residues for two scenarios:

- a. *Scenario 1 min*, by applying the minimal coefficient K_1 ;
- b. *Scenario 2 max*, by applying the maximum coefficient K_2 .

Thus, if V is the area in hectares, then the following formula shall be applied: $V \times K_1$ and $V \times K_2$. After that, we will calculate the energy potential in TJ (Terajoule) for both scenarios. To this end, we will consider the value of the coefficient for the heat capacity shown in Table 1.1, which will be marked as R MJ/kg (Megajoule per kg) and we will take into account that $1\text{TJ } 10^{-6} = 1 \text{ MJ}$. It is obvious that $R \text{ MJ/kg} = R * 10^{-6} \text{ TJ/ kg}$.

At the next step, since a part of residues is lost during collection, we will apply the availability factor marked as K_{disponib} .

Thus, given the availability factor K_{disponib} and factors K_1 and K_2 in order to determine the minimum and maximum amount of agricultural residues, which shall be marked as $K_{1,2}$, we obtain the following formula to estimate the energy potential of agricultural crops in Group 1:

$$(V \text{ ha} \times K_{1,2} \text{ t/t grains}) \times R \times 10^{-6} \text{ TJ/ kg} \times 1000 \text{ kg} \times K_{\text{disponib}}.$$

Similarly, we obtain the formula for estimating the energy potential of crops in Group 2:

$$(V \text{ ha} \times K_{1,2} \text{ t/ha}) \times R \times 10^{-6} \text{ TJ/ kg} \times 1000 \text{ kg} \times K_{\text{disponib}}.$$

Both formulas above cover the following relationship:

$$(V \times K_{1,2}) \times K_{\text{disponib}} \times R \times 10^{-3} \text{ TJ}.$$

Thus, for each of these scenarios, we can estimate the energy potential in TJ, using the relations:

$$\text{Scenario 1 min: } (V \times K_1) \times R : 1000 \times K_{\text{disponib}}$$

and respectively

$$\text{Scenario 2 max: } (V \times K_2) \times R : 1000 \times K_{\text{disponib}}.$$

Next, we determined the average heat capacity for 2009 and 2010 respectively according to the relation:

$$\text{Caloric}_{\text{med}} \text{ 2009} = ((V \times K_1) \times R : 1000 \times K_{\text{disponib}} + (V \times K_2) \times R : 1000 \times K_{\text{disponib}}) : 2$$

$$\text{Caloric}_{\text{med}} \text{ 2010} = ((V \times K_1) \times R : 1000 \times K_{\text{disponib}} + (V \times K_2) \times R : 1000 \times K_{\text{disponib}}) : 2$$

At the last step, we determined the average values for 2009 and 2010, according to the formula:

$$\text{Caloric}_{\text{average}} = (\text{Caloric}_{\text{med}} \text{ 2009} + \text{Caloric}_{\text{med}} \text{ 2010}) : 2$$

The first four rayons were selected in each region while considering the data obtained, depending on the heat capacity.

Estimating the potential of biomass derived from bearing vineyards

According to official statistics, the total area of vineyards in the Republic of Moldova at national level in 2009 and 2010 was 149,000 ha and 145,000 ha, respectively, of which about 136,000 ha in 2009 and 133,000 ha in 2010 were bearing plantations. The National Bureau of Statistics keeps strict records of agricultural enterprises and peasant's (farmer's) households with agricultural land of 10 ha and more. In this context, according to the National Bureau of Statistics, the area of bearing vineyards, of agricultural enterprises and peasant's (farmer's) households with agricultural land of 10 ha and more was about 31,744 ha in 2009 and 29,638 ha in 2010.

In order to determine the potential of biomass derived from vineyards it is necessary to determine the residues obtained after pruning of vines. According to data from Table 1.1, to determine the production of residues in tons per 1 ha of bearing vineyards, both the minimal coefficient of 0.8 was applied for the Scenario 1 min, and maximal coefficient 1.1, for Scenario 2 max.

Thus, for each of these scenarios, we have the relations:

$$\text{Scenario 1 min: } (V \times 0.8) \times 15 : 1000 \times 0.97$$

and respectively

$$\text{Scenario 2 max: } (V \times 1.1) \times 15 : 1000 \times 0.97$$

where 15 MJ/kg is the coefficient for determining the reference caloric capacity, and 0.97 is the availability coefficient. After this, the average of caloric capacity for 2009 and 2010 was determined according to the relations:

$$\text{Caloric}_{\text{aver}} 2009 = ((V \times 0.8) \times 15 : 1000 \times 0.97 + (V \times 1.1) \times 15 : 1000 \times 0.97) : 2$$

$$\text{Caloric}_{\text{aver}} 2010 = ((V \times 0.8) \times 15 : 1000 \times 0.97 + (V \times 1.1) \times 15 : 1000 \times 0.97) : 2$$

And at the last phase the average for 2009 and 2010 was determined:

$$\text{Caloric}_{\text{aver}} = (\text{Caloric}_{\text{aver}} 2009 + \text{Caloric}_{\text{aver}} 2010) : 2$$

Based on caloric capacity, the first 4 rayons from each region were selected and were included in the following table:

Table 2.1. **General biomass potential derived from vineyards, of first 4 rayons from each region**

	Average by min and max for 2009, in TJ	Place within region 2009	Average by min and max for 2010, in TJ	Place within region 2010	Average for 2009 and 2010 TJ	Place within region
Total vineyard plantations at national level	1,879.86		1,838.4		1,859.12	
Plantations of agricultural enterprises and peasant households with agricultural lands of 10 ha and more	438.781		409.7		424.2263	
Municipality of CHISINAU	13.7119		14.04		13.87779	
NORTH	7.00801		6.04		6.52422	
Singerei	3.26211	1	2.889	1	3.075506	1
Falesti	1.61723	2	1.742	2	1.679434	2
Floresti	0.70495	3	0.484	4	0.594368	3
Glodeni	0.53908	5	0.567	3	0.5529	4
CENTRE (total)	101.457		98.2		99.8261	
Hincesti	30.4648	1	33.67	1	32.0682	1
Anenii-Noi	20.9964	2	20.78	2	20.8858	2
Ialoveni	13.3802	3	6.787	6	10.08351	3
Calarasi	6.96654	5	8.667	4	7.816624	4
SOUTH (total)	223.952		218.5		221.2015	
Taraclia	57.6813	1	54.05	1	55.86363	1
Cahul	45.9736	2	45.93	2	45.9529	2

	Average by min and max for 2009, in TJ	Place within region 2009	Average by min and max for 2010, in TJ	Place within region 2010	Average for 2009 and 2010 TJ	Place within region
Cimislia	32.2064	3	22.36	5	27.28562	3
Cantemir	26.3872	4	28.07	3	27.23033	4
GAGAUZIA ATU	92.6522		72.94		82.79678	

Source: National Bureau of Statistics; Data processed by author

Characteristics of biomass potential by regions

a. At national level

At national level, due to the fact that the total area of bearing plantations decreased from 149,000 ha in 2009 to 145,000 ha in 2010, according to the data of the National Bureau of Statistics, obviously the potential of biomass deriving from this type of biomass is also in decrease, from **1,879.86 TJ to 1,838.4 TJ**, approximately by 3%.

Thus, according to the NBS data, bearing plantations with the area of 10 ha and over of agricultural enterprise and peasants households decreased by 31,744 ha in 2009 to 29,638 ha in 2010. In these conditions, the biomass potential is decreasing by approximately 7% from **438.781 TJ to 409.7 TJ**.

b. At regional level according to the NBS data

Hereinafter, we will refer to bearing vineyards with area of 10 ha and over. In this context, there was also outlined a tendency of decrease in vineyard plantations with area of 10 ha and over in Northern, Central, Southern and ATU Gagauzia regions.

We note in Table 2.1 that the Southern region has the highest biomass potential - about 221.2 TJ. After it, the Central region with 99.8 TJ, and ATU Gagauzia Region follow with about 82.8 TJ, which indicates that the potential is approximately 2.22 and 2.67 times lower than the biomass potential of the Southern region. Biomass potential of Northern region is insignificant, about 6.52 TJ compared to the other regions.

If to refer to rayons within each region, according to data in Table 2.1, then 4 rayons from the Southern region, with the highest energy potential are identified: **Taraclia** (55.8 TJ), **Cahul** (48.9 TJ), **Cimislia** (27.28 TJ) and **Cantemir** (27.23 TJ). The rayons with the highest energy potential in the Central region, in a descending order, are: **Hincesti** (32.06 TJ), **Anenii-Noi** (20.88 TJ), **Ialoveni** (10.08 TJ) and **Calarasi** (7.81 TJ). In the Northern region we can mention the following rayons: **Singerei** (3.07 TJ), **Falesti** (1.67 TJ), **Floresti** (0.59 TJ) and **Glodeni** (0.55 TJ).

Energy potential of biomass derived from pruning of pome and stone fruit plantations

According to statistics, the Republic of Moldova has approximately 100 thousand hectares of fruit-bearing plantations with fruit trees and shrubs. Annually, these plantations generate huge amounts of agricultural residues, branches after annual pruning, which can be used for energy production. In order to identify the energy potential for each rayon separately, a more detailed analysis was performed. As reference, the official data of the National Bureau of Statistics were used, available for 2009-2010, separately by rayons, covering fruit-bearing plantations of pome fruits (apple, pear, quince and other trees) and stone fruits (plum, cherry, sweet cherry, apricots, peaches and other trees) of the agricultural enterprises and peasants households with agricultural land of 10 ha and over. Analysing the data, there were not taken into account data related to walnut plantations because they do not need pruning and the availability of the nutshell is very low as population uses it directly for combustion due to its high caloric capacity. Additionally, areas of fruit-bearing walnut plantations are quite small compared to other types of fruit trees. At the same time, it should be noted that during the latest years walnut plantations grew significantly, consequently during the next 8-10 years the availability of nutshell for energetic purposes will increase considerably. This hypothesis is confirmed by the statistics indicating an increase in the total planted area from 3,553 ha in 2009 to 4,430 ha in 2010, while the total area of bearing plantations in 2010 was only of 512 ha. Also, there were not taken into account the plantations of fruit shrubs which are present only in some rayons and have no interest because of very small areas, 182 ha in 2010.

For a more reasonable argumentation, there was performed a comparative analysis of results obtained according to NBS data with the data offered by the Ministry of Agriculture and Food Industry. This source has not been used as reference because the data were not confirmed for 2010 and for 2008 they were not significantly different compared to 2009.

Based on the calculation methodology there were used data about the area of fruit-bearing plantations and coefficients for determining the quantity of biomass (orchard branches as a result of annual pruning) according to source [1], these having values between 1.2-1.5 tons/ha. Because a part of branches obtained as a result of annual pruning of orchards may be used in other purposes, like direct combustion in the field in case of frost for more vulnerable varieties, and taking into account that reference analysis is made for plantations of agricultural enterprises and peasant households with agricultural land of 10 ha and more, the availability coefficient of 95% was used, as according to source [5]. In order to transform the volume of biomass into energetic units there is used a coefficient indicating the caloric capacity that can be obtained from one mass unit of dry material. This varies depending on the type of biomass and depending on its humidity. In case of orchard branches, to transform the available biomass quantity into energetic units the transformation coefficient 15 MJ/kg was used. This was selected according to sources [1,3,4] taking also into account the fact that humidity is less than 20%.

The energy potential was calculated for every rayon separately according to two scenarios, minimum and maximum, depending on the quantity of branches that can be obtained from one hectare of fruit-bearing plantations taking as reference the average area of fruit plantations for 2009 and 2010. To determine the top rayons that have the highest energy potential from biomass, the average between the minimum and maximum energy potential was calculated. As a result, a total average energy potential by country of 659 TJ was obtained, details in Annex 3.1 and 3.2. Performing the same calculations based on data for 2009 of the Ministry of Agriculture and Food Industry we obtain an average energy potential of approximately 1,000.14 TJ, details in Annex 3.3. Based on the analysis performed according to NBS data, the region of the country with the highest potential of energy production from agricultural residues generated by fruit plantations was identified, this being the Northern region of the Republic of Moldova with a potential of approximately 361.26 TJ per year more than half of the total potential per country. Moreover, even the top first five rayons belong to the Northern region, Table 3.1.

Table 3.1. **Top 5 Rayons by potential of energy from orchards**

Development region	Rayon	Top energy potential, TJ, average 2009-2010	
		Average	Place
North	Soroca	53.20	1
North	Floresti	38.92	2
North	Riscani	34.98	3
North	Briceni	34.65	4
North	Donduseni	34.04	5

Source: National Bureau of Statistics, data processed by author

Because the main objective of analysis is to determine the top rayons with the highest energy potential from biomass, according to reference data, the top first 4 rayons was identified for each region, Table 3.2.

Table 3.2. **Top of first four rayons from the Northern, Central and Southern regions by potential energy that can be obtained from biomass collected from pruning of orchards, by agricultural enterprises and peasants households with agricultural lands of 10 ha and more.**

Development Regions	Energy potential, TJ				Top energy potential, TJ, average 2009-2010	
	2009		2010		average	Place
	average	place	average	place		
Total	708.02		609.98		659.00	
m. CHISINAU	17.49		15.97		16.73	
NORTH	370.09		352.43		361.26	
Soroca	53.21	1	53.19	1	53.20	1
Floresti	36.07	4	41.76	2	38.92	2
Riscani	38.05	2	31.92	5	34.98	3
Briceni	34.13	6	35.17	3	34.65	4
CENTRE	186.16		141.51		163.84	
Orhei	29.09	1	23.57	1	26.33	1
Hincesti	20.14	3	21.20	2	20.67	2
Anenii Noi	20.74	2	18.12	3	19.43	3
Soldanesti	20.01	4	11.64	6	15.82	4
SOUTH	108.54		83.88		96.21	
Stefan Voda	28.93	1	21.10	1	25.02	1
Cahul	15.27	3	12.35	2	13.81	2

Development Regions	Energy potential, TJ				Top energy potential, TJ, average 2009-2010	
	2009		2010		average	Place
	average	place	average	place		
Cantemir	15.31	2	12.31	3	13.81	3
Taradia	14,89	4	10.97	4	12.93	4
GAGAUZIA ATU	25.74		16.20		20.97	

Source: National Bureau of Statistics; Data processed by author

The obtained results were compared with data for 2009, after both sources, for the first rayons with the highest energy potential. As a result, classification of the first 4 positions for Central and Southern regions calculated according to the National Bureau of Statistics (BNS) data coincides with the results of calculations performed based on data offered by the ministry (Annex 3.1, 3.2 and 3.3). In case of the Northern regions, the results coincide only for position 1 and 4. Comparing the 2009 classification with that for 2010, obtained according to the National Bureau of Statistics data, you can notice that the classification is not maintained for any of the top 10 positions, reason for which the data used as reference were calculated as the arithmetic average for results obtained separately for 2009 and 2010.

Potential of biomass derived from forestry and wood processing residues

Forest areas of the Republic of Moldova are important and strategic natural resources for development of national economy, and they represent an important reserve for the energetic sector. Forest resources require a comprehensive and unified management in close relation with other natural resources. Responsible for management of forest resources in the Republic of Moldova is currently the “Moldsilva” Agency. In case there is a prudent and rational management, Moldova’s forests can offer significant and constant energetic benefits. Forestry sector provides the national economy about 400 thousand m³ of timber harvested in the process of complex forestry works (works of care and management, regeneration, conservation, ecological reconstruction, pruning etc.). As a result of these works, which do not have the intention to obtain biomass-based energy resources, important quantities of raw material are obtained for production of fuel in form of briquettes. According to estimations, vital needs of rural population (house heating, cooking meals etc.) are met up to a share of 70% by wood products. Every year, the forestry sector brings an income to the national economy of 0.5-0.6% of the Gross Domestic Product.

All forest renewal and harvesting works are performed by “Silva” Agency. Timber is harvested in the forests of the Republic of Moldova, according to Article 33-36 of the Forestry Code, by cutting by-products (first cleaning, pruning, selective cuttings, hygiene cuttings), cutting of main products (regeneration, conservation, hygiene clean cuttings) and ecological reconstruction. As a result of these works during 1997-2010 big volumes of timber were collected. These volumes are shown in Table 1. During 1997 – 2010 there were 5.787 million m³ of timber, among which 586.1 thousand m³ of wood for industrial processing, 4,812.3 thousand m³ of firewood.

Table 4.1. **Volume of timber harvested in the forestry fund managed by “Moldsilva” Agency**

No.	Reference years	Volume of harvested timber, thousand m ³			
		Total	Including sold volume	including:	
				Industrial wood	firewood (including twigs, branches, limbs)
1.	1997	470.3	445.4	51.4	394.0
2.	1998	387.9	369.9	37.5	332.4
3.	1999	382.4	364.9	38.8	326.1
4.	2000	375.8	365.2	39.7	325.5
5.	2001	359.7	343.5	37.3	306.2
6.	2002	403.2	386.8	50.4	336.4
7.	2003	438.9	418.9	47.0	371.9
8.	2004	422.0	402.3	43.5	358.8
9.	2005	397.0	376.0	39.0	337.0
10.	2006	438.4	417.3	45.0	372.3
11.	2007	410.6	389.3	43.0	346.3
12.	2008	420.6	398.7	41.7	357.0
13.	2009	441.6	410.5	36.4	312.7
14.	2010	438.2	434.9	35.4	335.7
15.	Total	5,786.6	5,523.6	586.1	4,812.3

Source: “Moldsilva” Agency

It should be noted that annual production of respective volumes does not affect the status of forestry fund. Timber collected by forestry enterprises in Moldova’s forests during a year is sold to population, economic operators and/or is processed directly within specialized sections of forestry enterprises. Forestry has approximately 30 sections of different capacities for wood cutting and processing, as well as drying installations. Forestry enterprises process an annual average volume of about 25 thousand m³ of timber. Low efficiency of using the production capacity is influenced by the low quality of raw material, limited demand for processed timber and low purchasing capacity of population of the Republic of Moldova. The range of products, obtained from wood processing includes parquet, timber, cut semi-finished materials, fence strips, charcoal and others.

It should be taken into account that residues obtained as a result of wood processing are sold for household needs and as **fuel to population and other consumers**. In order to assess the potential of biomass derived from forest resources the following steps have been undertaken.

Methodological clarifications

The statistical data were collected from ALRC, National Bureau of Statistics, and “Moldsilva” Agency. Total forest areas were assessed for the country and by regions, rayons, including ATU Gagauzia.

According to statistics presented by the Agency for Land Relations and Cadastre of the Republic of Moldova (ALRC) in 2009 the total area of forests was 423,979.9 ha, in 2010 – 393,020.34 ha, respectively. The richest region in forests in the Republic of Moldova is the Central region, which in 2010 had an area of 193,784.97 ha. In terms of regional structure, the largest areas covered by forests in the Northern region in 2010 are rayons Falesti and Singerei with 12,060.39 ha and 11,636.97 ha, respectively, in Central region – rayons Hincesti and Straseni, respectively with 38,674.11 ha and 26,726.22 ha, Southern region - in Cahul and Cimislia rayons with 18,048.68 ha and 12,862.35 ha respectively, and the area covered by forests in ATU Gagauzia is 17,779.77 ha.

The volumes of products obtained from forest cutting were distributed according to the data provided by “Moldsilva” Agency for 2009 and 2010. As a result of harvesting forest wood, a large amount of branches and rods of different size and thickness and different chips is obtained. The coefficient of residues obtained from one *ha* of forest (branches, rods, etc.) for 2009 and 2010 was determined.

For 2009, the relation $C_1=V_1/S_1$ was used,

where C_1 is the coefficient of residues obtained from one *ha* of forest, V_1 is the volume of branches and rods obtained and S_1 is the total area covered with forests and forest strips in 2009

For 2010 the relation $C_2=V_2/S_2$ was used,

where C_2 is the coefficient of residues obtained to one *ha* of forest, where V_2 is the volume of branches and rods obtained and S_2 is the total area covered with forests and forest strips in 2010.

Table 4.2 Conversion coefficients for forestry and wood processing residues

Biomass residue	Conversion ha to m ³		Conversion m ³ to tons	Caloric capacity, MJ/kg	Availability factor
	2009	2010			
Wood branches, rods	0.145	0.172	0.4 [7]	15 [1]	90 [8]
Residues from wood processing industry	-	-	-	15 [3]	90 [8]

Thus, the coefficient for obtaining residues from forests was for 2009: $C_1=0,145$, and, respectively, for 2010: $C_2=0,172$.

Using calculated coefficients, we assessed the volume of biomass, in cubic meters, that can be used for briquetting. We used in our study coefficients of energy potential for measurement units MJ per kilogram of dry wood. Therefore, it was necessary to transform the volume of cubic meters of dry forest derived biomass in mass measurement units (tons). Thus, the amounts of residues in tons were calculated for every rayon. In order to assess the volume of biomass in these residues, coefficient for transformation of branches and rods from cubic metres into tons $M = 0.4$ was taken into consideration, expressing dry mass of residues in tons to one cubic metre of residues (see Table 4.2).

According to 2009 evaluation, a total of 24,590.83 tons, amount of forest dry biomass, and 27,039.79 tons, respectively in 2010, were obtained in the Republic of Moldova. In terms of regional structure, the classification was distributed as follows: in 2009, the first place in the Central region was 12,226.28 tons, followed by Northern region - with 5,675.21 tons, South - with 5,159.02 tons and ATU Gagauzia with 1,036.0 tons. Classification for 2010 is the following: the first place in the Central region was 13,332.4 tons, followed by North - with 6,517.87 tons, South - with 5,369.28 tons and ATU Gagauzia - with 1,223.24 tons.

In rayon structure, the classification by volume of dry biomass for 2009 is the following (see Annex 4.1):

North – the first is Falesti rayon, followed by Glodeni, Singerei, Riscani.

Centre – the first is Hincesti rayon, followed by Straseni, Orhei, Calarasi.

South – the first is Cahul, followed by Causeni, Cantemir, Cimislia.

ATUG

In rayon structure, the classification by volume of forest dry biomass for 2010 is the following (see Annex 4.2):

North – the first is Falesti rayon, followed by Singerei, Glodeni, Soroca.

Centre – the first is Hincesti rayon, followed by Straseni, Orhei, Calarasi.

South – the first is Cahul, followed by Causeni, Cantemir, Cimislia.

ATUG

According to data provided by the National Bureau of Statistics (BNS), every year in the Republic of Moldova residues are obtained from the processing industry of imported wood, domestic forest wood, furniture production and from other enterprises producing wooden items. This volume is an important one to be taken into account when assessing the biomass volume for energetic purposes. From the experience of manufacturers, and also taking into account surveys on biomass assessment for energetic purposes it was found out that residues have a certain degree of use for this purpose. To this volume of residues, $K_1=0.9$, the share of availability of wooden residues is applied. According to results of focus groups, which discussed the availability of using residues obtained as a result of wood processing, according to some surveys, it was decided to use the coefficient of availability of wooden residues $K_1=0.9$. After assessing the volume of biomass derived from wooden residues and wood harvest derivatives by each rayon separately, the energy potential coefficients were applied to these two types of biomass.

For residues obtained from wood processing for industrial purposes and, respectively, for timber (derivates from the harvested forest wood) the coefficient $K_e=15MJ/kg$ was applied.

This way, we assessed the total energy potential of dry biomass for the Republic of Moldova, by regions and by rayons, for 2009 and 2010.

After assessing the energy potential for these two types of biomass for 2009 and 2010 respectively, the average for both years was calculated for the country level, by regions and by all rayons (see Annexes 4.1 and 4.2).

As a result of assessing the energy potential for this type of dry biomass the regions and rayons were classified based on the volume of energy potential. Classification by regions and rayons is provided in Table 4.3.

In total, the country's energy potential for this type of biomass was 463.64 TJ for 2009 and 505.42 TJ for 2010. Classification by regions is the same for both years 2009 and 2010 without changes and it is the following – first place Centre, followed by North, South, ATUG.

Table 4.3. **Energy potential that can be obtained from biomass of forestry and wood processing residues in the Republic of Moldova 2009-2010**

	2009		2010		2009-2010	
	Total, TJ	Place	Total, TJ	Place	Average	Place
TOTAL	463.64		505.42		484.53	
Municipality of CHISINAU	51.79		8.06		29.93	
NORTH (total)	113.45		116.49		114.97	
Municipality of Balti	4.59	11	9.40	6	7.00	
Briceni	7.47	7	8.92	7	8.19	
Donduseni	5.23	10	5.23	11	5.23	
Drochia	2.98	12	3.45	12	3.22	
Edinet	34.62	1	24.83	1	29.73	1
Falesti	9.40	3	11.20	3	10.30	3
Floresti	6.55	8	7.77	8	7.16	
Glodeni	11.31	2	11.90	2	11.61	2
Ocnita	6.52	9	7.75	9	7.13	
Riscani	7.88	5	5.83	10	6.85	
Singerei	9.04	4	10.81	4	9.92	4
Soroca	7.86	6	9.40	5	8.63	
CENTRE (total)	211.18		291.87		251.53	
Anenii Noi	9.42	11	11.82	8	10.62	
Calarasi	18.29	6	61.13	2	39.71	2
Criuleni	12.93	8	7.84	10	10.38	
Dubasari	2.28	13	2.65	11	2.47	
Hincesti	37.07	1	82.78	1	59.93	1
Ialoveni	11.44	10	0.37	13	5.91	
Nisporeni	12.20	9	0.40	12	6.30	

	2009		2010		2009-2010	
	Total, TJ	Place	Total, TJ	Place	Average	Place
Orhei	29.36	2	27.91	3	28.64	3
Rezina	7.97	12	9.43	9	8.70	
Straseni	23.70	4	26.16	4	24.93	4
Soldanesti	23.81	3	17.24	7	20.52	
Telenesti	20.15	5	23.76	5	21.96	
Ungheni	17.72	7	20.37	6	19.05	
SOUTH (total)	72.49		72.49		72.49	
Basarabasca	2.29	8	2.21	7	2.25	
Cahul	14.43	1	16.76	1	15.60	1
Cantemir	10.03	3	11.96	3	11.00	3
Causeni	12.44	2	14.87	2	13.66	2
Cimisia	9.96	4	11.95	4	10.95	4
Leova	9.28	5	0.57	8	4.93	
Stefan Voda	7.50	6	8.91	5	8.21	
Taraclia	5.81	7	5.24	6	5.53	
GAGAUZIA ATU	14.73		16.51		15.62	

Potential of biomass derived from residues of pulses, oilseeds and technical crops

In order to determine the biomass potential, there were included in the category of pulses, oilseeds and technical crops, the crops with the highest production potential in the Republic of Moldova, from those categories, according to NBS data: sunflower, soybeans, rapeseed, dry peas, beans and tobacco. Hereinafter, by notion of pulses, oilseeds and technical crops, we will refer to the above mentioned crops.

Methodological clarifications: In order to determine the energy potential of crops from pulses, oilseeds and technical crops group we used the statistical data of the National Bureau of Statistics (NBS) for 2009 and 2010, by territory (rayon). Being aware of the constraints in using those data for calculation of total biomass potential (National Bureau of Statistics is recording by territory only the data for categories of agricultural units “agricultural enterprises” and “peasant households” with agricultural area exceeding 10 ha), we tried to identify data as complete as possible with regard to production of those crops. Such data have been identified at the Ministry of Agriculture and Food Industry (MAFI), however only for sunflower and only for 2008 and 2009. Information from the MAFI contains data about sunflower production in areas larger by 28% then those stated by the NBS data. However, taking into account that the main goal of this research is to identify classification of rayons from the 3 regions by biomass potential and to assure data comparison, we, hereinafter, used the NBS data for calculations. The statistical data coverage does not affect, in the end, classification of rayons within each region by their potential. It may be, however, influenced significantly by years used for calculations, taking into account the very big differences in crop yields depending on weather conditions in each year and crop rotation. MAFI data may be used only to determine the absolute biomass potential per each rayon, maintaining the same period of comparison for all the crops. At the same time, taking into account the fact that most of the crops in the respective group are cultivated by agricultural enterprises and peasant households with area of more than 10 ha, the differences

between data by territory and total data for all categories of enterprises can not modify significantly rayons' classification or increase the differences higher than 21-26% in the total potential of the respective crops. Thus, for example, comparing total production of sunflower by territory for household categories "agricultural enterprises" and "peasant households with areas of more than 10 ha", recorded by the NBS, with total production of sunflower at country level for all categories of households (from NBS Statistical Yearbook), we get a "coverage" of 79% for the data we used in our calculations. This coverage is 74% for soybeans.

Total energy potential of pulses, oilseeds and technical crops, as biomass for briquettes production for 2009-2010 is approximately 10,577.3 TJ (minimum estimates), 14,451.1 TJ (maximum estimates), 12,514.2 TJ (average estimates). Among crops included in the respective group, the greatest potential (according to average estimates) of 51% is that of sunflower, followed by rapeseed – 22%, soybeans – 20%, dry peas – 6%, tobacco – 1% and beans– 0.1%. Separately, data by territory for each crop from the respective group are provided in Annexes 5.1-5.6.

At regional level, the highest energy potential of these crops is registered in the Northern region - 7.127,0 TJ (average potential), or 58% of the total potential. Then the Southern region follows, with an average potential of 2,678.1 TJ, or 21% of the total potential. Central region has a potential of 1,821.2 TJ, average estimations, or 15% of the total potential. The assessed average potential for ATU Gagauzia, for 2009-2010, is 773.0 TJ, or 6% of the total potential (Table 5.1).

At rayon level: 1) Northern region – classification is dominated by Drochia rayon, with an estimated average potential of 964.2 TJ and Riscani, with 948.0 TJ. The following positions are held by rayons Edinet – 825.3 TJ and Soroca – 704.1 TJ.

2) Southern region – on the first position according to pulses, oilseeds and technical crop potential in this region is Stefan Voda rayon, with an estimated average potential of 592.9 TJ, followed by Cahul rayon, with 427.1 TJ, Causeni – 372.1 TJ and Cantemir – 339.8 TJ.

3) Central region – Biomass energy potential from pulses, oilseeds and technical crop potential is dominated by Ungheni rayon, with an average potential of 256,5 TJ, followed by rayons Orhei - with 251.9 TJ, Soldanesti - with 244.0 TJ and Rezina - with 229.8 TJ.

Table 5.1. **Energy potential of pulses, oilseeds and technical crops by territory**

Rayons	Sunflower			Place	Rapeseed, soybeans, dry peas, beans, tobacco			Place	Total			Place
	Average 2009-2010, TJ				Average 2009-2010, TJ				Average 2009-2010, TJ			
	min	max	average		min	max	average		min	max	average	
TOTAL	4,626.8	8,096.9	6,361.8	-	5,950.6	6,354.2	6,152.4	-	10,577.3	14,451.1	12,514.2	-
NORTH	2,439.7	4,269.5	3,354.6	-	3,722.7	4,002.1	3,862.4	-	6,162.4	8,271.6	7,217.0	-
Drochia	377.4	660.5	519.0	1	428.8	461.6	445.2	3	806.3	1,122.1	964.2	1
Edinet	196.9	344.6	270.8	8	533.2	575.9	554.6	2	730.2	920.5	825.3	3
Floresti	294.5	515.4	405.0	3	201.8	213.1	207.5	9	496.4	728.6	612.5	6
Riscani	272.7	477.2	374.9	4	552.0	594.1	573.0	1	824.7	1,071.3	948.0	2
Soroca	300.1	525.1	412.6	2	281.7	301.3	291.5	7	581.8	826.5	704.1	4
CENTRE	941.1	1,646.9	1,294.0	-	514.1	540.4	527.2	-	1,455.2	2,187.3	1,821.2	-
Orhei	119.5	209.1	164.3	2	85.9	89.3	87.6	1	205.4	298.4	251.9	2
Rezina	110.1	192.6	151.4	4	76.9	79.9	78.4	3	187.0	272.5	229.8	4
Soldanesti	118.3	207.1	162.7	3	78.6	84.1	81.3	2	196.9	291.2	244.0	3
Ungheni	143.3	250.7	197.0	1	57.6	61.4	59.5	4	200.9	312.1	256.5	1
SOUTH	949.5	1,661.7	1,305.6	-	1,333.8	1,411.3	1,372.5	-	2,283.4	3,072.9	2,678.1	-
Cahul	154.0	269.5	211.7	2	209.2	221.5	215.3	2	363.2	491.0	427.1	2
Cantemir	108.1	189.1	148.6	6	186.1	196.3	191.2	4	294.2	385.4	339.8	4
Causeni	123.9	216.7	170.3	3	196.0	207.7	201.8	3	319.8	424.4	372.1	3
Cimislia	122.5	214.4	168.5	4	98.0	104.3	101.1	7	220.5	318.6	269.6	7
Stefan Voda	209.2	366.1	287.7	1	296.9	313.6	305.2	1	506.1	679.7	592.9	1
GAGAUZIA ATU	283.5	496.0	389.7	4	373.3	393.2	383.2	5	656.7	889.3	773.0	4

Source: Prepared based on NBS data

Sunflower: As mentioned above, this crop has the highest energy potential within the respective group of crops. This is approximately 4,626.8 TJ (minimum) and 8,096.9 TJ (maximum), or between 44%-56% of the total potential of all crops in the respective group. The highest potential of this crop was identified in the Northern rayons: Drochia (from 377.4 TJ up to 660.5 TJ) and Soroca (from 300.1 TJ up to 525.1 TJ). The potential of sunflower as biomass energy varies in Floresti rayon from 294.5 TJ up to 515.4 TJ (3rd place among Northern rayons) and Riscani rayon from 272.7 TJ up to 477.2 TJ (4th place) (Annex 5.1). In Southern rayons, the highest potential of this crop was identified in Stefan Voda rayon (from 209.2 TJ up to 366.1 TJ) and Cahul rayon (from 154.0 TJ up to 269.5 TJ). Then follow: Causeni rayon (from 123.9 TJ up to 216.7 TJ) and Cantemir rayon (from 108.1 TJ up to 189.1 TJ). The highest potential

of sunflower in the Central region was identified in Ungheni rayon (from 143.3 TJ up to 250.7 TJ) and Orhei rayon (from 119.5 TJ up to 209,1 TJ). Soldanesti rayon (3rd place) has an approximated potential from 118.3 TJ up to 207.1 TJ, and Rezina rayon (4th place), from 110.1 TJ up to 192.6 TJ.

Total energy potential of sunflower, according to MAFI data, differs from those presented above by 22%, on the account of larger areas, reflected in these data. However, we should bear in mind the season factor, given the fact that when determining sunflower energy potential according to MAFI data, we used years of 2008 and 2009. According to these data, the highest potential of sunflower in the Northern region is, like in the case of NBS data, in Drochia rayon, followed by Floresti (3rd place according to NBS data), Riscani (4th place, according to NBS data) and Soroca (2nd place, according to NBS data). Classification in Southern region, like in the case NBS data, is dominated by rayons Stefan Voda and Cahul, followed by Cantemir (6th place, according to NBS) and Taraclia (5th place, according to NBS). In the Centre region, on the first place, as in the case NBS data, is situated Ungheni rayon, followed by Soldanesti (3rd place, according to NBS), Orhei (2nd place, according to NBS) and Telenesti (5th place, according to NBS) (Table 5.2).

Table 5.2. **Energy potential of sunflower by rayon, according to MAFI data**

Rayons	Sunflower			
	Average of 2008-2009, TJ			
	min	max.	average	Place
TOTAL	5,626.7	9,846.7	7,736.7	-
NORTH	3,186.5	5,576.3	4,381.4	-
Drochia	460.7	806.1	633.4	1
Floresti	411.5	720.2	565.9	2
Riscani	367.7	643.4	505.5	3
Soroca	343.2	600.6	471.9	4
CENTRE	1,071.5	1,875.0	1,473.2	-
Orhei	121.4	212.4	166.9	3
Soldanesti	144.0	252.1	198.0	2
Telenesti	118.5	207.3	162.9	4
Ungheni	201.9	353.4	277.6	1
SOUTH	999.4	1,749.0	1,374.2	-

Rayons	Sunflower			
	Average of 2008-2009, TJ			
	min	max.	average	Place
Cahul	153.2	268.1	210.6	2
Cantemir	130.5	228.4	179.5	3
Stefan Voda	229.9	402.3	316.1	1
Taraclia	130.4	228.2	179.3	4
GAGAUZIA ATU	357.2	625.2	491.2	4

Source: Prepared based on MAFI data

Rapeseed: The respective crop was identified as the second crop in terms of its potential from the respective group of crops. Total energy potential of rapeseed was determined to about 5,950.6 TJ (minimum potential) and 6,3542.2 TJ (maximum potential). However, the territorial distribution of this crop is extremely uneven, with the highest quantity grown in the Northern (about 44%) and Southern regions (without ATU Gagauzia) (about 36%), and insignificant quantity grown in the Central region (10%) and ATU Gagauzia (9%). The highest potential of this crop in the Northern region was identified in Drochia (from 220.9 TJ up to 238,9 TJ) and Riscani rayons (from 169.0 TJ up to 182.8 TJ), followed by Soroca (from 135.3 TJ up to 146.3 TJ) and Glodeni (from 126.0 TJ up to 136.2 TJ) (Annex 5.2). The highest potential of rapeseed in the Southern region was identified in Stefan Voda (from 205.4 TJ up to 222.1 TJ) and Cahul (from 150.2 TJ up to 162.4 TJ) rayons, followed by Causeni (144.8-156.5 TJ) and Cantemir (125.1-135.2 TJ) rayons. The highest potential of rapeseed in the Central rayons is found in Ungheni and Orhei rayons (by 40-43 TJ each). Rapeseed potential in ATU Gagauzia is between 246.4 TJ and 266.3 TJ.

Soybeans: The third crop in terms of biomass energy potential in the respective group is soybean. Its residues are extremely appreciated by local producers as biomass for briquettes. Total potential of this crop was determined to be about 2,359.4 TJ (minimum) and about 2,550.7 TJ (maximum). However, this is concentrated almost exclusively in the Northern region (98%), with insignificant quantities in the Centre and South. Rayons with highest soybean potential are Edinet (443.1-479.0 TJ) and Riscani (349.9-378.3 TJ), followed by Briceni (335.4-362.6 TJ) and Ocnita (306.3-331.2 TJ) (Annex 5.3).

Dry peas, beans, tobacco: The potential of the other crops in the respective group is much lower than that of 3 crops mentioned above (only about 7% of group's total potential). Distribution of this potential by rayons is shown in Annexes 5.4-5.6.

Estimating the energy potential of biomass derived from grain crops

In order to assess the energy potential generated from biomass of grain crops the following agricultural crops were taken into consideration: wheat, barley, oats, rye and buckwheat. Corn, one of the most important suppliers of biomass, is assessed separately.

At national level, the total annual average volume of energy, measures in TJ, in 2009-2010 was 3,925. Crops with the highest energy potential are: wheat – 2,857 TJ (representing 73%) and barley – 1,049 (representing 27%). The other crops analysed had insignificant contributions.

To note in this context is that these results were obtained based on processing NBS information on areas and harvest of agricultural farms with more than 10 ha during 2009-2010.

Taking into account incompleteness of this database, we also processed the available information from the Ministry of Agriculture and Food Industry (MAFI) for the period 2008-2009, although in this case there were analysed only 3 types of crops: wheat, barley and corn. The processed information is included in Annexes.

According to MAFI information, in 2008-2009 the average annual value of energy potential related to the first 2 crops: wheat and barley was of 6,864 TJ, which is almost 1.8 times higher compared to calculations performed based on NBS information.

Large discrepancy in the results of calculations, caused by use of these 2 data sources may be explained first of all by the coverage of corn producers in the statistical evidence: thus, NBS provides information on production of wheat for an area of 258,094 ha (2009) and 253,585 (2010), while MAFI information covers an area of 408,709 (2008) and 346,798 (2009). Areas considered by NBS for corn are: 62,846 (2009) and 77,393 (2010), and those included in MAFI statistics – 421,810 (2008) and 393,525 (2009).

At regional level, if we consider information of the NBS, the most rich in energy potential based on grain biomass is the Northern region (1,754 TJ or 45%) followed by Southern region (1,056 TJ or 27%).

Processing MAFI information allowed identifying the same regions.

At rayon level, based on the information from NBS, the ranking of rayons within regions is as follows:

- in the Northern region: 1st position is held by Drochia rayon, followed by Floresti, Falesti and Soroca;
- in the Central region: 1st position is held by Ungheni, followed by Anenii Noi, Orhei and Hincesti;
- in Southern region: 1st position is held by Stefan Voda, followed by Causeni, Cahul and Taraclia;
- potential of the ATU Gagauzia is 323 TJ, representing 8% of the total.

Table 6.1. **Biomass potential likely to be obtained from grain crops (wheat, rye, oats, barley, buckwheat)**

	2009 average, TJ	Place within region, 2009	2010 average, TJ	Place within region, 2010	average 2009 2010, TJ	Place within region, 2009 2010
TOTAL	3,937		3,913		3,925	
NORTH	1,735		1,774		1,754	
Drochia	254	1	298	1	275.9	1
Floresti	224	2	221	2	222.5	2
Falesti	188	3	206	3	196.8	3
Soroca	172	4	171	4	172	4
CENTRE	748		802		775	
Ungheni	102	2	108.8	1	105	1
Anenii Noi	115	1	89.4	3	102	2
Orhei	74	4	107.1	2	90.4	3
Hincesti	93	3	77.2	6	85.3	4
Rezina	61	8	89.1	4	75.2	5
SOUTH	1,117		994		1,056	
Stefan Voda	230	1	247	1	239	1
Causeni	190	3	155	2	173	2
Cahul	193	2	144	3	168	3
Taraclia	155	4	133	4	144	4
GAGAUZIA ATU	316		330		323	

Source: calculated based on the information from NBS

In case of barley, distribution of rayons by energy potential depending on information provider is as follows:

Place	NBS			MAFI		
	North	Centre	South	North	Centre	South
1	Drochia	Anenii Noi	Causeni	Floresti	Anenii Noi	Causeni
2	Floresti	Orhei	Stefan Voda	Singerei	Orhei	Stefan Voda
3	Falesti	Soldanesti	Cahul	Soroca	Soldanesti	Taraclia
4	Soroca	Hincesti	Taraclia	Drochia	Telenesti	Cahul

Source: calculated based on the information from NBS and MAFI

Assessment of energy potential from corn biomass

During 2009-2010, according to the NBS information, the energy potential of corn biomass was **3,035 TJ**, which represents 77% of grain crops potential.

At the same time, if we use MAFI information, we obtain an energy potential of **22,221 TJ**, which exceeds over 7 times the figure calculated based on NBS data. This large discrepancy may be explained, as mentioned above, through the corn producers' coverage in the statistical evidence.

Table 6.2. **Biomass potential likely to be obtained from corn**

	2009 average, TJ	Place within region, 2009	2010 average, TJ	Place within region, 2010	average 2009 2010, TJ	Place within region, 2009 2010
TOTAL	2,054		4,015		3,035	
NORTH	803		1,585		1,194	
Floresti	129.0	1	263.7	1	196	1
Riscani	125.5	2	228.3	2	177	2
Drochia	102.1	3	207.1	3	155	3
Donduseni	89.5	4	161.1	4	125	4
CENTRE	430		836		633	
Ungheni	97	1	187	1	142	1
Criuleni	55.1	2	122.1	2	88.6	2
Rezina	41.2	5	74.8	3	58.0	3
Hincesti	34.3	8	72.4	4	53.3	4
Soldanesti	43.9	3	52.8	8	48.4	7
Telenesti	41.7	4	59.9	7	50.8	5
SOUTH	627		1195		911	
Cahul	122	2	298	1	210.2	1
Stefan Voda	127	1	207	2	167.1	2
Taraclia	104	3	198	4	151.2	3
Cantemir	99	4	203	3	151.0	4
GAGAUZIA ATU	186		390		288	

Source: calculated based on the information from NBS

At regional level, Northern region provides the highest energy potential from corn biomass – 1,194 TJ, which represents 40%, followed by Southern region – 911 TJ (30%).

According to MAFI information, Northern region provides 9,590 TJ (43%), being on the 1st place, followed by Southern region with 27%.

At rayon level, depending on information suppliers, distribution of rayons as follows:

Place	NBS			MAFI		
	North	Centre	South	North	Centre	South
1	Floresti	Ungheni	Cahul	Floresti	Soldanesti	Stefan Voda
2	Riscani	Criuleni	Stefan Voda	Riscani	Ungheni	Taraclia
3	Drochia	Rezina	Taraclia	Drochia	Rezina	Cahul
4	Donduseni	Hincesti	Cantemir	Soroca	Hincesti	Cantemir

Source: calculated based on the information from NBS and MAFI

Estimating the total potential of biomass by region and rayon

After summarizing the results obtained above, we have the following picture of the total biomass energy potential by region and rayon.

Table 7.1. **Estimating the total potential of biomass by region and rayon**

Biomass energy potential, total by rayon	Energy potential, orchards, TJ	Energy potential, pulses and oilseeds, tobacco, TJ	Energy potential, vineyards, TJ	Energy potential forestry, TJ	Energy potential corn, TJ	Energy potential grains, TJ	Total biomass energy potential, TJ	Position
TOTAL	659,00	12514,20	424,23	484,53	3034,94	3925,16	21042,06	
Development regions								
CHISINAU	16,73	24,85	13,88	29,93	9,58	17,11	112,07	
NORTH	361,26	7216,97	6,52	114,97	1193,80	1754,10	10647,63	
Drochia	22,75	964,19	0,00	3,22	154,58	275,90	1420,63	1
Riscani	34,98	947,96	0,17	6,85	176,90	164,48	1331,34	2
Edinet	23,95	825,34	0,06	29,73	72,88	131,51	1083,46	3
Floresti	38,92	612,46	0,59	7,16	196,35	222,47	1077,95	4
Soroca	53,20	704,11	0,36	8,63	84,05	171,68	1022,03	5
Glodeni	29,92	653,07	0,55	11,61	102,18	152,06	949,39	6
Falesti	23,93	443,54	1,68	10,30	115,73	196,83	792,01	7
Donduseni	34,04	456,60	0,04	5,23	125,30	131,85	753,06	8
Ocnita	33,22	569,06	0,00	7,13	52,16	89,12	750,70	9
Singerei	30,19	473,42	3,08	9,92	69,01	140,07	725,68	10
Briceni	34,65	551,71	0,00	8,19	43,81	73,21	711,57	11
Balti	1,50	15,51	0,00	7,00	0,85	4,92	29,78	12
CENTRE	163,84	1821,24	99,83	251,53	633,07	775,26	3744,76	
Ungheni	12,70	256,50	3,03	19,05	141,90	105,24	538,42	1
Orhei	26,33	251,89	6,50	28,64	34,83	90,42	438,61	2
Hincesti	20,67	175,38	32,07	59,93	53,34	85,32	426,71	3
Soldanesti	15,82	244,05	6,30	20,52	48,37	70,60	405,65	4
Rezina	10,96	229,75	0,00	8,70	58,04	75,24	382,69	5
Criuleni	10,09	180,22	3,78	10,38	88,59	70,96	364,03	6
Telenesti	11,81	179,84	2,57	21,96	50,83	71,55	338,55	7

Anenii Noi	19,43	129,73	20,89	10,62	48,59	102,45	331,71	8
Dubasari	13,33	99,77	0,48	2,47	47,58	50,27	213,90	9
Ialoveni	7,67	45,14	10,08	5,91	28,07	33,71	130,58	10
Straseni	10,25	15,55	6,05	24,93	21,55	11,28	89,62	11
Calarasi	4,26	4,26	7,82	39,71	5,58	4,88	66,51	12
Nisporeni	0,52	9,15	0,28	6,30	5,79	3,33	25,37	13
SOUTH	96,21	2678,14	221,20	72,49	910,56	1055,80	5034,40	
Stefan Voda	25,02	592,91	24,31	8,21	167,14	238,72	1056,30	1
Cahul	13,81	427,08	45,95	15,60	210,16	168,27	880,87	2
Causeni	9,59	372,13	13,30	13,66	98,80	172,51	679,99	3
Taraclia	12,93	296,21	55,86	5,53	151,23	143,98	665,74	4
Cantemir	13,81	339,80	27,23	11,00	150,97	106,30	649,11	5
Leova	3,77	306,94	14,49	4,93	80,36	74,69	485,19	7
Cimislia	12,28	269,56	27,29	10,95	39,64	122,65	482,37	6
Basarabasca	4,99	73,51	12,77	2,25	12,27	28,68	134,46	8
GAGAUZIA ATU	20,97	773,00	82,80	15,62	287,92	322,89	1503,20	

As shown in the table above, the top position in terms of biomass potential is held by the North region, which account for 10647.63 TJ, followed by South (5034.40 TJ) and Centre (3744.76 TJ).

The breakdown by rayon is shown in Table 7.2. below.

Table 7.2. **The first four rayons in each region with the greatest biomass energy potential**

Position	Total biomass energy potential, TJ					
	North		Centre		South	
1	Drochia	1420,63	Ungheni	538,42	Stefan Voda	1056,30
2	Rascani	1331,34	Orhei	438,61	Cahul	880,87
3	Edinet	1083,46	Hancesti	426,71	Causeni	679,99
4	Floresti	1077,95	Soldanesti	405,65	Taraclia	665,74

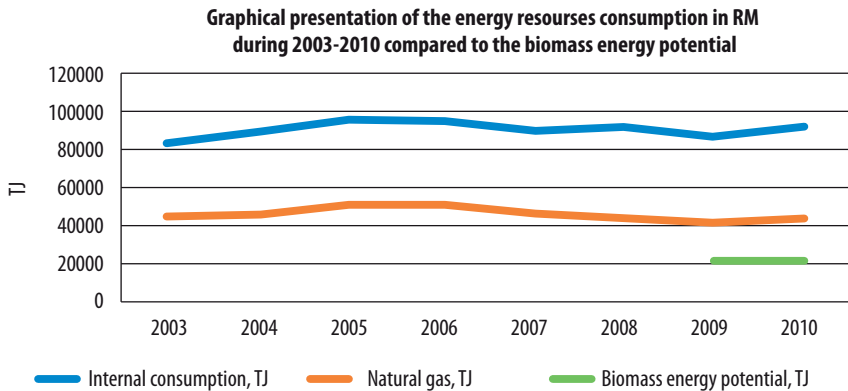
Source: calculated based on the information from NBS

As shown in Table 7.2, Drochia rayon has the greatest potential of biomass at the rayon level (1420 TJ), followed by Stefan-Voda rayon (1056.30 TJ) and Ungheni rayon (538.42 TJ).

About 48% of natural gas imports could be reduced due to biomass resources

After analysing the potential of biomass for each separate rayon, a total potential of about 21,042 TJ per year was obtained based on average values for 2009 and 2010. While comparing this result with domestic consumption of energy resources of the Republic of Moldova, which was about 92,544 TJ in 2010, we found that 22% of total needs of energy resources can be covered by biomass.

Chart 8.1. **Consumption of energy resources compared to potential of biomass-based energy for period 2009-2010**



Source: Calculated based on the information from NBS

Text Box: Graphical representation of energy resources in the Republic of Moldova during 2003-2010 compared to biomass-based energy potential

Moreover, this is a rather essential finding, given that the Republic of Moldova is 95% dependent on imported energy resources. Therefore, approximately 48% of natural gas imports could be reduced due to biomass resources, natural gas imports in 2010 amounted to approximately 43,295 TJ.

Conclusions and recommendations

Because the main objective of the study was to identify the top reasons by the biomass potential, the analysis results show a more conservative/pessimist scenario due to several reasons. Below, from the point of view of experts of IDIS “Viitorul”, it will be highlighted the most important problems and the possible solutions related to the assessment of energy potential of biomass from crops and measures referring to the growth of the briquettes and pellets production at national level. Thus:

1. There were performed calculations with the available data for 2009 and 2010 regarding areas of the agricultural enterprises and peasant households with agricultural land of 10 ha and more. From the examples highlighted above it can be clearly noticed that the statistics of the NBS differs in many situations from the statistics of the Ministry of Agricultural and Food Industry. From this point of view, it can be easily noticed that there are considerable resources in terms of increasing the total biomass potential for briquettes production.
2. Another important reserve for increasing the final potential is the residues and the availability coefficients used, especially for grain crops, which can be greatly improved with the help of some governmental policies focused on this issue and in the context of building new biofuel market.
3. Expenditures for reducing household heating belong also to current practices of biomass use, the population in this sense being accustomed to use it in its primary form which is less efficient. From this point of view, briquetting and the improvement of combustion technologies would allow cutting expenses for household heating.
4. It is to be mentioned that residues of the most important cultivated crops were taken into account, while significant quantities of biomass can also be obtained from other types of plants and non-agricultural crops as thicket, wild bushes, energetic plants and many other cultures that grow in the meadow areas, bottom land etc.
5. The data regarding walnut plantations were not taken into account in this research, because their areas are very small and the nut trees

do not need pruning, however, these plantations will have an increasing interest for the nutshell in 8-10 years due to the growing areas of walnut plantations. The statistical data show an increase in the total area of walnut plantations from 3,553 ha in 2009 to 4,430 in 2010, while the total area of bearing plantations for 2010 was only 512 ha.

6. In order to determine the absolute potential of biomass for the production of briquettes/pellets, in the absence of complete statistical data, it is recommended to use the data of the agricultural census conducted in 2011. The census results were not available (processed by NBS) yet at the time this study was conducted.
7. According to the calculations made, each of the reviewed region: North (10,647.63 TJ), Centre (3,744.76 TJ), South (5,034.40 TJ) and ATU Gagauzia (1,503.20 TJ), has the necessary and sufficient local biomass potential to launch profitable businesses in the field of briquettes and pellets production, using the raw material (raw materials) predominant in that area.
8. The first 4 rayons from each region, with the highest biomass energy potential can be identified in the Table below:

Place	Total biomass energy potential, TJ					
	North		Centre		South	
1	Drochia	1,420.63	Ungheni	538.42	Stefan Voda	1,056.30
2	Riscani	1,331.34	Orhei	438.61	Cahul	880.87
3	Edinet	1,083.46	Hincesti	426.71	Causeni	679.99
4	Floresti	1,077.95	Soldanesti	405.65	Taraclia	665.74

Source: calculated by IDIS “Viitorul” based on the information from NBS

1. After analysing the potential of biomass for each separate rayon, at national level, a total potential of about **21,042 TJ** per year was obtained based on average values for 2009 and 2010. While comparing this result with domestic consumption of energy resources of the Republic of Moldova, which was about **92,544 TJ** in 2010, we found that 22% of total needs of energy resources can be covered by biomass. Moreover, this conclusion is a rather essential finding, given that the Republic of Moldova is 95% dependent on imported

energy resources, thus we could certainly affirm that the energy sources of biomass equals, at least to the energy potential of approximately 48% of natural gas imports, if we take into consideration the fact that the natural gas imports in 2010 amounted to 43,295 TJ.

2. It is necessary that the NBS revises the methodology for collection of data and information on agricultural crops, as well as their structure in order to keep the total real evidence of real areas of agricultural plantations which represent the most important resources of local biomass. In this sense, it would be useful to maintain and publish separately data on residues of agricultural crops that can be used as renewable energy sources.
3. According to interviews conducted with producers and according to survey results, conducted countrywide, we found that people do not have sufficient knowledge about biomass and its advantages. Respectively, it is proposed to intensify the actions for public/decision-makers information with regard to possibilities of using alternative energy sources, especially biomass to produce energy in a comfortable way.
4. Taking into account that production of briquettes and pellets is not regulated by law it is recommended to adopt a law to provide for all the biomass types that can be largely used (or prohibited), rules and norms for production and distribution activity.
5. Since the Republic of Moldova does not have national standards in place that would include technological norms, quality requirements, calorie limits for each type of product etc., it is recommended to develop regulatory norms in this sense, so that each producer of briquettes and pellets to comply with technical norms and quality standards.
6. For state's energetic security, the survey revealed the need to amend some legislative documents related to fiscal legislation, with the help of which manufacturers of biomass production would get tax facilities on imported technology, equipment and machinery, which would reduce the production costs.

7. In order to attract investments in briquettes and pellets production, and to facilitate initiating businesses in this area an income tax relief, for example, for a period of 3 years and a reduction of up to 50% of the invested resources after the innitial three years of activity.
8. In order to access funding for the potential producers it is required to develop programs to support business in the area of briquettes and pellets production, including use of the Program to attract re-mittances in the economy - PARE 1 +1.

References:

- [1]. Strategia privind valorificarea potențialului de biomasă și direcții de acțiune pentru dezvoltare și utilizare, pentru anii 2011-2015
- [2]. I. Hăbășescu, V. Cerempei, Energy potential si perspectivele utilizarii biomasei in Republica Moldova Institutul de Tehnică Agricolă „Mecagro”, Chișinău
- [3]. www.eubia.org . Datele sunt prezentate pentru straw maruntite cu umiditatea 15%, pentru lemn datele sunt prezentate pentru aschii forestiere cu umeditatea de 30%, iar aschii industriale 20%.
- [4]. V. Arion, C. Bordeianu, A. Boșcăneanu, A- Capcelea, S. Drucioc, C. Gherman. Biomasa si utilizarea ei in scopuri energetice, Editura „Garomond-Studio” Ltd, 2008.
- [5] Valentin Arion, Cristina Gherman, Sergiu Ungureanu. SOLID BIOMASS POTENTIAL ASSESSMENT FOR MOLDOVA Technical University of Moldova, 6TH INTERNATIONAL CONFERENCE ON ELECTRICAL AND POWER ENGINEERING, 28-30 October 2010 - Iași, Romania
- [6]. Regional Renewable Energy Assessment Biomass in Moldova. Project, USAID - HELLENIC AID ENERGY COOPERATION,
- [7]. <http://christianferoviarul.blogspot.com/2009/02/densitatea-celor-mai-uzuale-materiale.html>, Densitatea celor mai uzuale materiale
- [8]. <http://www.scribd.com/doc/72268539/Surse-de-energie> ; <http://www.kasin.org/pdf/chapter2.pdf> И.В. Масаев, Б.А. Пермяков “Топливо из бытовых и растительных отходов”, Глава 2.; <http://www.scribd.com/doc/35222909/Ghid-sisteme-hibrid>.

Anexes

Anex nr. 2.1 Wineyard plantations, residues and thermal capacity, 2009

Yelding wineyards, enterprises and family farms with a cultivated area of 10 and more hectares						
Plantations per rayon	Yelding plantations, 2010					
	Total	residues, t/ha min	residues, t/ha max	thermal capacity, TJ min	thermal capacity, TJ max	Rank
TOTAL național pe rod	136.000	108800	149600	1583,04	2176,68	
Total terenuri agricole de 10 ha și peste	31744	25395,2	34918,4	369,50016	508,06272	
Development regions		0	0	0	0	
m. CHIȘINĂU	992	793,6	1091,2	11,54688	15,87696	
		0				
NORD	507	405,6	557,7	5,90148	8,114535	
mun. Bălți		0	0	0	0	
Briceni		0	0	0	0	
Dondușeni	3	2,4	3,3	0,03492	0,048015	8
Drochia		0	0	0	0	
Edineț	4	3,2	4,4	0,04656	0,06402	7
Fălești	117	93,6	128,7	1,36188	1,872585	2
Florești	51	40,8	56,1	0,59364	0,816255	3
Glodeni	39	31,2	42,9	0,45396	0,624195	5
Ocnîța		0	0	0	0	
Rîșcani	12	9,6	13,2	0,13968	0,19206	6
Sîngerei	236	188,8	259,6	2,74704	3,77718	1
Soroca	45	36	49,5	0,5238	0,720225	4
CENTRU	7340	5872	8074	85,4376	117,4767	
Anenii Noi	1519	1215,2	1670,9	17,68116	24,311595	2
Călărași	504	403,2	554,4	5,86656	8,06652	5
Criuleni	332	265,6	365,2	3,86448	5,31366	7
Dubăsari	25	20	27,5	0,291	0,400125	10
Hîncești	2204	1763,2	2424,4	25,65456	35,27502	1

Yielding vineyards, enterprises and family farms with a cultivated area of 10 and more hectares

Plantations per rayon	Yielding plantations, 2010					
	Total	residues, t/ha		thermal capacity, TJ		Rank
		min	max	min	max	
Ialoveni	968	774,4	1064,8	11,26752	15,49284	3
Nisporeni	32	25,6	35,2	0,37248	0,51216	9
Orhei	414	331,2	455,4	4,81896	6,62607	6
Rezina		0	0	0	0	
Șoldănești	6	4,8	6,6	0,06984	0,09603	11
Strășeni	892	713,6	981,2	10,38288	14,27646	4
Telenești	185	148	203,5	2,1534	2,960925	8
Ungheni	259	207,2	284,9	3,01476	4,145295	12
SUD	16202	12961,6	17822,2	188,59128	259,31301	
Basarabeasca	920	736	1012	10,7088	14,7246	7
Cahul	3326	2660,8	3658,6	38,71464	53,23263	2
Cantemir	1909	1527,2	2099,9	22,22076	30,553545	4
Căușeni	843	674,4	927,3	9,81252	13,492215	8
Cimișlia	2330	1864	2563	27,1212	37,29165	3
Leova	959	767,2	1054,9	11,16276	15,348795	6
Ștefan Vodă	1742	1393,6	1916,2	20,27688	27,88071	5
Taraclia	4173	3338,4	4590,3	48,57372	66,788865	1
UTA GĂGĂUZIA	6703	5362,4	7373,3	78,02292	107,28152	

Anex nr.2.2. **Wineyard plantations, residues and thermal capacity, 2010**

Yelding vineyards, enterprises and family farms with a cultivated area of 10 and more hectares						
Plantations per rayon	Yelding plantations, 2010					
	Total	residues, t/ha	residues, t/ha	thermal capacity, TJ	thermal capacity, TJ	Rank
		min	max	min	max	
TOTAL national yelding	133.000	106400	146300	1548,12	2128,665	
TOTAL terenuri agricole de 10 ha si peste ha	29638	23710,4	32601,8	344,98632	474,35619	
Development regions		0	0	0	0	
m. CHIȘINĂU	1016	812,8	1117,6	11,82624	16,26108	
		0	0	0	0	
NORD	437	349,6	480,7	5,08668	6,994185	
mun.Bălți		0	0	0	0	
Briceni		0	0	0	0	
Dondușeni	3	2,4	3,3	0,03492	0,048015	8
Drochia		0	0	0	0	
Edineț	4	3,2	4,4	0,04656	0,06402	7
Fălești	126	100,8	138,6	1,46664	2,01663	2
Florești	35	28	38,5	0,4074	0,560175	4
Glodeni	41	32,8	45,1	0,47724	0,656205	3
Ocnîța		0	0	0	0	
Rîșcani	12	9,6	13,2	0,13968	0,19206	5
Sîngerei	209	167,2	229,9	2,43276	3,345045	1
Soroca	7	5,6	7,7	0,08148	0,112035	6
CENTRU	7104	5683,2	7814,4	82,69056	113,69952	
Anenii Noi	1503	1202,4	1653,3	17,49492	24,055515	2
Călărași	627	501,6	689,7	7,29828	10,035135	4
Criuleni	215	172	236,5	2,5026	3,441075	7
Dubăsari	44	35,2	48,4	0,51216	0,70422	11
Hîncești	2436	1948,8	2679,6	28,35504	38,98818	1
Ialoveni	491	392,8	540,1	5,71524	7,858455	6
Nisporeni	8	6,4	8,8	0,09312	0,12804	13
Orhei	526	420,8	578,6	6,12264	8,41863	5

Yielding vineyards, enterprises and family farms with a cultivated area of 10 and more hectares

Plantations per rayon	Yielding plantations, 2010					
	Total	residues, t/ha	residues, t/ha	thermal capacity, TJ	thermal capacity, TJ	Rank
		min	max	min	max	
Rezina		0	0	0	0	
Șoldănești	869	695,2	955,9	10,11516	13,908345	3
Strășeni	19	15,2	20,9	0,22116	0,304095	12
Telenești	187	149,6	205,7	2,17668	2,992935	8
Ungheni	179	143,2	196,9	2,08356	2,864895	9
SUD	15804	12643,2	17384,4	183,95856	252,94302	
Basarabeasca	927	741,6	1019,7	10,79028	14,836635	8
Cahul	3323	2658,4	3655,3	38,67972	53,184615	2
Cantemir	2031	1624,8	2234,1	23,64084	32,506155	3
Căușeni	1082	865,6	1190,2	12,59448	17,31741	7
Cimișlia	1618	1294,4	1779,8	18,83352	25,89609	5
Leova	1138	910,4	1251,8	13,24632	18,21369	6
Ștefan Vodă	1775	1420	1952,5	20,661	28,408875	4
Taraclia	3910	3128	4301	45,5124	62,57955	1
UTA GĂGĂUZIA	5277	4221,6	5804,7	61,42428	84,458385	

Anex nr.2.3. Vineyard plantations, average thermal capacity, data for 2009 and 2010.

Yielding vineyards, enterprises and family farms with a cultivated area of 10 and more hectares

Wineyards per rayon	Total					
	2009 (average)	Rank	2010 (average)	Rank	Average (2009 si 2010)	Rank
TOTAL național pe rod	1879,86		1838,4		1859,126	
TOTAL terenuri agricole de 10 ha și peste	438,781		409,7		424,2263	
Development regions						
m. CHIȘINĂU	13,7119		14,04		13,87779	
NORD	7,00801		6,04		6,52422	
mun. Bălți						
Briceni						

Yielding vineyards, enterprises and family farms with a cultivated area of 10 and more hectares

Wineyards per rayon	Total					
	2009 (average)	Rank	2010 (average)	Rank	Average (2009 si 2010)	Rank
Dondușeni	0,04147	8	0,041	8	0,041468	8
Drochia						
Edineț	0,05529	7	0,055	7	0,05529	7
Fălești	1,61723	2	1,742	2	1,679434	2
Florești	0,70495	3	0,484	4	0,594368	3
Glodeni	0,53908	5	0,567	3	0,5529	4
Ocnîța						
Rîșcani	0,16587	6	0,166	5	0,16587	6
Sîngerei	3,26211	1	2,889	1	3,075506	1
Soroca	0,62201	4	0,097	6	0,359385	5
CENTRU	101,457		98,2		99,8261	
Anenii Noi	20,9964	2	20,78	2	20,8858	2
Călărași	6,96654	5	8,667	4	7,816624	4
Criuleni	4,58907	7	2,972	7	3,780454	8
Dubăsari	0,34556	10	0,608	11	0,476876	11
Hîncești	30,4648	1	33,67	1	32,0682	1
Ialoveni	13,3802	3	6,787	6	10,08351	3
Nisporeni	0,44232	9	0,111	13	0,27645	12
Orhei	5,72252	6	7,271	5	6,496575	5
Rezina						
Șoldănești	0,08294	11	12,01	3	6,047344	7
Strășeni	12,3297	4	0,263	12	6,296149	6
Telenești	2,55716	8	2,585	8	2,570985	10
Ungheni	3,58003	12	2,474	9	3,027128	9
SUD	223,952		218,5		221,2015	
Basarabasca	12,7167	7	12,81	8	12,76508	8
Cahul	45,9736	2	45,93	2	45,9529	2
Cantemir	26,3872	4	28,07	3	27,23033	4
Căușeni	11,6524	8	14,96	7	13,30416	7
Cimișlia	32,2064	3	22,36	5	27,28562	3
Leova	13,2558	6	15,73	6	14,49289	6
Ștefan Vodă	24,0788	5	24,53	4	24,30687	5
Taraclia	57,6813	1	54,05	1	55,86363	1
UTA GĂGĂUZIA	92,6522		72,94		82,79678	

Anex 3.1. Potential energy that can be produced from biomass collected in fruit orchards, at enterprises and family farms with a cultivated area of 10 and more hectares. According to National Bureau of Statistics, 2009

Fruit plantations per rayon	Total orchards, ha	Available biomass potential, t		Energy potential, TJ		Rank
		minim	max	minim	max	
TOTAL	36804	41956,56	52445,70	629,35	786,69	
Development regions						
m. CHIȘINĂU	909	1036,26	1295,33	15,54	19,43	
NORD	19238	21931,32	27414,15	328,97	411,21	
mun. Bălți	78	88,92	111,15	1,33	1,67	12
Briceni	1774	2022,36	2527,95	30,34	37,92	6
Dondușeni	1850	2109,00	2636,25	31,64	39,54	5
Drochia	1252	1427,28	1784,10	21,41	26,76	11
Edineț	1311	1494,54	1868,18	22,42	28,02	9
Fălești	1253	1428,42	1785,53	21,43	26,78	10
Florești	1875	2137,50	2671,88	32,06	40,08	4
Glodeni	1556	1773,84	2217,30	26,61	33,26	8
Ocnîța	1883	2146,62	2683,28	32,20	40,25	3
Rîșcani	1978	2254,92	2818,65	33,82	42,28	2
Sîngerei	1662	1894,68	2368,35	28,42	35,53	7
Soroca	2766	3153,24	3941,55	47,30	59,12	1
CENTRU	9677	11031,78	13789,73	165,48	206,85	
Anenii Noi	1078	1228,92	1536,15	18,43	23,04	2
Călărași	296	337,44	421,80	5,06	6,33	12
Criuleni	598	681,72	852,15	10,23	12,78	10
Dubăsari	727	828,78	1035,98	12,43	15,54	6
Hîncești	1047	1193,58	1491,98	17,90	22,38	3
Ialoveni	527	600,78	750,98	9,01	11,26	11

Fruit plantations per rayon	Total orchards, ha	Available biomass potential, t		Energy potential, TJ		Rank
		minim	max	minim	max	
Nisporeni		0,00	0,00	0,00	0,00	13
Orhei	1512	1723,68	2154,60	25,86	32,32	1
Rezina	905	1031,70	1289,63	15,48	19,34	5
Strășeni	609	694,26	867,83	10,41	13,02	9
Șoldănești	1040	1185,60	1482,00	17,78	22,23	4
Telenesti	660	752,40	940,50	11,29	14,11	8
Ungheni	678	772,92	966,15	11,59	14,49	7
SUD	5642	6431,88	8039,85	96,48	120,60	
Basarabasca	305	347,70	434,63	5,22	6,52	7
Cahul	794	905,16	1131,45	13,58	16,97	3
Cantemir	796	907,44	1134,30	13,61	17,01	2
Căușeni	537	612,18	765,23	9,18	11,48	6
Cimișlia	721	821,94	1027,43	12,33	15,41	5
Leova	211	240,54	300,68	3,61	4,51	8
Ștefan Vodă	1504	1714,56	2143,20	25,72	32,15	1
Taraclia	774	882,36	1102,95	13,24	16,54	4
UTA GĂGĂUZIA	1338	1525,32	1906,65	22,88	28,60	

Source: National Bureau of Statistics, data processed by author

Anex 3.2. **Potential energy that can be produced from biomass collected in fruit orchards, at enterprises and family farms with a cultivated area of 10 and more hectares. According to National Bureau of Statistics, 2010**

Fruit plantations per rayon	Total orchards, ha	Available biomass potential, t		Energy potential, TJ		Rank
		minim	max	minim	max	
TOTAL	31708	36147,12	45183,90	542,21	677,76	
Development regions						
m. CHIȘINĂU	830	946,20	1182,75	14,19	17,74	
NORD	18320	20884,80	26106,00	313,27	391,59	
mun.Bălți	78	88,92	111,15	1,33	1,67	12
Briceni	1828	2083,92	2604,90	31,26	39,07	3
Dondușeni	1689	1925,46	2406,83	28,88	36,10	4
Drochia	1113	1268,82	1586,03	19,03	23,79	11
Edineț	1179	1344,06	1680,08	20,16	25,20	10
Fălești	1235	1407,90	1759,88	21,12	26,40	9
Florești	2171	2474,94	3093,68	37,12	46,41	2
Glodeni	1555	1772,70	2215,88	26,59	33,24	7
Ocnîța	1571	1790,94	2238,68	26,86	33,58	6
Rîșcani	1659	1891,26	2364,08	28,37	35,46	5
Sîngerei	1477	1683,78	2104,73	25,26	31,57	8
Soroca	2765	3152,10	3940,13	47,28	59,10	1
CENTRU	7356	8385,84	10482,30	125,79	157,23	
Anenii Noi	942	1073,88	1342,35	16,11	20,14	3
Călărași	147	167,58	209,48	2,51	3,14	12
Criuleni	451	514,14	642,68	7,71	9,64	9
Dubăsari	659	751,26	939,08	11,27	14,09	4
Hîncești	1102	1256,28	1570,35	18,84	23,56	2
Ialoveni	270	307,80	384,75	4,62	5,77	11

Fruit plantations per rayon	Total orchards, ha	Available biomass potential, t		Energy potential, TJ		Rank
		minim	max	minim	max	
Nisporeni	54	61,56	76,95	0,92	1,15	13
Orhei	1225	1396,50	1745,63	20,95	26,18	1
Rezina	234	266,76	333,45	4,00	5,00	10
Strășeni	457	520,98	651,23	7,81	9,77	8
Șoldănești	605	689,70	862,13	10,35	12,93	6
Telenesti	568	647,52	809,40	9,71	12,14	7
Ungheni	642	731,88	914,85	10,98	13,72	5
SUD	4360	4970,40	6213,00	74,56	93,20	
Basarabeasca	214	243,96	304,95	3,66	4,57	7
Cahul	642	731,88	914,85	10,98	13,72	2
Cantemir	640	729,60	912,00	10,94	13,68	3
Căușeni	460	524,40	655,50	7,87	9,83	6
Cimișlia	556	633,84	792,30	9,51	11,88	5
Leova	181	206,34	257,93	3,10	3,87	8
Ștefan Vodă	1097	1250,58	1563,23	18,76	23,45	1
Taraclia	570	649,80	812,25	9,75	12,18	4
UTA GĂGĂUZIA	842	959,88	1199,85	14,40	18,00	

Source: National Bureau of Statistics, data processed by author

Anex 3.3. Potential energy that can be produced from biomass collected in fruit orchards, data from the Ministry of Agriculture for 2009

Yelding orchards per rayon	Total area of orchards, ha	Availabel biomass potential, t		Energy potential, TJ, 2009			Rank
		minim	maxim	minim	maxim	Average	
TOTAL	51989	59267,46	74084,33	889,01	1111,26	1000,14	
Development regions							
m. CHIȘINĂU	1207	1375,98	1719,98	20,64	25,80	23,22	

Yelding orchards per rayon	Total area of orchards, ha	Availabel biomass potential, t		Energy potential, TJ, 2009			Rank
		minim	maxim	minim	maxim	Average	
NORD	24522	27955,08	34943,85	419,33	524,16	471,74	
mun.Bălți	104	118,56	148,20	1,78	2,22	2,00	
Briceni	2500	2850,00	3562,50	42,75	53,44	48,09	2
Dondușeni	2412	2749,68	3437,10	41,25	51,56	46,40	3
Drochia	1452	1655,28	2069,10	24,83	31,04	27,93	
Edineț	1665	1898,10	2372,63	28,47	35,59	32,03	
Fălești	1414	1611,96	2014,95	24,18	30,22	27,20	
Florești	2390	2724,60	3405,75	40,87	51,09	45,98	4
Glodeni	1676	1910,64	2388,30	28,66	35,82	32,24	
Ocnița	2336	2663,04	3328,80	39,95	49,93	44,94	5
Rîșcani	2095	2388,30	2985,38	35,82	44,78	40,30	
Sîngerei	2072	2362,08	2952,60	35,43	44,29	39,86	
Soroca	4406	5022,84	6278,55	75,34	94,18	84,76	1
CENTRU	14937	17028,18	21285,23	255,42	319,28	287,35	
Anenii Noi	1991	2269,74	2837,18	34,05	42,56	38,30	2
Călărași	396	451,44	564,30	6,77	8,46	7,62	
Criuleni	1340	1527,60	1909,50	22,91	28,64	25,78	
Dubăsari	853	972,42	1215,53	14,59	18,23	16,41	
Hîncești	1479	1686,06	2107,58	25,29	31,61	28,45	3
Ialoveni	527	600,78	750,98	9,01	11,26	10,14	
Nisporeni	44	50,16	62,70	0,75	0,94	0,85	
Orhei	2226	2537,64	3172,05	38,06	47,58	42,82	1
Rezina	1056	1203,84	1504,80	18,06	22,57	20,31	
Strășeni	1160	1322,40	1653,00	19,84	24,80	22,32	
Șoldănești	1452	1655,28	2069,10	24,83	31,04	27,93	4
Telenesti	994	1133,16	1416,45	17,00	21,25	19,12	
Ungheni	1419	1617,66	2022,08	24,26	30,33	27,30	5
SUD	8865	10106,10	12632,63	151,59	189,49	170,54	
Basarabeasca	371	422,94	528,68	6,34	7,93	7,14	
Cahul	1358	1548,12	1935,15	23,22	29,03	26,12	3
Cantemir	1464	1668,96	2086,20	25,03	31,29	28,16	2

Yelding orchards per rayon	Total area of orchards, ha	Availabel biomass potential, t		Energy potential, TJ, 2009			Rank
		minim	maxim	minim	maxim	Average	
Căușeni	744	848,16	1060,20	12,72	15,90	14,31	
Cimișlia	892	1016,88	1271,10	15,25	19,07	17,16	5
Leova	821	935,94	1169,93	14,04	17,55	15,79	
Ștefan Vodă	2256	2571,84	3214,80	38,58	48,22	43,40	1
Taraclia	959	1093,26	1366,58	16,40	20,50	18,45	4
UTA GĂGĂUZIA	2458	2802,12	3502,65	42,03	52,54	47,29	

Source: Ministry of Agriculture and Food Industry for 2009, data processed by author

Anex 4.1. Biomass potential of forest and wood residues in Moldova 2009

Biomass potential of forest and wood residues in Moldova 2009										
	Production of branches				Wood residues from wood processing industry			Total energy potential, TJ	Rank	
	Total area of forests S, ha	Quantity of branches V ₁		Available potential	Energy potential	Total residues	Available potential			Energy potential
		m ³	tone							
1	2	3	4	5	6	7	8	9=5+8		
TOTAL	423979,90	61477,09	24590,83	22131,75	331,98	9752,80	8777,52	131,66	463,64	
CHIȘINĂU	8522,30	1235,73	494,29	444,86	6,67	3342,20	3007,98	45,12	51,79	
NORD (total)	97848,59	14188,05	5675,22	5107,70	76,62	2728,40	2455,56	36,83	113,45	
mun. Bălți	754,38	109,39	43,75	39,38	0,59	296,60	266,94	4,00	4,59	11
Briceni	9542,00	1383,59	553,44	498,09	7,47		0,00	0,00	7,47	7
Dondușeni	5615,45	814,24	325,70	293,13	4,40	62,00	55,80	0,84	5,23	10
Drochia	3268,15	473,88	189,55	170,60	2,56	31,00	27,90	0,42	2,98	12
Edineț	7978,48	1156,88	462,75	416,48	6,25	2101,90	1891,71	28,38	34,62	1
Fălești	12003,91	1740,57	696,23	626,60	9,40		0,00	0,00	9,40	3
Florești	8364,24	1212,81	485,13	436,61	6,55		0,00	0,00	6,55	8
Glodeni	10624,73	1540,59	616,23	554,61	8,32	221,50	199,35	2,99	11,31	2
Ocnița	8323,51	1206,91	482,76	434,49	6,52		0,00	0,00	6,52	9
Rîșcani	10065,19	1459,45	583,78	525,40	7,88		0,00	0,00	7,88	5
Sîngerei	11276,21	1635,05	654,02	588,62	8,83	15,40	13,86	0,21	9,04	4

Biomass potential of forest and wood residues in Moldova 2009

	Production of branches					Wood residues from wood processing industry			Total energy potential, TJ	Rank
	Total area of forests S_f , ha	Quantity of branches V_1		Available potential tone	Energy potential TJ	Total residues tone	Available potential tone	Energy potential TJ		
		m ³	tone							
Soroca	10032,34	1454,69	581,88	523,69	7,86		0,00	0,00	7,86	6
CENTRU (total)	210798,00	30565,71	12226,28	11003,66	165,05	3416,90	3075,21	46,13	211,18	
Anenii Noi	12031,67	1744,59	697,84	628,05	9,42		0,00	0,00	9,42	11
Călărași	23362,70	3387,59	1355,04	1219,53	18,29		0,00	0,00	18,29	6
Criuleni	7945,83	1152,15	460,86	414,77	6,22	496,80	447,12	6,71	12,93	8
Dubăsari	2829,81	410,32	164,13	147,72	2,22	5,00	4,50	0,07	2,28	13
Hîncești	38513,56	5584,47	2233,79	2010,41	30,16	512,30	461,07	6,92	37,07	1
Ialoveni	14302,50	2073,86	829,55	746,59	11,20	18,00	16,20	0,24	11,44	10
Nisporeni	15344,69	2224,98	889,99	800,99	12,01	14,00	12,60	0,19	12,20	9
Orhei	24877,67	3607,26	1442,90	1298,61	19,48	732,00	658,80	9,88	29,36	2
Rezina	10065,00	1459,43	583,77	525,39	7,88	6,70	6,03	0,09	7,97	12
Strășeni	26726,22	3875,30	1550,12	1395,11	20,93	205,60	185,04	2,78	23,70	4
Șoldănești	11604,16	1682,60	673,04	605,74	9,09	1090,70	981,63	14,72	23,81	3
Telenesti	12353,40	1791,24	716,50	644,85	9,67	776,30	698,67	10,48	20,15	5
Ungheni	21394,80	3102,25	1240,90	1116,81	16,75	71,80	64,62	0,97	17,72	7
SUD (total)	88948,75	12897,57	5159,03	4643,12	69,65	210,30	189,27	2,84	72,49	
Basarabeasca	2923,82	423,95	169,58	152,62	2,29		0,00	0,00	2,29	8
Cahul	17947,30	2602,36	1040,94	936,85	14,05	28,30	25,47	0,38	14,43	1
Cantemir	12808,70	1857,26	742,90	668,61	10,03		0,00	0,00	10,03	3
Căușeni	15887,70	2303,72	921,49	829,34	12,44		0,00	0,00	12,44	2
Cimișlia	12720,50	1844,47	737,79	664,01	9,96		0,00	0,00	9,96	4
Leova	11539,35	1673,21	669,28	602,35	9,04	18,00	16,20	0,24	9,28	5
Ștefan Vodă	9583,12	1389,55	555,82	500,24	7,50		0,00	0,00	7,50	6
Taraclia	5538,26	803,05	321,22	289,10	4,34	109,00	98,10	1,47	5,81	7
UTA GĂGĂUZIA	17862,20	2590,02	1036,01	932,41	13,99	55,00	49,50	0,74	14,73	

Anex 4.2. Biomass potential of forest and wood residues in Moldova 2010

Biomass potential of forest and wood residues in Moldova 2010										
	Production of branches					Wood residues from wood processing industry			Total energy potential, TJ	Rank
	Total area of forests S ₂ ha	Quantity of branches V ₁		Available potential tone	Energy potential TJ	Total residues tone	Available potential tone	Energy potential TJ		
		m ³	tone							
1	2	3	4		5	6	7	8	9=5+8	
TOTAL	393020,30	67599,49	27039,80	24335,82	365,04	10398,90	9359,01	140,39	505,42	
		0,00	0,00	0,00	0,00		0,00	0,00	0,00	
Chişinău	8677,21	1492,48	596,99	537,29	8,06		0,00	0,00	8,06	
		0,00	0,00	0,00	0,00		0,00	0,00	0,00	
NORD (total)	94736,50	16294,68	6517,87	5866,08	87,99	2111,00	1899,90	28,50	116,49	
mun. Bălţi	754,38	129,75	51,90	46,71	0,70	644,50	580,05	8,70	9,40	6
Briceni	9562,20	1644,70	657,88	592,09	8,88	2,60	2,34	0,04	8,92	7
Donduşeni	5632,81	968,84	387,54	348,78	5,23		0,00	0,00	5,23	11
Drochia	3323,97	571,72	228,69	205,82	3,09	27,10	24,39	0,37	3,45	12
Edineţ	7978,82	1372,36	548,94	494,05	7,41	1290,30	1161,27	17,42	24,83	1
Făleşti	12060,39	2074,39	829,75	746,78	11,20		0,00	0,00	11,20	3
Floreşti	8368,08	1439,31	575,72	518,15	7,77		0,00	0,00	7,77	8
Glodeni	10703,13	1840,94	736,38	662,74	9,94	145,20	130,68	1,96	11,90	2
Ocnîţa	8326,51	1432,16	572,86	515,58	7,73	1,30	1,17	0,02	7,75	9
Rîşcani	6273,90	1079,11	431,64	388,48	5,83		0,00	0,00	5,83	10
Sîngerei	11635,97	2001,39	800,55	720,50	10,81		0,00	0,00	10,81	4
Soroca	10116,34	1740,01	696,00	626,40	9,40		0,00	0,00	9,40	5
		0,00	0,00	0,00	0,00		0,00	0,00	0,00	
CENTRU (total)	193784,97	33331,01	13332,41	11999,17	179,99	8287,90	7459,11	111,89	291,87	
Anenii Noi	12148,92	2089,61	835,85	752,26	11,28	39,90	35,91	0,54	11,82	8
Călăraşi	23133,34	3978,93	1591,57	1432,42	21,49	2936,90	2643,21	39,65	61,13	2
Criuleni	7969,19	1370,70	548,28	493,45	7,40	32,50	29,25	0,44	7,84	10
Dubăsari	2850,81	490,34	196,14	176,52	2,65		0,00	0,00	2,65	11
Hînceşti	38674,11	6651,95	2660,78	2394,70	35,92	3471,10	3123,99	46,86	82,78	1
Ialoveni	397,00	68,28	27,31	24,58	0,37		0,00	0,00	0,37	13
Nisporeni	293,18	50,43	20,17	18,15	0,27	9,80	8,82	0,13	0,40	12

Biomass potential of forest and wood residues in Moldova 2009										
	Production of branches					Wood residues from wood processing industry			Total energy potential, TJ	Rank
	Total area of forests S ₂ ha	Quantity of branches V ₁		Available potential tone	Energy potential TJ	Total residues tone	Available potential tone	Energy potential TJ		
		m ³	tone							
Orhei	25121,14	4320,84	1728,33	1555,50	23,33	339,40	305,46	4,58	27,91	3
Rezina	10084,22	1734,49	693,79	624,41	9,37	4,70	4,23	0,06	9,43	9
Strășeni	26726,22	4596,91	1838,76	1654,89	24,82	99,20	89,28	1,34	26,16	4
Șoldănești	11702,62	2012,85	805,14	724,63	10,87	471,70	424,53	6,37	17,24	7
Telenesti	12812,18	2203,69	881,48	793,33	11,90	878,50	790,65	11,86	23,76	5
Ungheni	21872,04	3761,99	1504,80	1354,32	20,31	4,20	3,78	0,06	20,37	6
		0,00	0,00	0,00	0,00		0,00	0,00	0,00	
SUD (total)	78041,89	13423,21	5369,28	4832,35	72,49		0,00	0,00	72,49	
Basarabesca	2381,23	409,57	163,83	147,45	2,21		0,00	0,00	2,21	7
Cahul	18048,68	3104,37	1241,75	1117,57	16,76		0,00	0,00	16,76	1
Cantemir	12881,71	2215,65	886,26	797,64	11,96		0,00	0,00	11,96	3
Căușeni	16013,07	2754,25	1101,70	991,53	14,87		0,00	0,00	14,87	2
Cimișlia	12862,35	2212,32	884,93	796,44	11,95		0,00	0,00	11,95	4
Leova	615,98	105,95	42,38	38,14	0,57		0,00	0,00	0,57	8
Ștefan Vodă	9594,07	1650,18	660,07	594,06	8,91		0,00	0,00	8,91	5
Taraclia	5644,80	970,91	388,36	349,53	5,24		0,00	0,00	5,24	6
		0,00	0,00	0,00	0,00		0,00	0,00	0,00	
UTA GĂGĂUZIA	17779,77	3058,12	1223,25	1100,92	16,51		0,00	0,00	16,51	

Anex 4.3. Energy potential that can be obtained from forest and wood residues in Moldova 2009-2010

	2009		2010		2009-2010	
	Total, TJ	Rank	Total, TJ	Rank	Average	Rank
TOTAL	463,64		505,42		484,53	
m. CHIȘINĂU	51,79		8,06		29,93	
			0,00		0,00	
NORD (total)	113,45		116,49		114,97	
mun.Bălți	4,59	11	9,40	6	7,00	

	2009		2010		2009-2010	
Briceni	7,47	7	8,92	7	8,19	
Dondușeni	5,23	10	5,23	11	5,23	
Drochia	2,98	12	3,45	12	3,22	
Edineț	34,62	1	24,83	1	29,73	1
Fălești	9,40	3	11,20	3	10,30	3
Florești	6,55	8	7,77	8	7,16	
Glodeni	11,31	2	11,90	2	11,61	2
Ocnîța	6,52	9	7,75	9	7,13	
Rîșcani	7,88	5	5,83	10	6,85	
Sîngerei	9,04	4	10,81	4	9,92	4
Soroca	7,86	6	9,40	5	8,63	
CENTRU (total)	211,18		291,87		251,53	
Anenii Noi	9,42	11	11,82	8	10,62	
Călărași	18,29	6	61,13	2	39,71	2
Criuleni	12,93	8	7,84	10	10,38	
Dubăsari	2,28	13	2,65	11	2,47	
Hîncești	37,07	1	82,78	1	59,93	1
Ialoveni	11,44	10	0,37	13	5,91	
Nisporeni	12,20	9	0,40	12	6,30	
Orhei	29,36	2	27,91	3	28,64	3
Rezina	7,97	12	9,43	9	8,70	
Strășeni	23,70	4	26,16	4	24,93	4
Șoldănești	23,81	3	17,24	7	20,52	
Telenesti	20,15	5	23,76	5	21,96	
Ungheni	17,72	7	20,37	6	19,05	
SUD (total)	72,49		72,49		72,49	
Basarabasca	2,29	8	2,21	7	2,25	
Cahul	14,43	1	16,76	1	15,60	1
Cantemir	10,03	3	11,96	3	11,00	3
Căușeni	12,44	2	14,87	2	13,66	2
Cimișlia	9,96	4	11,95	4	10,95	4
Leova	9,28	5	0,57	8	4,93	
Ștefan Vodă	7,50	6	8,91	5	8,21	

	2009		2010		2009-2010	
Taraclia	5,81	7	5,24	6	5,53	
UTA GĂGĂUZIA	14,73		16,51		15,62	

Anex 4.4. Forestry production, forest area in Moldova 2009, (hectares)

	Păduri forestiere ha	Producție lemn m ³				Reziduuri industriale (așchii, rumeguș, altele) tone
		Total	Industrial	Pentru foc	nuiete, crengi	
TOTAL	423979,9	410450	36354	312663	61433	9752,8
mun.CHIȘINĂU	8522,3	20264	527	15479	4258	3342,2
NORD (total)	97848,59	95358	8638	73115	13605	2728,4
mun.Bălți	754,38	10315	191	6953	3171	296,6
Briceni	9542					
Dondușeni	5615,45					62
Drochia	3268,15					31
Edineț	7978,48	26133	2509	20215	3409	2101,9
Fălești	12003,91					
Florești	8364,24					
Glodeni	10624,73	35563	5232	25751	4580	221,5
Ocnîța	8323,51					
Rîșcani	10065,19					
Sîngerei	11276,21					15,4
Soroca	10032,34	23347	706	20196	2445	
CENTRU (total)	210798,02	203941	18685	157453	27803	3416,9
Anenii Noi	12031,67					
Călărași	23362,7	25522	2610	19591	3321	
Criuleni	7945,83					496,8
Dubăsari	2829,81					5
Hîncești	38513,56	37889	2464	29815	5610	512,3
Ialoveni	14302,5	9647	463	8049	1135	18
Nisporeni	15344,69	21550	911	17899	2740	14
Orhei	24877,67	30543	2638	23983	3922	732
Rezina	10065					6,7
Strășeni	26726,22	24317	2520	17962	3835	205,6
Șoldănești	11604,16	18220	2687	13206	2327	1090,7

	Păduri forestiere ha	Producție lemn m ³				Reziduuri industriale (așchii, rumeguș, altele) tone
		Total	Industrial	Pentru foc	nuiiele, crengi	
Telenesti	12353,4	7571	705	5690	1176	776,3
Ungheni	21394,8	28682	3687	21258	3737	71,8
SUD (total)	88948,75	80760	7644	59212	13904	210,3
Basarabeasca	2923,82					
Cahul	17947,3	32113	2804	22890	6419	28,3
Cantemir	12808,7					
Căușeni	15887,7	27756	2929	20737	4090	
Cimișlia	12720,5	11848	815	9130	1903	
Leova	11539,35	9043	1096	6455	1492	18
Ștefan Vodă	9583,12					
Taraclia	5538,26					109
UTA GĂGĂUZIA	17862,2	10127	860	7404	1863	55

Anex 4.5. Forestry production, forest area in Moldova 2010, (hectares)

	Păduri forestiere ha	Producție lemn m ³				Reziduuri industriale (așchii, rumeguș, altele) tone
		Total	Industrial	Pentru foc	nuiiele, crengi	
Total	393020,3	856300	70030	662837	123433	20797,8
CHIȘINĂU	8677,21	23473	729	17901	4843	
NORD (total)	94736,5	118717	8583	93092	17042	2111
mun. Bălți	754,38	9896	189	7334	2373	644,5
Briceni	9562,2					2,6
Dondușeni	5632,81					
Drochia	3323,97					27,1
Edineț	7978,82	24626	2483	19052	3091	1290,3
Fălești	12060,39					
Florești	8368,08					
Glodeni	10703,13	39592	4781	29797	5014	145,2
Ocnîța	8326,509					1,3
Rîșcani	6273,9					
Sîngerei	11635,97					
Soroca	10116,34	21130	401	19008	1721	

	Păduri forestiere ha	Producție lemn m ³				Reziduuri industriale (așchii, rumeguș, altele) tone
		Total	Industrial	Pentru foc	nuiiele, crengi	
CENTRU	193784,97	216906	18412	170293	28201	8287,9
Anenii Noi	12148,92					39,9
Călărași	23133,34	27568	2775	21523	3270	2936,9
Criuleni	7969,19					32,5
Dubăsari	2850,81					
Hîncești	38674,11	41171	2697	32796	5678	3471,1
Ialoveni	397	9786	259	8417	1110	
Nisporeni	293,18	18103	610	15216	2277	9,8
Orhei	25121,14	35586	2708	28798	4080	339,4
Rezina	10084,22					4,7
Strășeni	26726,22	29842	3874	21094	4874	99,2
Șoldănești	11702,62	19203	2468	14528	2207	471,7
Telenesti	12812,18	8175	600	6253	1322	878,5
Ungheni	21872,04	27472	2421	21668	3383	4,2
SUD	78041,89	86709	7637	63745	15327	
Basarabasca	2381,23					
Cahul	18048,68	33118	2420	23776	6922	
Cantemir	12881,71					
Căușeni	16013,07	26605	2633	19875	4097	
Cimișlia	12862,35	13002	838	10172	1992	
Leova	615,98	13984	1746	9922	2316	
Ștefan Vodă	9594,07					
Taraclia	5644,8					
UTA GĂGĂUZIA	17779,77	11636	766	8577	2293	

Anex 5.1. Sunflower Average of 2009-2010

Raioanele	Average effective yield, t	Average residues quantity, t		Residues for biomass, t		Energy potential, TJ			Rank
		min	max	min	max	min	max	mediu	
TOTAL	270.572,1	324.686,5	568.201,4	308.452,2	539.791,3	4.626,8	8.096,9	6.361,8	-
mun. CHIȘINĂU	761,9	914,3	1.600,0	868,6	1.520,0	13,0	22,8	17,9	31
NORD	142.672,1	171.206,5	299.611,4	162.646,2	284.630,8	2.439,7	4.269,5	3.354,6	-

Raioanele	Average effective yield, t	Average residues quantity, t		Residues for biomass, t		Energy potential, TJ			Rank
		min	max	min	max	min	max	mediu	
mun.Bălți	385,2	462,2	808,9	439,1	768,5	6,6	11,5	9,1	12
Briceni	5.052,0	6.062,3	10.609,1	5.759,2	10.078,6	86,4	151,2	118,8	11
Dondușeni	7.536,7	9.044,0	15.827,0	8.591,8	15.035,6	128,9	225,5	177,2	10
Drochia	22.072,2	26.486,6	46.351,6	25.162,3	44.034,0	377,4	660,5	519,0	1
Edineț	11.516,8	13.820,1	24.185,2	13.129,1	22.975,9	196,9	344,6	270,8	8
Fălești	11.574,2	13.889,0	24.305,7	13.194,5	23.090,4	197,9	346,4	272,1	7
Florești	17.224,5	20.669,4	36.171,5	19.635,9	34.362,9	294,5	515,4	405,0	3
Glodeni	12.106,5	14.527,8	25.423,7	13.801,4	24.152,5	207,0	362,3	284,7	6
Ocnîța	8.183,2	9.819,8	17.184,7	9.328,8	16.325,5	139,9	244,9	192,4	9
Rîșcani	15.946,1	19.135,3	33.486,7	18.178,5	31.812,4	272,7	477,2	374,9	4
Sîngerei	13.527,1	16.232,5	28.406,8	15.420,8	26.986,5	231,3	404,8	318,1	5
Soroca	17.547,9	21.057,5	36.850,6	20.004,6	35.008,1	300,1	525,1	412,6	2
CENTRU	55.034,2	66.041,0	115.571,8	62.739,0	109.793,2	941,1	1.646,9	1.294,0	-
Anenii Noi	3.698,1	4.437,7	7.765,9	4.215,8	7.377,6	63,2	110,7	87,0	8
Călărași	100,5	120,6	211,1	114,6	200,5	1,7	3,0	2,4	13
Criuleni	5.879,3	7.055,2	12.346,5	6.702,4	11.729,2	100,5	175,9	138,2	6
Dubăsari	2.951,9	3.542,2	6.198,9	3.365,1	5.888,9	50,5	88,3	69,4	9
Hîncești	5.596,2	6.715,4	11.752,0	6.379,7	11.164,4	95,7	167,5	131,6	7
Ialoveni	1.446,7	1.736,0	3.038,1	1.649,2	2.886,2	24,7	43,3	34,0	10
Nisporeni	315,3	378,3	662,0	359,4	628,9	5,4	9,4	7,4	12
Orhei	6.987,2	8.384,6	14.673,1	7.965,4	13.939,5	119,5	209,1	164,3	2
Rezina	6.437,6	7.725,1	13.519,0	7.338,9	12.843,0	110,1	192,6	151,4	4
Strășeni	356,3	427,6	748,2	406,2	710,8	6,1	10,7	8,4	11
Șoldănești	6.920,8	8.305,0	14.533,7	7.889,7	13.807,0	118,3	207,1	162,7	3
Telenesti	5.966,7	7.160,0	12.530,1	6.802,0	11.903,6	102,0	178,6	140,3	5
Ungheni	8.377,8	10.053,3	17.593,3	9.550,6	16.713,6	143,3	250,7	197,0	1
SUD	55.527,7	66.633,2	116.608,1	63.301,5	110.777,7	949,5	1.661,7	1.305,6	-
Basarabeasca	1.419,2	1.703,0	2.980,2	1.617,8	2.831,2	24,3	42,5	33,4	8
Cahul	9.005,7	10.806,8	18.912,0	10.266,5	17.966,4	154,0	269,5	211,7	2
Cantemir	6.320,7	7.584,8	13.273,4	7.205,5	12.609,7	108,1	189,1	148,6	6
Căușeni	7.243,0	8.691,5	15.210,2	8.257,0	14.449,7	123,9	216,7	170,3	3
Cimișlia	7.164,5	8.597,4	15.045,5	8.167,5	14.293,2	122,5	214,4	168,5	4
Leova	5.810,4	6.972,4	12.201,7	6.623,8	11.591,6	99,4	173,9	136,6	7
Ștefan Vodă	12.234,6	14.681,5	25.692,7	13.947,4	24.408,0	209,2	366,1	287,7	1
Taraclia	6.329,8	7.595,7	13.292,5	7.215,9	12.627,9	108,2	189,4	148,8	5

Raioanele	Average effective yield, t	Average residues quantity, t		Residues for biomass, t		Energy potential, TJ			Rank
		min	max	min	max	min	max	mediu	
UTA GĂGĂUZIA	16.576,3	19.891,5	34.810,1	18.896,9	33.069,6	283,5	496,0	389,7	4

Anex 5.2. Rapeseed. Average of 2009-2010

Raioanele	Average effective yield, t	Average residues quantity, t		Residues for biomass, t		Energy potential, TJ			Rank
		min	max	min	max	min	max	mediu	
TOTAL	56.173,0	207.839,9	224.691,8	145.488	157.284,3	2.618,8	2.831,1	2.724,9	
mun.CHIȘINĂU	119,2	440,9	476,6	308,6	333,6	5,6	6,0	5,8	31
NORD	24.485,3	90.595,4	97.941,0	63.416,8	68.558,7	1.141,5	1.234,1	1.187,8	
mun.Bălți	78,6	290,6	314,2	203,4	219,9	3,7	4,0	3,8	12
Briceni	1.197,7	4.431,5	4.790,8	3.102,0	3.353,6	55,8	60,4	58,1	10
Dondușeni	1.466,3	5.425,3	5.865,2	3.797,7	4.105,6	68,4	73,9	71,1	8
Drochia	4.739,3	17.535,4	18.957,2	12.274,8	13.270,0	220,9	238,9	229,9	1
Edineț	1.778,2	6.579,2	7.112,6	4.605,4	4.978,8	82,9	89,6	86,3	6
Fălești	1.601,6	5.925,7	6.406,2	4.148,0	4.484,3	74,7	80,7	77,7	7
Florești	2.173,7	8.042,5	8.694,6	5.629,8	6.086,2	101,3	109,6	105,4	5
Glodeni	2.702,4	9.998,7	10.809,4	6.999,1	7.566,6	126,0	136,2	131,1	4
Ocnîța	908,5	3.361,3	3.633,8	2.352,9	2.543,7	42,4	45,8	44,1	11
Rîșcani	3.626,1	13.416,4	14.504,2	9.391,5	10.152,9	169,0	182,8	175,9	2
Sîngerei	1.311,2	4.851,3	5.244,6	3.395,9	3.671,2	61,1	66,1	63,6	9
Soroca	2.902,1	10.737,6	11.608,2	7.516,3	8.125,7	135,3	146,3	140,8	3
CENTRU	5.845,5	21.628,4	23.382,0	15.139,8	16.367,4	272,5	294,6	283,6	
Anenii Noi	388,1	1.436,0	1.552,4	1.005,2	1.086,7	18,1	19,6	18,8	8
Călărași	6,6	24,4	26,4	17,1	18,5	0,3	0,3	0,3	12
Criuleni	466,9	1.727,3	1.867,4	1.209,1	1.307,2	21,8	23,5	22,6	7
Dubăsari	205,5	760,2	821,8	532,1	575,3	9,6	10,4	10,0	10
Hîncești	621,7	2.300,1	2.486,6	1.610,1	1.740,6	29,0	31,3	30,2	5
Ialoveni	217,0	802,9	868,0	562,0	607,6	10,1	10,9	10,5	9
Nisporeni	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	-
Orhei	867,2	3.208,6	3.468,8	2.246,0	2.428,2	40,4	43,7	42,1	1
Rezina	711,5	2.632,6	2.846,0	1.842,8	1.992,2	33,2	35,9	34,5	4
Strășeni	56,4	208,5	225,4	145,9	157,8	2,6	2,8	2,7	11
Șoldănești	826,1	3.056,6	3.304,4	2.139,6	2.313,1	38,5	41,6	40,1	3

Raioanele	Average effective yield, t	Average residues quantity, t		Residues for bio-mass, t		Energy potential, TJ			Rank
		min	max	min	max	min	max	mediu	
Telenesti	620,5	2.295,9	2.482,0	1.607,1	1.737,4	28,9	31,3	30,1	6
Ungheni	858,2	3.175,3	3.432,8	2.222,7	2.403,0	40,0	43,3	41,6	2
SUD	20.438,6	75.622,6	81.754,2	52.935,8	57.227,9	952,8	1.030,1	991,5	
Basarabeasca	700,9	2.593,3	2.803,6	1.815,3	1.962,5	32,7	35,3	34,0	8
Cahul	3.222,0	11.921,2	12.887,8	8.344,9	9.021,5	150,2	162,4	156,3	2
Cantemir	2.682,9	9.926,5	10.731,4	6.948,6	7.512,0	125,1	135,2	130,1	4
Căușeni	3.105,8	11.491,5	12.423,2	8.044,0	8.696,2	144,8	156,5	150,7	3
Cimișlia	1.663,3	6.154,0	6.653,0	4.307,8	4.657,1	77,5	83,8	80,7	7
Leova	2.472,4	9.147,9	9.889,6	6.403,5	6.922,7	115,3	124,6	119,9	5
Ștefan Vodă	4.405,9	16.301,8	17.623,6	11.411,3	12.336,5	205,4	222,1	213,7	1
Taraclia	2.185,5	8.086,4	8.742,0	5.660,4	6.119,4	101,9	110,1	106,0	6
UTA GĂGĂUZIA	5.284,5	19.552,7	21.138,0	13.686,9	14.796,6	246,4	266,3	256,4	1

Anex 5.3. Soya. Average of 2009-2010

Raioanele	Average effective yield, t	Average residues quantity, t		Residues for bio-mass, t		Energy potential, TJ			Rank
		min	max	min	max	min	max	mediu	
TOTAL	65.068,0	240.751,6	260.272,0	168.526,1	182.190,4	2.359,4	2.550,7	2.455,0	
mun. CHIȘINĂU	23,9	88,4	95,6	61,9	66,9	0,9	0,9	0,9	23
NORD	63.571,5	235.214,4	254.285,8	164.650,1	178.000,1	2.305,1	2.492,0	2.398,6	
mun.Bălți	70,0	258,8	279,8	181,2	195,9	2,5	2,7	2,6	12
Briceni	9.250,4	34.226,5	37.001,6	23.958,5	25.901,1	335,4	362,6	349,0	3
Dondușeni	5.142,3	19.026,5	20.569,2	13.318,6	14.398,4	186,5	201,6	194,0	6
Drochia	5.047,7	18.676,3	20.190,6	13.073,4	14.133,4	183,0	197,9	190,4	7
Edineț	12.220,6	45.216,2	48.882,4	31.651,4	34.217,7	443,1	479,0	461,1	1
Fălești	2.304,8	8.527,8	9.219,2	5.969,4	6.453,4	83,6	90,3	87,0	9
Florești	1.049,6	3.883,5	4.198,4	2.718,5	2.938,9	38,1	41,1	39,6	11
Glodeni	5.786,5	21.409,9	23.145,8	14.986,9	16.202,1	209,8	226,8	218,3	5
Ocnîța	8.448,7	31.260,0	33.794,6	21.882,0	23.656,2	306,3	331,2	318,8	4
Rîșcani	9.650,9	35.708,3	38.603,6	24.995,8	27.022,5	349,9	378,3	364,1	2
Sîngerei	1.648,0	6.097,6	6.592,0	4.268,3	4.614,4	59,8	64,6	62,2	10
Soroca	2.952,2	10.923,0	11.808,6	7.646,1	8.266,0	107,0	115,7	111,4	8
CENTRU	1.422,2	5.262,1	5.688,8	3.683,5	3.982,2	51,6	55,8	53,7	

Raioanele	Average effective yield, t	Average residues quantity, t		Residues for biomass, t		Energy potential, TJ			Rank
		min	max	min	max	min	max	mediu	
Anenii Noi	27,3	100,8	109,0	70,6	76,3	1,0	1,1	1,0	9
Călărași	5,8	21,3	23,0	14,9	16,1	0,2	0,2	0,2	11
Criuleni	90,3	334,1	361,2	233,9	252,8	3,3	3,5	3,4	4
Dubăsari	32,1	118,6	128,2	83,0	89,7	1,2	1,3	1,2	8
Hîncești	49,9	184,6	199,6	129,2	139,7	1,8	2,0	1,9	6
Ialoveni	8,7	32,2	34,8	22,5	24,4	0,3	0,3	0,3	10
Nisporeni	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	-
Orhei	61,6	227,7	246,2	159,4	172,3	2,2	2,4	2,3	5
Rezina	103,6	383,3	414,4	268,3	290,1	3,8	4,1	3,9	3
Strășeni	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	-
Șoldănești	817,1	3.023,3	3.268,4	2.116,3	2.287,9	29,6	32,0	30,8	1
Telenesti	48,4	179,1	193,6	125,4	135,5	1,8	1,9	1,8	7
Ungheni	177,6	657,1	710,4	460,0	497,3	6,4	7,0	6,7	2
SUD	50,5	186,7	201,8	130,7	141,3	1,8	2,0	1,9	
Basarabasca	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	-
Cahul	36,5	135,1	146,0	94,5	102,2	1,3	1,4	1,4	1
Cantemir	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	-
Căușeni	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	-
Cimișlia	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	-
Leova	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	-
Ștefan Vodă	14,0	51,6	55,8	36,1	39,1	0,5	0,5	0,5	2
Taraclia	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	-
UTA GĂGĂUZIA	0,0	0,0	0,0	0,0	0,0	0,0	0,0	0,0	-

Anex 5.4. Dry beans. Average of 2009-2010

Raioanele	Average effective yield, t	Average residues quantity, t	Residues for biomass, t	Energy potential, TJ	Rank
TOTAL	16.168,0	80.839,8	56.587,8	792,2	
mun.CHIȘINĂU	1,4	6,8	4,7	0,1	33
NORD	4.744,3	23.721,3	16.604,9	232,5	
mun.Bălți	0,0	0,0	0,0	0,0	-
Briceni	521,6	2.607,8	1.825,4	25,6	4
Dondușeni	280,6	1.402,8	981,9	13,7	7
Drochia	382,2	1.911,0	1.337,7	18,7	5
Edineț	104,5	522,5	365,8	5,1	10

Raioanele	Average effective yield, t	Average residues quantity, t	Residues for biomass, t	Energy potential, TJ	Rank
Fălești	50,8	254,0	177,8	2,5	11
Florești	1.219,0	6.094,8	4.266,3	59,7	1
Glodeni	180,5	902,5	631,8	8,8	9
Ocnîța	274,1	1.370,3	959,2	13,4	8
Rîșcani	597,7	2.988,5	2.092,0	29,3	3
Sîngerei	376,5	1.882,3	1.317,6	18,4	6
Soroca	757,0	3.785,0	2.649,5	37,1	2
CENTRU	2.711,1	13.555,5	9.488,9	132,8	
Anenii Noi	466,9	2.334,5	1.634,2	22,9	2
Călărași	27,9	139,3	97,5	1,4	11
Criuleni	159,2	796,0	557,2	7,8	7
Dubăsari	146,8	734,0	513,8	7,2	8
Hîncești	219,7	1.098,5	769,0	10,8	4
Ialoveni	5,4	27,0	18,9	0,3	12
Nisporeni	0,0	0,0	0,0	0,0	-
Orhei	364,5	1.822,3	1.275,6	17,9	3
Rezina	756,8	3.783,8	2.648,6	37,1	1
Strășeni	90,7	453,3	317,3	4,4	9
Șoldănești	189,3	946,5	662,6	9,3	6
Telenesti	86,0	430,0	301,0	4,2	10
Ungheni	198,1	990,5	693,4	9,7	5
SUD	6.956,7	34.783,3	24.348,3	340,9	
Basarabeasca	125,3	626,3	438,4	6,1	8
Cahul	1.119,8	5.599,0	3.919,3	54,9	2
Cantemir	1.019,3	5.096,3	3.567,4	49,9	3
Căușeni	1.016,3	5.081,5	3.557,1	49,8	4
Cimișlia	384,0	1.920,0	1.344,0	18,8	7
Leova	856,7	4.283,5	2.998,5	42,0	5
Ștefan Vodă	1.685,1	8.425,5	5.897,9	82,6	1
Taraclia	750,3	3.751,3	2.625,9	36,8	6
UTA GĂGĂUZIA	1.754,6	8.773,0	6.141,1	86,0	1

Anex 5.5 Beans. Average of 2009-2010

Raioanele	Average effective yield, t	Average residues quantity, t	Residues for biomass, t	Energy potential, TJ	Rank
TOTAL	354,2	1.771,0	1.239,7	17,4	-
mun.CHIȘINĂU	3,9	19,5	13,7	0,2	17
NORD	150,3	751,5	526,1	7,4	-
mun.Bălți	0,0	0,0	0,0	0,0	-

Raioanele	Average effective yield, t	Average residues quantity, t	Residues for biomass, t	Energy potential, TJ	Rank
Briceni	5,2	25,8	18,0	0,3	9
Dondușeni	10,1	50,5	35,4	0,5	7
Drochia	0,0	0,0	0,0	0,0	-
Edineț	12,3	61,3	42,9	0,6	6
Fălești	12,6	63,0	44,1	0,6	5
Florești	2,1	10,5	7,4	0,1	10
Glodeni	31,8	158,8	111,1	1,6	1
Ocnîța	8,0	40,0	28,0	0,4	8
Rișcani	23,6	117,8	82,4	1,2	3
Sîngerei	18,0	90,0	63,0	0,9	4
Soroca	26,8	134,0	93,8	1,3	2
CENTRU	79,9	399,5	279,7	3,9	-
Anenii Noi	0,9	4,3	3,0	0,0	9
Călărași	0,0	0,0	0,0	0,0	-
Criuleni	28,6	143,0	100,1	1,4	1
Dubăsari	14,3	71,3	49,9	0,7	3
Hîncești	2,5	12,5	8,8	0,1	7
Ialoveni	0,1	0,5	0,4	0,0	-
Nisporeni	0,5	2,5	1,8	0,0	10
Orhei	3,0	14,8	10,3	0,1	6
Rezina	3,1	15,5	10,9	0,2	5
Strășeni	0,0	0,0	0,0	0,0	-
Șoldănești	6,0	30,0	21,0	0,3	4
Telenesti	1,9	9,5	6,7	0,1	8
Ungheni	19,2	95,8	67,0	0,9	2
SUD	94,1	470,3	329,2	4,6	-
Basarabeasca	0,0	0,0	0,0	0,0	-
Cahul	56,9	284,3	199,0	2,8	1
Cantemir	2,3	11,5	8,1	0,1	4
Căușeni	0,1	0,5	0,4	0,0	-
Cimișlia	0,8	3,8	2,6	0,0	5
Leova	0,0	0,0	0,0	0,0	-
Ștefan Vodă	9,2	45,8	32,0	0,4	3
Taraclia	24,9	124,5	87,2	1,2	2
UTA GĂGĂUZIA	26,1	130,3	91,2	1,3	5

Anex 5.6. **Tabacco. Average of 2009-2010**

Raioanele	Average effective yield, t	Average residues quantity, t	Residues for biomass, t	Energy potential, TJ	Rank
TOTAL	5.538,3	16.614,8	11.630,3	162,8	
mun.CHIȘINĂU	0,0	0,0	0,0	0,0	-
NORD	1.232,4	3.697,1	2.587,9	36,2	-
mun.Bălți	0,0	0,0	0,0	0,0	-
Briceni	0,0	0,0	0,0	0,0	-
Dondușeni	0,0	0,0	0,0	0,0	-
Drochia	209,0	626,9	438,8	6,1	3
Edineț	50,9	152,6	106,8	1,5	7
Fălești	124,0	371,9	260,3	3,6	4
Florești	88,1	264,2	184,9	2,6	5
Glodeni	292,6	877,8	614,5	8,6	2
Ocnîța	0,0	0,0	0,0	0,0	-
Rîșcani	87,1	261,2	182,8	2,6	6
Sîngerei	348,7	1.046,0	732,2	10,3	1
Soroca	32,3	96,8	67,7	0,9	8
CENTRU	1.811,6	5.434,8	3.804,4	53,3	-
Anenii Noi	0,0	0,0	0,0	0,0	-
Călărași	0,0	0,0	0,0	0,0	-
Cruleni	228,9	686,7	480,7	6,7	3
Dubăsari	384,2	1.152,5	806,7	11,3	2
Hîncești	29,8	89,4	62,6	0,9	7
Ialoveni	0,0	0,0	0,0	0,0	-
Nisporeni	58,3	174,8	122,3	1,7	6
Orhei	857,5	2.572,5	1.800,8	25,2	1
Rezina	93,0	279,0	195,3	2,7	5
Strășeni	0,0	0,0	0,0	0,0	-
Șoldănești	28,8	86,4	60,5	0,8	8
Telenesti	112,7	338,0	236,6	3,3	4
Ungheni	18,6	55,7	39,0	0,5	9
SUD	1.145,8	3.437,4	2.406,2	33,7	-
Basarabasca	0,0	0,0	0,0	0,0	-
Cahul	0,0	0,0	0,0	0,0	-
Cantemir	373,7	1.121,1	784,8	11,0	1
Căușeni	46,3	138,8	97,1	1,4	6
Cimișlia	53,4	160,2	112,1	1,6	5
Leova	286,2	858,6	601,0	8,4	2
Ștefan Vodă	271,1	813,3	569,3	8,0	3
Taraclia	115,2	345,5	241,8	3,4	4
UTA GĂGĂUZIA	1.348,5	4.045,5	2.831,9	39,6	1

Anex 6.1. Wheat (2008 minim)

	Total harvested area, hectares	Effective yield on total area, t	Production of waste, t / t culture, min	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			1	25%	14	
TOTAL	408709	1278052	1278052	319513	4473180	4473
Development regions:						
mun. CHIȘINĂU	1926	5654	5654	1414	19789	20
NORD	163503	563925	563925	140981	1973736	1974
mun.Bălți	598	2051	2051	513	7179	7
Briceni	7363	26094	26094	6523	91327	91
Dondușeni	10687	36150	36150	9037	126525	127
Drochia	24225	78017	78017	19504	273061	273
Edineț	12671	41893	41893	10473	146627	147
Fălești	16405	56454	56454	14114	197590	198
Florești	23483	87183	87183	21796	305141	305
Glodeni	11879	42139	42139	10535	147486	147
Ocnîța	6957	26415	26415	6604	92452	92
Rîșcani	15424	52857	52857	13214	184999	185
Sîngerei	16398	55226	55226	13807	193292	193
Soroca	17414	59445	59445	14861	208056	208
CENTRU	93625	273759	273759	68440	958155	958
Anenii Noi	12277	34751	34751	8688	121630	122
Călărași	904	2349	2349	587	8223	8
Criuleni	8390	26412	26412	6603	92441	92
Dubăsari	6267	20297	20297	5074	71039	71
Hîncești	10099	28261	28261	7065	98914	99
Ialoveni	4077	12290	12290	3073	43016	43
Nisporeni	1030	3071	3071	768	10748	11
Orhei	9869	27207	27207	6802	95225	95
Rezina	11216	31786	31786	7946	111250	111

	Total harvested area, hectares	Effective yield on total area, t	Production of waste, t / t culture, min	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			1	25%	14	
Strășeni	1395	4183	4183	1046	14640	15
Șoldănești	9278	28592	28592	7148	100071	100
Telenesti	8286	21106	21106	5277	73872	74
Ungheni	10537	33453	33453	8363	117085	117
SUD	110390	315212	315212	78803	1103241	1103
Basarabeasca	6618	16248	16248	4062	56867	57
Cahul	20603	62518	62518	15629	218813	219
Cantemir	8206	25017	25017	6254	87560	88
Căușeni	16556	44067	44067	11017	154234	154
Cimișlia	12070	33540	33540	8385	117388	117
Leova	6470	20152	20152	5038	70530	71
Ștefan Vodă	24537	68686	68686	17172	240401	240
Taraclia	15329	44985	44985	11246	157448	157
UTA GĂGĂUZIA	39265	119502	119502	29876	418259	418

Anex 6.2. Wheat (2008 maxim)

	Total harvested area, hectares	Effective yield on total area, t	Production of waste, t / t culture, max	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			1,8	25%	14	
TOTAL	408709	1278052	2300493	575123	8051725	8052
Development regions:						
mun. CHIȘINĂU	1926	5654	10177	2544	35620	36
NORD	163503	563925	1015064	253766	3552725	3553
mun. Bălți	598	2051	3692	923	12923	13
Briceni	7363	26094	46968	11742	164389	164
Dondușeni	10687	36150	65070	16267	227745	228

	Total harvested area, hectares	Effective yield on total area, t	Production of waste, t / t culture, max	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			1,8	25%	14	
Drochia	24225	78017	140431	35108	491510	492
Edineț	12671	41893	75408	18852	263929	264
Fălești	16405	56454	101618	25404	355663	356
Florești	23483	87183	156929	39232	549253	549
Glodeni	11879	42139	75850	18963	265475	265
Ocnîța	6957	26415	47547	11887	166414	166
Rîșcani	15424	52857	95142	23786	332998	333
Sîngerei	16398	55226	99407	24852	347926	348
Soroca	17414	59445	107000	26750	374501	375
CENTRU	93625	273759	492765	123191	1724679	1725
Anenii Noi	12277	34751	62552	15638	218934	219
Călărași	904	2349	4229	1057	14801	15
Criuleni	8390	26412	47541	11885	166395	166
Dubăsari	6267	20297	36535	9134	127871	128
Hîncești	10099	28261	50870	12718	178046	178
Ialoveni	4077	12290	22122	5531	77429	77
Nisporeni	1030	3071	5527	1382	19346	19
Orhei	9869	27207	48973	12243	171405	171
Rezina	11216	31786	57214	14304	200250	200
Strășeni	1395	4183	7529	1882	26352	26
Șoldănești	9278	28592	51465	12866	180129	180
Telenesti	8286	21106	37991	9498	132969	133
Ungheni	10537	33453	60215	15054	210754	211
SUD	110390	315212	567381	141845	1985835	1986
Basarabeasca	6618	16248	29246	7312	102361	102
Cahul	20603	62518	112532	28133	393863	394
Cantemir	8206	25017	45031	11258	157608	158

	Total harvested area, hectares	Effective yield on total area, t	Production of waste, t / t culture, max	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			1,8	25%	14	
Căușeni	16556	44067	79320	19830	277621	278
Cimișlia	12070	33540	60371	15093	211299	211
Leova	6470	20152	36273	9068	126955	127
Ștefan Vodă	24537	68686	123635	30909	432722	433
Taraclia	15329	44985	80973	20243	283406	283
UTA GĂGĂUZIA	39265	119502	215104	53776	752866	753

Anex 6.3. Wheat (2008 average)

	2008 Average, TJ	Rank within the region, 2008
TOTAL	6262	
Development regions:		
mun.CHIȘINĂU	28	
NORD	2763	
mun.Bălți	10	12
Briceni	128	11
Dondușeni	177	9
Drochia	382	2
Edineț	205	8
Fălești	277	4
Florești	427	1
Glodeni	206	7
Ocnîța	129	10
Rîșcani	259	6
Sîngerei	271	5
Soroca	291	3
CENTRU	1341	
Anenii Noi	170	1

	2008 Average, TJ	Rank within the region, 2008
Călărași	12	13
Criuleni	129	7
Dubăsari	99	9
Hîncești	138	5
Ialoveni	60	10
Nisporeni	15	12
Orhei	133	6
Rezina	156	3
Strășeni	20	11
Șoldănești	140	4
Telenesti	103	8
Ungheni	164	2
SUD	1545	
Basarabasca	80	8
Cahul	306	2
Cantemir	123	6
Căușeni	216	4
Cimișlia	164	5
Leova	99	7
Ștefan Vodă	337	1
Taraclia	220	3
UTA GĂGĂUZIA	586	

Anex 6.4. Wheat (2009 minim)

	Total harvested area, hectares	Effective yield on total area, t	Production of waste, t / t culture, min	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			1	25%	14	
TOTAL	346798	729872	729872	182468	2554553	2555

	Total harvested area, hectares	Effective yield on total area, t	Production of waste, t / t culture, min	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			1	25%	14	
Development regions:						
mun.CHIȘINĂU	1868	3802	3802	950	13305	13
NORD	138644	353824	353824	88456	1238385	1238
mun.Bălți	511	960	960	240	3359	3
Briceni	5876	16826	16826	4207	58892	59
Dondușeni	8838	25487	25487	6372	89204	89
Drochia	19410	53838	53838	13460	188434	188
Edineț	9709	26131	26131	6533	91459	91
Fălești	14683	39978	39978	9994	139922	140
Florești	20461	43902	43902	10976	153657	154
Glodeni	11764	32225	32225	8056	112788	113
Ocnîța	6129	18164	18164	4541	63575	64
Rîșcani	12615	34980	34980	8745	122431	122
Sîngerei	14351	25552	25552	6388	89430	89
Soroca	14296	35781	35781	8945	125234	125
CENTRU	77932	142663	142663	35666	499321	499
Anenii Noi	9299	17243	17243	4311	60352	60
Călărași	577	1124	1124	281	3935	4
Criuleni	6173	13226	13226	3306	46291	46
Dubăsari	4825	7886	7886	1972	27602	28
Hîncești	9965	19553	19553	4888	68434	68
Ialoveni	3626	6255	6255	1564	21891	22
Nisporeni	227	354	354	88	1238	1
Orhei	9276	14305	14305	3576	50067	50
Rezina	8322	11432	11432	2858	40010	40
Strășeni	1171	2236	2236	559	7824	8
Șoldănești	6606	11439	11439	2860	40038	40

	Total harvested area, hectares	Effective yield on total area, t	Production of waste, t / t culture, min	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			1	25%	14	
Telenesti	7568	12045	12045	3011	42157	42
Ungheni	10298	25566	25566	6392	89482	89
SUD	94897	178512	178512	44628	624790	625
Basarabasca	3760	4832	4832	1208	16913	17
Cahul	17768	31539	31539	7885	110388	110
Cantemir	7168	15969	15969	3992	55891	56
Căușeni	14341	27605	27605	6901	96618	97
Cimișlia	12928	21337	21337	5334	74680	75
Leova	5352	13508	13508	3377	47277	47
Ștefan Vodă	19122	39268	39268	9817	137437	137
Taraclia	14458	24453	24453	6113	85587	86
UTA GĂGĂUZIA	33457	51072	51072	12768	178752	179

Anex 6.5. Wheat (2009 maxim)

	Total harvested area, hectares	Effective yield on total area, t	Production of waste, t / t culture, max	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			1,8	25%	14	
TOTAL	346798	729872	1313770	328443	4598196	4598
Development regions:						
mun.CHIȘINĂU	1868	3802	6843	1711	23950	24
NORD	138644	353824	636884	159221	2229093	2229
mun.Bălți	511	960	1727	432	6045	6
Briceni	5876	16826	30287	7572	106005	106
Dondușeni	8838	25487	45876	11469	160567	161
Drochia	19410	53838	96909	24227	339181	339
Edineț	9709	26131	47036	11759	164627	165

Fălesti	14683	39978	71960	17990	251859	252
Florești	20461	43902	79024	19756	276583	277
Glodeni	11764	32225	58005	14501	203018	203
Ocnîța	6129	18164	32696	8174	114435	114
Rîșcani	12615	34980	62965	15741	220377	220
Sîngerei	14351	25552	45993	11498	160975	161
Soroca	14296	35781	64406	16102	225422	225
CENTRU	77932	142663	256794	64198	898777	899
Anenii Noi	9299	17243	31038	7760	108633	109
Călărași	577	1124	2024	506	7082	7
Criuleni	6173	13226	23807	5952	83324	83
Dubăsari	4825	7886	14196	3549	49684	50
Hîncești	9965	19553	35195	8799	123182	123
Ialoveni	3626	6255	11258	2815	39404	39
Nisporeni	227	354	637	159	2228	2
Orhei	9276	14305	25749	6437	90121	90
Rezina	8322	11432	20577	5144	72019	72
Strășeni	1171	2236	4024	1006	14084	14
Șoldănești	6606	11439	20591	5148	72069	72
Telenesti	7568	12045	21681	5420	75882	76
Ungheni	10298	25566	46019	11505	161067	161
SUD	94897	178512	321321	80330	1124623	1125
Basarabeasca	3760	4832	8698	2175	30443	30
Cahul	17768	31539	56771	14193	198699	199
Cantemir	7168	15969	28744	7186	100604	101
Căușeni	14341	27605	49689	12422	173912	174
Cimișlia	12928	21337	38407	9602	134425	134
Leova	5352	13508	24314	6078	85098	85
Ștefan Vodă	19122	39268	70682	17670	247386	247
Taraclia	14458	24453	44016	11004	154057	154
UTA GĂGĂUZIA	33457	51072	91930	22982	321754	322

Anex 6.6. Wheat (2009 average)

	2009 Average, TJ	Rank within the region, 2009
TOTAL	3576	
Development regions:		
mun.CHIȘINĂU	19	
NORD	1734	
mun.Bălți	5	11
Briceni	82	10
Dondușeni	125	8
Drochia	264	1
Edineț	128	7
Fălești	196	3
Florești	215	2
Glodeni	158	6
Ocnîța	89	9
Rîșcani	171	5
Sîngerei	125	8
Soroca	175	4
CENTRU	699	
Anenii Noi	84	3
Călărași	6	11
Criuleni	65	5
Dubăsari	39	8
Hîncești	96	2
Ialoveni	31	9
Nisporeni	2	12
Orhei	70	4
Rezina	56	7
Strășeni	11	10
Șoldănești	56	7

	2009 Average, TJ	Rank within the region, 2009
Telenesti	59	6
Ungheni	125	1
SUD	875	
Basarabeasca	24	8
Cahul	155	2
Cantemir	78	6
Căuşeni	135	3
Cimişlia	105	5
Leova	66	7
Ştefan Vodă	192	1
Taraclia	120	4
UTA GĂGĂUZIA	250	

Anex 6.7. Wheat (average 2008-2009)

	Average 2008 2009, TJ	Rank within the region, 2008 2009
TOTAL	4919	
Development regions:		
mun.CHIŞINĂU	23	
NORD	2248	
mun.Bălţi	7	12
Briceni	105	11
Donduşeni	151	9
Drochia	323	1
Edineţ	167	8
Fălesti	236	3
Floreşti	321	2
Glodeni	182	7
Ocnîţa	109	10
Rîşcani	215	5

	Average 2008 2009, TJ	Rank within the region, 2008 2009
Singerei	198	6
Soroca	233	4
CENTRU	1020	
Anenii Noi	127	2
Călărași	9	12
Criuleni	97	7
Dubăsari	69	9
Hîncești	117	3
Ialoveni	45	10
Nisporeni	8	13
Orhei	102	5
Rezina	106	4
Strășeni	16	11
Șoldănești	98	6
Telenesti	81	8
Ungheni	145	1
SUD	1210	
Basarabasca	52	8
Cahul	230	2
Cantemir	100	6
Căușeni	176	3
Cimișlia	134	5
Leova	82	7
Ștefan Vodă	264	1
Taraclia	170	4
UTA GĂGĂUZIA	418	

Anex 6.8. Barley (2008 minimum)

	Total harvested area, hectares	Effective yield on total area, t	Production of waste, t / t culture, min	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			1,5	25%	14	
TOTAL	130309	410067	615100	153775	2152849	2153
Development regions:						
mun.CHIȘINĂU	1150	4349	6524	1631	22832	23
NORD	39908	130371	195557	48889	684449	684
mun.Bălți	70	157	235	59	822	1
Briceni	1605	2237	3355	839	11743	12
Dondușeni	3112	9504	14255	3564	49894	50
Drochia	5115	10967	16450	4113	57575	58
Edineț	3686	11487	17231	4308	60309	60
Fălești	3550	12277	18416	4604	64456	64
Florești	6538	29624	44435	11109	155524	156
Glodeni	2830	8065	12097	3024	42340	42
Ocnîța	3116	8690	13035	3259	45621	46
Rîșcani	3094	9696	14544	3636	50905	51
Sîngerei	3574	14552	21828	5457	76400	76
Soroca	3619	13116	19674	4919	68860	69
CENTRU	25200	85828	128741	32185	450595	451
Anenii Noi	5587	18646	27969	6992	97890	98
Călărași	223	472	708	177	2477	2
Criuleni	1497	6976	10465	2616	36626	37
Dubăsari	2275	5548	8322	2080	29126	29
Hîncești	2205	6731	10096	2524	35337	35
Ialoveni	1341	5677	8515	2129	29802	30
Nisporeni	152	326	489	122	1710	2
Orhei	2776	9854	14782	3695	51736	52
Rezina	3098	8550	12825	3206	44889	45
Strășeni	303	958	1437	359	5028	5
Șoldănești	1718	7380	11070	2767	38744	39

	Total harvested area, hectares	Effective yield on total area, t	Production of waste, t / t culture, min	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			1,5	25%	14	
Telenesti	2812	11044	16566	4141	57981	58
Ungheni	1213	3666	5500	1375	19248	19
SUD	47774	154201	231301	57825	809555	810
Basarabeasca	1828	3936	5903	1476	20662	21
Cahul	7723	20440	30660	7665	107310	107
Cantemir	5726	20494	30741	7685	107593	108
Căușeni	8032	33835	50752	12688	177633	178
Cimișlia	4527	14642	21963	5491	76870	77
Leova	3509	8482	12723	3181	44532	45
Ștefan Vodă	8583	30060	45089	11272	157813	158
Taraclia	7845	22313	33469	8367	117142	117
UTA GĂGĂUZIA	16277	35318	52977	13244	185418	185

Anex 6.9. Barley (2008 maximum)

	Total harvested area, hectares	Effective yield on total area, t	Production of waste, t / t culture, max	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			1,8	25%	14	
TOTAL	130309	410067	738120	184530	2583419	2583
Development regions:						
mun.CHIȘINĂU	1150	4349	7828	1957	27399	27
NORD	39908	130371	234668	58667	821338	821
mun.Bălți	70	157	282	70	986	1
Briceni	1605	2237	4026	1007	14092	14
Dondușeni	3112	9504	17106	4277	59873	60
Drochia	5115	10967	19740	4935	69090	69
Edineț	3686	11487	20677	5169	72371	72
Fălești	3550	12277	22099	5525	77347	77

	Total harvested area, hectares	Effective yield on total area, t	Production of waste, t / t culture, max	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			1,8	25%	14	
Florești	6538	29624	53322	13331	186629	187
Glodeni	2830	8065	14517	3629	50809	51
Ocnîța	3116	8690	15641	3910	54745	55
Rîșcani	3094	9696	17453	4363	61086	61
Sîngerei	3574	14552	26194	6549	91679	92
Soroca	3619	13116	23609	5902	82633	83
CENTRU	25200	85828	154490	38622	540714	541
Anenii Noi	5587	18646	33562	8391	117468	117
Călărași	223	472	849	212	2972	3
Criuleni	1497	6976	12558	3139	43951	44
Dubăsari	2275	5548	9986	2497	34951	35
Hîncești	2205	6731	12116	3029	42405	42
Ialoveni	1341	5677	10218	2554	35762	36
Nisporeni	152	326	586	147	2052	2
Orhei	2776	9854	17738	4434	62083	62
Rezina	3098	8550	15391	3848	53867	54
Strășeni	303	958	1724	431	6034	6
Șoldănești	1718	7380	13284	3321	46493	46
Telenesti	2812	11044	19879	4970	69577	70
Ungheni	1213	3666	6599	1650	23098	23
SUD	47774	154201	277562	69390	971466	971
Basarabeasca	1828	3936	7084	1771	24795	25
Cahul	7723	20440	36792	9198	128772	129
Cantemir	5726	20494	36889	9222	129112	129
Căușeni	8032	33835	60903	15226	213159	213
Cimișlia	4527	14642	26356	6589	92245	92
Leova	3509	8482	15268	3817	53438	53
Ștefan Vodă	8583	30060	54107	13527	189376	189
Taraclia	7845	22313	40163	10041	140571	141
UTA GĂGĂUZIA	16277	35318	63572	15893	222502	223

Anex 6.10. Barley (2008 average)

	2008 Average, TJ	Rank within the region, 2008
TOTAL	2368	
Development regions:		
mun.CHIȘINĂU	25	
NORD	753	
mun.Bălți	1	12
Briceni	13	11
Dondușeni	55	8
Drochia	63	6
Edineț	66	5
Fălești	71	4
Florești	171	1
Glodeni	47	10
Ocnîța	50	9
Rîșcani	56	7
Sîngerei	84	2
Soroca	76	3
CENTRU	496	
Anenii Noi	108	1
Călărași	3	12
Criuleni	40	6
Dubăsari	32	9
Hîncești	39	7
Ialoveni	33	8
Nisporeni	2	13
Orhei	57	3
Rezina	49	4
Strășeni	6	11
Șoldănești	43	5
Telenesti	64	2
Ungheni	21	10
SUD	891	

	2008 Average, TJ	Rank within the region, 2008
Basarabasca	23	7
Cahul	118	4
Cantemir	118	4
Căușeni	195	1
Cimișlia	85	5
Leova	49	6
Ștefan Vodă	174	2
Taraclia	129	3
UTA GĂGĂUZIA	204	

Anex 6.11. Barley (2009 minim)

	Total harvested area, hectares	Effective yield on total area, t	Production of waste, t / t culture, min	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			1	25%	14	
TOTAL	153832	263360	395040	98760	1382639	1383
Development regions:						
mun.CHIȘINĂU	830	1577	2366	591	8279	8
NORD	46996	87989	131984	32996	461942	462
mun.Bălți	125	149	224	56	784	1
Briceni	2016	3337	5006	1251	17521	18
Dondușeni	3515	6421	9632	2408	33713	34
Drochia	5232	10396	15594	3899	54580	55
Edineț	4458	9155	13733	3433	48065	48
Fălești	3981	7951	11926	2981	41741	42
Florești	7405	12156	18234	4559	63819	64
Glodeni	3858	8898	13347	3337	46715	47
Ocnîța	2869	6276	9415	2354	32951	33
Rîșcani	3451	7641	11461	2865	40113	40
Sîngerei	4901	7176	10764	2691	37673	38
Soroca	5185	8432	12648	3162	44269	44

	Total harvested area, hectares	Effective yield on total area, t	Production of waste, t / t culture, min	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			1	25%	14	
CENTRU	30899	45748	68623	17156	240179	240
Anenii Noi	6700	11636	17455	4364	61091	61
Călărași	219	337	506	126	1771	2
Criuleni	1677	3203	4804	1201	16814	17
Dubăsari	2725	4219	6328	1582	22148	22
Hîncești	2704	4241	6362	1590	22267	22
Ialoveni	1224	1934	2900	725	10151	10
Nisporeni	256	300	450	112	1575	2
Orhei	3199	4533	6800	1700	23800	24
Rezina	3197	3293	4940	1235	17289	17
Strășeni	504	867	1301	325	4552	5
Șoldănești	4071	5078	7617	1904	26661	27
Telenesti	2994	3643	5465	1366	19127	19
Ungheni	1429	2463	3695	924	12933	13
SUD	56348	100660	150990	37747	528464	528
Basarabasca	1656	1974	2961	740	10364	10
Cahul	9381	16276	24414	6103	85448	85
Cantemir	6564	12623	18934	4733	66269	66
Căușeni	12438	20263	30395	7599	106382	106
Cimișlia	6278	9680	14519	3630	50818	51
Leova	3338	6659	9989	2497	34960	35
Ștefan Vodă	8423	18613	27920	6980	97720	98
Taraclia	8270	14572	21858	5465	76504	77
UTA GĂGĂUZIA	18759	27386	41078	10270	143775	144

Anex 6.12. Barley (2009 maxim)

	Total harvested area, hectares	Effective yield on total area, t	Production of waste, t / t culture, max	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			1,8	25%	14	
TOTAL	153832	263360	474048	118512	1659167	1659
Development regions:						
mun.CHIȘINĂU	830	1577	2839	710	9935	10
NORD	46996	87989	158380	39595	554331	554
mun.Bălți	125	149	269	67	941	1
Briceni	2016	3337	6007	1502	21025	21
Dondușeni	3515	6421	11559	2890	40455	40
Drochia	5232	10396	18713	4678	65496	65
Edineț	4458	9155	16480	4120	57678	58
Fălești	3981	7951	14311	3578	50089	50
Florești	7405	12156	21881	5470	76583	77
Glodeni	3858	8898	16016	4004	56058	56
Ocnîța	2869	6276	11297	2824	39541	40
Rîșcani	3451	7641	13753	3438	48135	48
Sîngerei	4901	7176	12916	3229	45208	45
Soroca	5185	8432	15178	3794	53123	53
CENTRU	30899	45748	82347	20587	288215	288
Anenii Noi	6700	11636	20946	5236	73309	73
Călărași	219	337	607	152	2125	2
Criuleni	1677	3203	5765	1441	20177	20
Dubăsari	2725	4219	7594	1898	26577	27
Hîncești	2704	4241	7634	1909	26720	27
Ialoveni	1224	1934	3480	870	12181	12
Nisporeni	256	300	540	135	1889	2
Orhei	3199	4533	8160	2040	28560	29
Rezina	3197	3293	5928	1482	20747	21
Strășeni	504	867	1561	390	5462	5
Șoldănești	4071	5078	9141	2285	31993	32

	Total harvested area, hectares	Effective yield on total area, t	Production of waste, t / t culture, max	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			1,8	25%	14	
Telenesti	2994	3643	6558	1639	22953	23
Ungheni	1429	2463	4434	1109	15519	16
SUD	56348	100660	181188	45297	634157	634
Basarabeasca	1656	1974	3553	888	12437	12
Cahul	9381	16276	29296	7324	102537	103
Cantemir	6564	12623	22721	5680	79522	80
Căușeni	12438	20263	36474	9118	127659	128
Cimișlia	6278	9680	17423	4356	60982	61
Leova	3338	6659	11986	2997	41952	42
Ștefan Vodă	8423	18613	33504	8376	117264	117
Taraclia	8270	14572	26230	6557	91805	92
UTA GĂGĂUZIA	18759	27386	49294	12324	172530	173

Anex 6.13. Barley (2009 Average)

	2009 Average, TJ	Rank within the region, 2009
TOTAL	1521	
Development regions:		
mun.CHIȘINĂU	9	
NORD	508	
mun.Bălți	1	12
Briceni	19	11
Dondușeni	37	9
Drochia	60	2
Edineț	53	3
Fălești	46	6
Florești	70	1
Glodeni	51	4
Ocnîța	36	10

	2009 Average, TJ	Rank within the region, 2009
Rișcani	44	7
Sîngerei	41	8
Soroca	49	5
CENTRU	264	
Anenii Noi	67	1
Călărași	2	11
Criuleni	18	7
Dubăsari	24	4
Hîncești	24	4
Ialoveni	11	9
Nisporeni	2	11
Orhei	26	3
Rezina	19	6
Strășeni	5	10
Șoldănești	29	2
Telenesti	21	5
Ungheni	14	8
SUD	581	
Basarabeasca	11	8
Cahul	94	3
Cantemir	73	5
Căușeni	117	1
Cimișlia	56	6
Leova	38	7
Ștefan Vodă	107	2
Taraclia	84	4
UTA GĂGĂUZIA	158	

Anex 6.14. Barley (average 2008-2009)

	Average 2008 2009, TJ	Rank within the region, 2008 2009
TOTAL	1945	

	Average 2008 TJ	2009, TJ	Rank within the region, 2008 2009
Development regions:			
mun.CHIȘINĂU	17		
NORD	631		
mun.Bălți	1		1
Briceni	16		10
Dondușeni	46		8
Drochia	62		3
Edineț	60		4
Fălești	58		5
Florești	121		1
Glodeni	49		7
Ocnița	43		9
Rîșcani	50		6
Sîngerei	63		2
Soroca	62		3
CENTRU	380		
Anenii Noi	87		1
Călărași	2		11
Criuleni	29		6
Dubăsari	28		7
Hîncești	32		5
Ialoveni	22		8
Nisporeni	2		11
Orhei	42		2
Rezina	34		4
Strășeni	5		10
Șoldănești	36		3
Telenesti	42		2
Ungheni	18		9
SUD	736		
Basarabeasca	17		8
Cahul	106		4

	Average 2008 TJ	2009, TJ	Rank within the region, 2008 2009
Cantemir	96		5
Căușeni	156		1
Cimișlia	70		6
Leova	44		7
Ștefan Vodă	141		2
Taraclia	107		3
UTA GĂGĂUZIA	181		

Anex 6.15. Corn (2008 minim)

	Total harvested area, hectares	Effective yield on total area, t	Production of waste, t / t culture, min	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			1,2	65%	14	
TOTAL	421810	1488801	1786561	1161265	16257709	16258
Development regions:						
mun.CHIȘINĂU	1095	2341	2809	1826	25559	26
NORD	152492	689210	827052	537584	7526173	7526
mun.Bălți	148	379	455	296	4143	4
Briceni	6048	18335	22002	14301	200215	200
Dondușeni	6566	32957	39548	25707	359891	360
Drochia	16444	78843	94612	61497	860965	861
Edineț	9741	39603	47524	30890	432464	432
Fălești	11862	42995	51594	33536	469509	470
Florești	34153	158675	190410	123767	1732734	1733
Glodeni	14148	69138	82966	53928	754990	755
Ocnîța	5968	37514	45016	29261	409648	410
Rîșcani	21302	87978	105573	68623	960716	961
Sîngerei	11450	37326	44792	29115	407605	408
Soroca	14661	85466	102560	66664	933294	933
CENTRU	100429	337802	405362	263485	3688795	3689
Anenii Noi	10540	22772	27326	17762	248668	249
Călărași	497	1289	1547	1005	14074	14

	Total harvested area, hectares	Effective yield on total area, t	Production of waste, t / t culture, min	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			1,2	65%	14	
Criuleni	8810	19316	23180	15067	210936	211
Dubăsari	5651	17460	20952	13619	190663	191
Hîncești	15280	35155	42186	27421	383889	384
Ialoveni	4069	7985	9582	6228	87193	87
Nisporeni	1376	4377	5252	3414	47797	48
Orhei	4323	12098	14517	9436	132106	132
Rezina	10349	55269	66323	43110	603542	604
Strășeni	1550	1894	2273	1477	20684	21
Șoldănești	16778	92599	111119	72228	1011186	1011
Telenesti	9492	20026	24032	15621	218689	219
Ungheni	11714	47561	57073	37098	519368	519
SUD	125354	349780	419736	272828	3819598	3820
Basarabeasca	3635	6569	7883	5124	71732	72
Cahul	24090	59320	71184	46270	647774	648
Cantemir	13519	40577	48692	31650	443101	443
Căușeni	18466	48978	58774	38203	534842	535
Cimișlia	6820	12043	14452	9393	131509	132
Leova	10751	38353	46024	29915	418814	419
Ștefan Vodă	21735	69523	83428	54228	759191	759
Taraclia	26339	74417	89300	58045	812634	813
UTA GĂGĂUZIA	42439	109669	131603	85542	1197584	1198

Anex 6.16. Corn (2008 maxim)

	Total harvested area, hectares	Effective yield on total area, t	Production of waste, t / t culture, max	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			2,5	65%	14	
TOTAL	421810	1488801	3722003	2419302	33870227	33870
Development regions:						
mun.CHIȘINĂU	1095	2341	5851	3803	53248	53

	Total harvested area, hectares	Effective yield on total area, t	Production of waste, t / t culture, max	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			2,5	65%	14	
NORD	152492	689210	1723025	1119966	15679528	15680
mun.Bălți	148	379	949	617	8632	9
Briceni	6048	18335	45837	29794	417115	417
Dondușeni	6566	32957	82393	53555	749773	750
Drochia	16444	78843	197107	128120	1793677	1794
Edineț	9741	39603	99007	64355	900967	901
Fălești	11862	42995	107488	69867	978143	978
Florești	34153	158675	396688	257847	3609863	3610
Glodeni	14148	69138	172846	112350	1572895	1573
Ocnîța	5968	37514	93784	60959	853433	853
Rîșcani	21302	87978	219944	142964	2001491	2001
Sîngerei	11450	37326	93316	60656	849177	849
Soroca	14661	85466	213666	138883	1944362	1944
CENTRU	100429	337802	844504	548928	7684990	7685
Anenii Noi	10540	22772	56929	37004	518058	518
Călărași	497	1289	3222	2094	29321	29
Criuleni	8810	19316	48291	31389	439450	439
Dubăsari	5651	17460	43650	28373	397215	397
Hîncești	15280	35155	87887	57126	799770	800
Ialoveni	4069	7985	19962	12975	181652	182
Nisporeni	1376	4377	10943	7113	99578	100
Orhei	4323	12098	30244	19659	275221	275
Rezina	10349	55269	138174	89813	1257379	1257
Strășeni	1550	1894	4735	3078	43091	43
Șoldănești	16778	92599	231499	150474	2106637	2107
Telenesti	9492	20026	50066	32543	455602	456
Ungheni	11714	47561	118903	77287	1082017	1082
SUD	125354	349780	874450	568393	7957495	7957
Basarabeasca	3635	6569	16422	10674	149441	149
Cahul	24090	59320	148300	96395	1349530	1350
Cantemir	13519	40577	101443	65938	923128	923

	Total harvested area, hectares	Effective yield on total area, t	Production of waste, t / t culture, max	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			2,5	65%	14	
Căușeni	18466	48978	122446	79590	1114255	1114
Cimișlia	6820	12043	30107	19570	273977	274
Leova	10751	38353	95882	62324	872529	873
Ștefan Vodă	21735	69523	173807	112975	1581647	1582
Taraclia	26339	74417	186043	120928	1692988	1693
UTA GĂGĂUZIA	42439	109669	274172	178212	2494966	2495

Anex 6.17. Corn (2008 average)

	2008 Average, TJ	Rank within the region, 2008
TOTAL	25064	
Development regions:		
mun.CHIȘINĂU	39	
NORD	11603	
mun.Bălți	6	12
Briceni	309	11
Dondușeni	555	10
Drochia	1327	4
Edineț	667	7
Fălești	724	6
Florești	2671	1
Glodeni	1164	5
Ocnîța	632	8
Rîșcani	1481	2
Sîngerei	628	9
Soroca	1439	3
CENTRU	5687	
Anenii Noi	383	5
Călărași	22	13
Criuleni	325	7

	2008 Average, TJ	Rank within the region, 2008
Dubăsari	294	8
Hîncești	592	4
Ialoveni	134	10
Nisporeni	74	11
Orhei	204	9
Rezina	930	2
Strășeni	32	12
Șoldănești	1559	1
Telenesti	337	6
Ungheni	801	3
SUD	5889	
Basarabasca	111	8
Cahul	999	3
Cantemir	683	5
Căușeni	825	4
Cimișlia	203	7
Leova	646	6
Ștefan Vodă	1170	2
Taraclia	1253	1
UTA GĂGĂUZIA	1846	

Anex 6.18. Corn (2009 minim)

	Total harvested area, hectares	Effective yield on total area, t	Production of waste, t / t culture, min	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			1,2	65%	14	
TOTAL	393525	1151094	1381313	897854	12569951	12570
Development regions:						
mun.CHIȘINĂU	1606	4594	5513	3584	50171	50
NORD	127719	450077	540092	351060	4914837	4915
mun.Bălți	188	488	585	381	5327	5

	Total harvested area, hectares	Effective yield on total area, t	Production of waste, t / t culture, min	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			1,2	65%	14	
Briceni	6038	19859	23831	15490	216859	217
Dondușeni	8225	48920	58704	38157	534202	534
Drochia	14444	56681	68018	44211	618960	619
Edineț	8338	24644	29573	19222	269112	269
Fălești	13156	48791	58549	38057	532794	533
Florești	25106	72017	86420	56173	786424	786
Glodeni	11181	38775	46530	30244	423420	423
Ocnîța	5181	24897	29877	19420	271877	272
Rîșcani	19056	69887	83864	54512	763165	763
Sîngerei	9594	18758	22510	14631	204837	205
Soroca	7213	26361	31633	20561	287859	288
CENTRU	96738	241089	289307	188049	2632690	2633
Anenii Noi	11188	20849	25018	16262	227667	228
Călărași	875	2322	2787	1811	25361	25
Criuleni	14081	30381	36458	23697	331764	332
Dubăsari	6081	19089	22907	14889	208450	208
Hîncești	9381	19170	23004	14953	209337	209
Ialoveni	2900	7355	8826	5737	80318	80
Nisporeni	594	1292	1550	1007	14104	14
Orhei	5181	11536	13844	8998	125978	126
Rezina	8444	23022	27627	17957	251405	251
Strășeni	1838	3474	4169	2710	37934	38
Șoldănești	13831	24388	29265	19023	266315	266
Telenesti	11731	23430	28116	18275	255855	256
Ungheni	10613	54780	65736	42729	598202	598
SUD	130906	351318	421581	274028	3836390	3836
Basarabeasca	3263	7267	8721	5668	79359	79
Cahul	24450	67986	81583	53029	742407	742
Cantemir	18781	54894	65873	42818	599447	599
Căușeni	13881	40870	49044	31879	446301	446
Cimișlia	10106	18217	21860	14209	198928	199

	Total harvested area, hectares	Effective yield on total area, t	Production of waste, t / t culture, min	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			1,2	65%	14	
Leova	11800	32341	38809	25226	353165	353
Ștefan Vodă	22188	70759	84911	55192	772687	773
Taraclia	26438	58983	70780	46007	644096	644
UTA GĂGĂUZIA	36556	104017	124820	81133	1135864	1136

Anex 6.19. Corn (2009 maxim)

	Total harvested area, hectares	Effective yield on total area, t	Production of waste, t / t culture, max	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			2,5	65%	14	
TOTAL	393525	1151094	2877736	1870528	26187397	26187
Development regions:						
mun.CHIȘINĂU	1606	4594	11486	7466	104522	105
NORD	127719	450077	1125192	731375	10239243	10239
mun.Bălți	188	488	1220	793	11099	11
Briceni	6038	19859	49647	32271	451789	452
Dondușeni	8225	48920	122299	79494	1112921	1113
Drochia	14444	56681	141703	92107	1289500	1289
Edineț	8338	24644	61610	40046	560649	561
Fălești	13156	48791	121977	79285	1109987	1110
Florești	25106	72017	180042	117027	1638383	1638
Glodeni	11181	38775	96937	63009	882126	882
Ocnîța	5181	24897	62243	40458	566411	566
Rîșcani	19056	69887	174717	113566	1589927	1590
Sîngerei	9594	18758	46895	30482	426743	427
Soroca	7213	26361	65902	42836	599707	600

	Total harvested area, hectares	Effective yield on total area, t	Production of waste, t / t culture, max	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			2,5	65%	14	
CENTRU	96738	241089	602722	391769	5484770	5485
Anenii Noi	11188	20849	52121	33879	474306	474
Călărași	875	2322	5806	3774	52835	53
Criuleni	14081	30381	75953	49370	691175	691
Dubăsari	6081	19089	47722	31019	434270	434
Hîncești	9381	19170	47925	31151	436120	436
Ialoveni	2900	7355	18388	11952	167329	167
Nisporeni	594	1292	3229	2099	29384	29
Orhei	5181	11536	28841	18747	262454	262
Rezina	8444	23022	57556	37411	523760	524
Strășeni	1838	3474	8685	5645	79030	79
Șoldănești	13831	24388	60970	39630	554824	555
Telenesti	11731	23430	58575	38074	533030	533
Ungheni	10613	54780	136951	89018	1246254	1246
SUD	130906	351318	878294	570891	7992479	7992
Basarabeasca	3263	7267	18168	11809	165331	165
Cahul	24450	67986	169965	110477	1546681	1547
Cantemir	18781	54894	137236	89203	1248847	1249
Căușeni	13881	40870	102175	66414	929795	930
Cimișlia	10106	18217	45542	29602	414433	414
Leova	11800	32341	80853	52554	735761	736
Ștefan Vodă	22188	70759	176897	114983	1609764	1610
Taraclia	26438	58983	147458	95848	1341867	1342
UTA GĂGĂUZIA	36556	104017	260042	169027	2366383	2366

Anex 6.20. Corn (2009 average)

	2009 Average, TJ	Rank within the region, 2009
TOTAL	19379	
Development regions:		

	2009 Average, TJ	Rank within the region, 2009
mun.CHIȘINĂU	77	
NORD	7577	
mun.Bălți	8	12
Briceni	334	11
Dondușeni	824	9
Drochia	954	2
Edineț	415	3
Fălești	821	6
Florești	1212	1
Glodeni	653	4
Ocnița	419	10
Rîșcani	1177	7
Sîngerei	316	8
Soroca	444	5
CENTRU	4059	
Anenii Noi	351	1
Călărași	39	11
Criuleni	511	7
Dubăsari	321	4
Hîncești	323	4
Ialoveni	124	9
Nisporeni	22	11
Orhei	194	3
Rezina	388	6
Strășeni	58	10
Șoldănești	411	2
Telenesti	394	5
Ungheni	922	8
SUD	5914	
Basarabeasca	122	8
Cahul	1145	3
Cantemir	924	5
Căușeni	688	1

	2009 Average, TJ	Rank within the region, 2009
Cimişlia	307	6
Leova	544	7
Ştefan Vodă	1191	2
Taraclia	993	4
UTA GĂGĂUZIA	1751	

Anex 6.21. Corn (average 2008-2009)

	Average 2008 2009, TJ	Rank within the region, 2008 2009
TOTAL	22221	
Development regions:		
mun.CHIŞINĂU	58	
NORD	9590	
mun.Bălţi	7	12
Briceni	321	11
Donduşeni	689	7
Drochia	1141	3
Edineţ	541	8
Fălesti	773	6
Floreşti	1942	1
Glodeni	908	5
Ocniţa	525	9
Rîşcani	1329	2
Sîngerei	472	10
Soroca	941	4
CENTRU	4873	
Anenii Noi	367	6
Călăraşi	30	13
Criuleni	418	5
Dubăsari	308	8
Hînceşti	457	4
Ialoveni	129	10
Nisporeni	48	11

	Average 2008 TJ	2009, TJ	Rank within the region, 2008 2009
Orhei	199		9
Rezina	659		3
Strășeni	45		12
Șoldănești	985		1
Telenesti	366		7
Ungheni	861		2
SUD	5901		
Basarabeasca	116		8
Cahul	1072		3
Cantemir	804		4
Căușeni	756		5
Cimișlia	255		7
Leova	595		6
Ștefan Vodă	1181		1
Taradia	1123		2
UTA GĂGĂUZIA	1799		

Anex 6.22. Autumn rye (2009 minim)

1 quintal = 100 kg

	Total harvested area, hectares	Effective yield on total area, q	Production of waste, t / t culture, min	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			1,8	25%	14	
TOTAL	869	13634	2454	614	8589	8,6
Development regions:						
mun.CHIȘINĂU	6	91	16	4	57	0,1
NORD	370	6409	1154	288	4038	4,0
mun.Bălți						
Briceni	50	1103	199	50	695	0,7
Dondușeni						
Drochia	30	611	110	27	385	0,4

	Total harvested area, hectares	Effective yield on total area, q	Production of waste, t / t culture, min	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			1,8	25%	14	
Edineț	105	836	150	38	527	0,5
Fălești						
Florești	140	2942	530	132	1853	1,9
Glodeni	8	275	50	12	173	0,2
Ocnîța						
Rîșcani	6	112	20	5	71	0,1
Sîngerei	30	520	94	23	328	0,3
Soroca	1	10	2	0	6	0,0
CENTRU	418	5540	997	249	3490	3,5
Anenii Noi	2	15	3	1	9	0,0
Călărași						
Criuleni	23	580	104	26	365	0,4
Dubăsari	114	1856	334	84	1169	1,2
Hîncești						
Ialoveni						
Nisporeni	1	19	3	1	12	0,0
Orhei	12	120	22	5	76	0,1
Rezina	266	2950	531	133	1859	1,9
Strășeni						
Șoldănești						
Telenesti						
Ungheni						
SUD	75	1594	287	72	1004	1,0
Basarabeasca						
Cahul						
Cantemir						
Căușeni						
Cimișlia	50	914	165	41	576	0,6
Leova	25	680	122	31	428	0,4

	Total harvested area, hectares	Effective yield on total area, q	Production of waste, t / t culture, min	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			1,8	25%	14	
Ștefan Vodă						
Taraclia						
UTA GĂGĂUZIA						

Anex 6.23. Autumn rye (2009 maxim)

	Total harvested area, hectares	Effective yield on total area, t	Production of waste, t / t culture, max	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			2,0	25%	14	
TOTAL	869	13634	2727	682	9543,8	9,5
Development regions:						
mun.CHIȘINĂU	6	91	18	5	63,7	0,1
NORD	370	6409	1282	320	4486,3	4,5
mun.Bălți						
Briceni	50	1103	221	55	772,1	0,8
Dondușeni						
Drochia	30	611	122	31	427,7	0,4
Edineț	105	836	167	42	585,2	0,6
Fălești						
Florești	140	2942	588	147	2059,4	2,1
Glodeni	8	275	55	14	192,5	0,2
Ocnîța						
Rîșcani	6	112	22	6	78,4	0,1
Sîngerei	30	520	104	26	364	0,4
Soroca	1	10	2	1	7	0,0
CENTRU	418	5540	1108	277	3878	3,9
Anenii Noi	2	15	3	1	10,5	0,0
Călărași						

	Total harvested area, hectares	Effective yield on total area, t	Production of waste, t / t culture, max	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			2,0	25%	14	
Criuleni	23	580	116	29	406	0,4
Dubăsari	114	1856	371	93	1299,2	1,3
Hîncești						
Ialoveni						
Nisporeni	1	19	4	1	13,3	0,0
Orhei	12	120	24	6	84	0,1
Rezina	266	2950	590	148	2065	2,1
Strășeni						
Șoldănești						
Telenesti						
Ungheni						
SUD	75	1594	319	80	1115,8	1,1
Basarabeasca						
Cahul						
Canemir						
Căușeni						
Cimișlia	50	914	183	46	639,8	0,6
Leova	25	680	136	34	476	0,5
Ștefan Vodă						
Taraclia						
UTA GĂGĂUZIA						

Anex 6.24. Autumn rye (average 2009)

	2009 Average, TJ	Rank within the region, 2009
TOTAL	9,1	
Development regions:		
mun.CHIȘINĂU	0,1	
NORD	4,3	

	2009 Average, TJ	Rank within the region, 2009
mun.Bălți		
Briceni	0,7	2
Dondușeni		
Drochia	0,4	4
Edineț	0,6	3
Fălești		
Florești	2,0	1
Glodeni	0,2	6
Ocnîța		
Rîșcani	0,1	7
Sîngerei	0,3	5
Soroca	0,01	8
CENTRU	3,7	
Anenii Noi	0,010	6
Călărași		
Criuleni	0,4	3
Dubăsari	1,2	2
Hîncești		
Ialoveni		
Nisporeni	0,013	5
Orhei	0,1	4
Rezina	2,0	1
Strășeni		
Șoldănești		
Telenesti		
Ungheni		
SUD	1,1	
Basarabeasca		
Cahul		
Cantemir		
Căușeni		
Cimișlia	0,6	1

	2009 Average, TJ	Rank within the region, 2009
Leova	0,5	2
Ștefan Vodă		
Taraclia		
UTA GĂGĂUZIA		

Anex 6.25. Autumn rye (2010 minim)

	Total harvested area, hectares	Effective yield on total area, q	Production of waste, t / t culture, min	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			1,8	25%	14	
TOTAL	867	15724	2830	708	9906	9,9
Development regions:						
mun.CHIȘINĂU	5	88	16	4	55	0,1
NORD	191	4565	822	205	2876	2,9
mun.Bălți						
Briceni	10	244	44	11	154	0,2
Dondușeni						
Drochia	5	200	36	9	126	0,1
Edineț	19	340	61	15	214	0,2
Fălești	23	544	98	24	343	0,3
Florești						
Glodeni	6	132	24	6	83	0,1
Ocnîța						
Rîșcani	118	2995	539	135	1887	1,9
Sîngerei	10	110	20	5	69	0,1
Soroca						
CENTRU	317	5712	1028	257	3599	3,6
Anenii Noi	7	64	12	3	40	0,0
Călărași						
Criuleni	19	235	42	11	148	0,1

	Total harvested area, hectares	Effective yield on total area, q	Production of waste, t / t culture, min	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			1,8	25%	14	
Dubăsari	76	1348	243	61	849	0,8
Hîncești	8	200	36	9	126	0,1
Ialoveni						
Nisporeni						
Orhei	22	363	65	16	229	0,2
Rezina	140	2500	450	113	1575	1,6
Strășeni						
Șoldănești	30	622	112	28	392	0,4
Telenesti						
Ungheni	15	380	68	17	239	0,2
SUD	354	5359	965	241	3376	3,4
Basarabeasca						
Cahul	353	5329	959	240	3357	3,4
Cantemir						
Căușeni						
Cimișlia						
Leova						
Ștefan Vodă	1	30	5	1	19	0,0
Taraclia						
UTA GĂGĂUZIA						

Anex 6.26. Autumn rye (2010 maxim)

	Total harvested area, hectares	Effective yield on total area, t	Production of waste, t / t culture, max	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			2,0	25%	14	
TOTAL	867	15724	3145	786	11006,8	11,0
Development regions:						

	Total harvested area, hectares	Effective yield on total area, t	Production of waste, t / t culture, max	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			2,0	25%	14	
mun.CHIȘINĂU	5	88	18	4	61,6	0,1
NORD	191	4565	913	228	3195,5	3,2
mun.Bălți						
Briceni	10	244	49	12	170,8	0,2
Dondușeni						
Drochia	5	200	40	10	140	0,1
Edineț	19	340	68	17	238	0,2
Fălești	23	544	109	27	380,8	0,4
Florești						
Glodeni	6	132	26	7	92,4	0,1
Ocnîța						
Rîșcani	118	2995	599	150	2096,5	2,1
Sîngerei	10	110	22	6	77	0,1
Soroca						
CENTRU	317	5712	1142	286	3998,4	4,0
Anenii Noi	7	64	13	3	44,8	0,0
Călărași						
Criuleni	19	235	47	12	164,5	0,2
Dubăsari	76	1348	270	67	943,6	0,9
Hîncești	8	200	40	10	140	0,1
Ialoveni						
Nisporeni						
Orhei	22	363	73	18	254,1	0,3
Rezina	140	2500	500	125	1750	1,8
Strășeni						
Șoldănești	30	622	124	31	435,4	0,4
Telenesti						
Ungheni	15	380	76	19	266	0,3
SUD	354	5359	1072	268	3751,3	3,8

	Total harvested area, hectares	Effective yield on total area, t	Production of waste, t / t culture, max	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			2,0	25%	14	
Basarabasca						
Cahul	353	5329	1066	266	3730,3	3,7
Cantemir						
Căușeni						
Cimișlia						
Leova						
Ștefan Vodă	1	30	6	2	21	0,0
Taraclia						
UTA GĂGĂUZIA						

Anex 6.27. Autumn rye (2010 average)

	2010 Average, TJ	Rank within the region, 2010
TOTAL	10,5	
Development regions:		
mun.CHIȘINĂU	0,1	
NORD	3,0	
mun.Bălți		
Briceni	0,16	4
Dondușeni		
Drochia	0,13	5
Edineț	0,23	3
Fălești	0,36	2
Florești		
Glodeni	0,09	6
Ocnîța		
Rîșcani	1,99	1
Sîngerei	0,07	7
Soroca		

	2010 Average, TJ	Rank within the region, 2010
CENTRU	3,8	
Anenii Noi	0,04	8
Călărași		
Criuleni	0,16	6
Dubăsari	0,90	2
Hîncești	0,13	7
Ialoveni		
Nisporeni		
Orhei	0,24	5
Rezina	1,66	1
Strășeni		
Șoldănești	0,41	3
Telenesti		
Ungheni	0,25	4
SUD	3,6	
Basarabasca		
Cahul	3,5	1
Cantemir		
Căușeni		
Cimișlia		
Leova		
Ștefan Vodă	0,02	2
Taraclia		
UTA GĂGĂUZIA		

Anex 6.28. Autumn rye (2009-2010 average)

	Average 2008 2009, TJ	Rank within the region, 2008 2009
TOTAL	10	
Development regions:		
mun.CHIȘINĂU	0	
NORD	4	

	Average 2008	2009, TJ	Rank within the region, 2008	2009
mun.Bălți				
Briceni	0,4		3	
Dondușeni				
Drochia	0,3		5	
Edineț	0,4		4	
Fălești	0,2		7	
Florești	1,0		2	
Glodeni	0,1		8	
Ocnița				
Rîșcani	1,0		1	
Sîngerei	0,2		6	
Soroca	0,0			
CENTRU	4			
Anenii Noi	0,0		8	
Călărași				
Criuleni	0,3		3	
Dubăsari	1,1		2	
Hîncești	0,1		7	
Ialoveni				
Nisporeni	0,0		9	
Orhei	0,2		5	
Rezina	1,8		1	
Strășeni				
Șoldănești	0,2		4	
Telenesti				
Ungheni	0,1		6	
SUD	2			
Basarabeasca				
Cahul	1,8		1	
Cantemir				
Căușeni				
Cimișlia	0,3		2	

	Average 2008 2009, TJ	Rank within the region, 2008 2009
Leova	0,2	3
Ștefan Vodă	0,0	4
Taraclia		
UTA GĂGĂUZIA		

Anex 6.29. Barley (2009 minim)

	Total harvested area, hectares	Effective yield on total area, q	Production of waste, t / t culture, min	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			1,8	25%	14	
TOTAL	1169	10749	1935	484	6772	6,77
Development regions:						
mun.CHIȘINĂU	20	362	65	16	228	0,23
NORD	209	3058	550	138	1927	1,93
mun.Bălți	4	94	17	4	59	0,06
Briceni	15	354	64	16	223	0,22
Dondușeni			0	0	0	0,00
Drochia	19	224	40	10	141	0,14
Edineț	49	618	111	28	389	0,39
Fălești	28	393	71	18	248	0,25
Florești	10	30	5	1	19	0,02
Glodeni	35	605	109	27	381	0,38
Ocnîța			0	0	0	0,00
Rîșcani	47	719	129	32	453	0,45
Sîngerei	2	21	4	1	13	0,01
Soroca			0	0	0	0,00
CENTRU	413	2941	529	132	1853	1,85
Anenii Noi	92	802	144	36	505	0,51
Călărași			0	0	0	0,00
Criuleni	47	319	57	14	201	0,20
Dubăsari	13	151	27	7	95	0,10

	Total harvested area, hectares	Effective yield on total area, q	Production of waste, t / t culture, min	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			1,8	25%	14	
Hîncești			0	0	0	0,00
Ialoveni	19	144	26	6	91	0,09
Nisporeni			0	0	0	0,00
Orhei	61	178	32	8	112	0,11
Rezina	9	50	9	2	32	0,03
Strășeni			0	0	0	0,00
Șoldănești	15	84	15	4	53	0,05
Telenesti	110	532	96	24	335	0,34
Ungheni	47	681	123	31	429	0,43
SUD	412	3649	657	164	2299	2,30
Basarabeasca			0	0	0	0,00
Cahul	63	388	70	17	244	0,24
Cantemir	95	1413	254	64	890	0,89
Căușeni	55	403	73	18	254	0,25
Cimișlia	14	30	5	1	19	0,02
Leova	25	240	43	11	151	0,15
Ștefan Vodă	45	275	50	12	173	0,17
Taraclia	115	900	162	41	567	0,57
UTA GĂGĂUZIA	115	739	133	33	466	0,47

Anex 6.30. Barley (2009 maxim)

	Total harvested area, hectares	Effective yield on total area, t	Production of waste, t / t culture, max	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			1,8	25%	14	
TOTAL	1169	10749	1935	484	6771,87	6,77
Development regions:						
mun.CHIȘINĂU	20	362	65	16	228,06	0,23
NORD	209	3058	550	138	1926,54	1,93

	Total harvested area, hectares	Effective yield on total area, t	Production of waste, t / t culture, max	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			1,8	25%	14	
mun.Bălți	4	94	17	4	59,22	0,06
Briceni	15	354	64	16	223,02	0,22
Dondușeni			0	0	0	0,00
Drochia	19	224	40	10	141,12	0,14
Edineț	49	618	111	28	389,34	0,39
Fălești	28	393	71	18	247,59	0,25
Florești	10	30	5	1	18,9	0,02
Glodeni	35	605	109	27	381,15	0,38
Ocnîța			0	0	0	0,00
Rîșcani	47	719	129	32	452,97	0,45
Sîngerei	2	21	4	1	13,23	0,01
Soroca			0	0	0	0,00
CENTRU	413	2941	529	132	1852,83	1,85
Anenii Noi	92	802	144	36	505,26	0,51
Călărași			0	0	0	0,00
Criuleni	47	319	57	14	200,97	0,20
Dubăsari	13	151	27	7	95,13	0,10
Hîncești			0	0	0	0,00
Ialoveni	19	144	26	6	90,72	0,09
Nisporeni			0	0	0	0,00
Orhei	61	178	32	8	112,14	0,11
Rezina	9	50	9	2	31,5	0,03
Strășeni			0	0	0	0,00
Șoldănești	15	84	15	4	52,92	0,05
Telenesti	110	532	96	24	335,16	0,34
Ungheni	47	681	123	31	429,03	0,43
SUD	412	3649	657	164	2298,87	2,30
Basarabasca			0	0	0	0,00
Cahul	63	388	70	17	244,44	0,24
Cantemir	95	1413	254	64	890,19	0,89

	Total harvested area, hectares	Effective yield on total area, t	Production of waste, t / t culture, max	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			1,8	25%	14	
Căușeni	55	403	73	18	253,89	0,25
Cimișlia	14	30	5	1	18,9	0,02
Leova	25	240	43	11	151,2	0,15
Ștefan Vodă	45	275	50	12	173,25	0,17
Taraclia	115	900	162	41	567	0,57
UTA GĂGĂUZIA	115	739	133	33	465,57	0,47

Anex 6.31. Barley (2009 average)

	2009 Average, TJ	Rank within the region, 2009
TOTAL	6,77	
Development regions:		
mun.CHIȘINĂU	0,23	
NORD	1,93	
mun.Bălți	0,06	7
Briceni	0,22	5
Donușeni	0,00	
Drochia	0,14	6
Edineț	0,39	2
Fălești	0,25	4
Florești	0,02	8
Glodeni	0,38	3
Ocnița	0,00	
Rîșcani	0,45	1
Sîngerei	0,01	9
Soroca	0,00	
CENTRU	1,85	
Anenii Noi	0,51	1
Călărași	0,00	
Criuleni	0,20	4

	2009 Average, TJ	Rank within the region, 2009
Dubăsari	0,10	6
Hîncești	0,00	
Ialoveni	0,09	7
Nisporeni	0,00	
Orhei	0,11	5
Rezina	0,03	9
Strășeni	0,00	
Șoldănești	0,05	8
Telenesti	0,34	3
Ungheni	0,43	2
SUD	2,30	
Basarabeasca	0,00	
Cahul	0,24	4
Cantemir	0,89	1
Căușeni	0,25	3
Cimișlia	0,02	7
Leova	0,15	6
Ștefan Vodă	0,17	5
Taraclia	0,57	2
UTA GĂGĂUZIA	0,47	

Anex 6.32. Autumn rye (2010 minim)

	Total harvested area, hectares	Effective yield on total area, q	Production of waste, t / t culture, min	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			1,8	25%	14	
TOTAL	1508	17180	3092	773	10823	10,82
Development regions:						
mun.CHIȘINĂU	29	476	86	21	300	0,30
NORD	286	4633	834	208	2919	2,92
mun.Bălți			0	0	0	0,00

	Total harvested area, hectares	Effective yield on total area, q	Production of waste, t / t culture, min	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			1,8	25%	14	
Briceni			0	0	0	0,00
Dondușeni	5	130	23	6	82	0,08
Drochia	20	410	74	18	258	0,26
Edineț	46	706	127	32	445	0,44
Fălești	58	809	146	36	510	0,51
Florești	39	451	81	20	284	0,28
Glodeni	23	337	61	15	212	0,21
Ocnîța	4	98	18	4	62	0,06
Rîșcani	61	1337	241	60	842	0,84
Sîngerei	6	115	21	5	72	0,07
Soroca	24	240	43	11	151	0,15
CENTRU	417	4968	894	224	3130	3,13
Anenii Noi	96	1327	239	60	836	0,84
Călărași			0	0	0	0,00
Criuleni	22	289	52	13	182	0,18
Dubăsari			0	0	0	0,00
Hîncești	13	99	18	4	62	0,06
Ialoveni	8	113	20	5	71	0,07
Nisporeni			0	0	0	0,00
Orhei	69	734	132	33	462	0,46
Rezina	4	20	4	1	13	0,01
Strășeni	1	10	2	0	6	0,01
Șoldănești	20	186	33	8	117	0,12
Telenesti	155	1846	332	83	1163	1,16
Ungheni	29	344	62	15	217	0,22
SUD	539	4588	826	206	2890	2,89
Basarabeasca	16	61	11	3	38	0,04
Cahul	221	1372	247	62	864	0,86
Canemir	37	304	55	14	192	0,19
Căușeni	69	619	111	28	390	0,39

	Total harvested area, hectares	Effective yield on total area, q	Production of waste, t / t culture, min	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			1,8	25%	14	
Cimișlia	10	50	9	2	32	0,03
Leova	22	162	29	7	102	0,10
Ștefan Vodă	59	953	172	43	600	0,60
Taraclia	105	1067	192	48	672	0,67
UTA GĂGĂUZIA	237	2515	453	113	1584	1,58

Anex 6.33. Autumn rye (2010 maxim)

	Total harvested area, hectares	Effective yield on total area, t	Production of waste, t / t culture, max	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			1,8	25%	14	
TOTAL	1508	17180	3092	773	10823,4	10,82
Development regions:						
mun.CHIȘINĂU	29	476	86	21	299,88	0,30
NORD	286	4633	834	208	2918,79	2,92
mun.Bălți			0	0	0	0,00
Briceni			0	0	0	0,00
Dondușeni	5	130	23	6	81,9	0,08
Drochia	20	410	74	18	258,3	0,26
Edineț	46	706	127	32	444,78	0,44
Fălești	58	809	146	36	509,67	0,51
Florești	39	451	81	20	284,13	0,28
Glodeni	23	337	61	15	212,31	0,21
Ocnîța	4	98	18	4	61,74	0,06
Rîșcani	61	1337	241	60	842,31	0,84
Sîngerei	6	115	21	5	72,45	0,07
Soroca	24	240	43	11	151,2	0,15
CENTRU	417	4968	894	224	3129,84	3,13
Anenii Noi	96	1327	239	60	836,01	0,84

	Total harvested area, hectares	Effective yield on total area, t	Production of waste, t / t culture, max	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			1,8	25%	14	
Călărași			0	0	0	0,00
Criuleni	22	289	52	13	182,07	0,18
Dubăsari			0	0	0	0,00
Hîncești	13	99	18	4	62,37	0,06
Ialoveni	8	113	20	5	71,19	0,07
Nisporeni			0	0	0	0,00
Orhei	69	734	132	33	462,42	0,46
Rezina	4	20	4	1	12,6	0,01
Strășeni	1	10	2	0	6,3	0,01
Șoldănești	20	186	33	8	117,18	0,12
Telenesti	155	1846	332	83	1162,98	1,16
Ungheni	29	344	62	15	216,72	0,22
SUD	539	4588	826	206	2890,44	2,89
Basarabeasca	16	61	11	3	38,43	0,04
Cahul	221	1372	247	62	864,36	0,86
Canemir	37	304	55	14	191,52	0,19
Căușeni	69	619	111	28	389,97	0,39
Cimișlia	10	50	9	2	31,5	0,03
Leova	22	162	29	7	102,06	0,10
Ștefan Vodă	59	953	172	43	600,39	0,60
Taraclia	105	1067	192	48	672,21	0,67
UTA GĂGĂUZIA	237	2515	453	113	1584,45	1,58

Anex 6.34. Autumn rye (2010 average)

	2010 Average, TJ	Rank within the region, 2010
TOTAL	10,82	
Development regions:		
mun.CHIȘINĂU	0,30	
NORD	2,92	

	2010 Average, TJ	Rank within the region, 2010
mun.Bălți	0,00	
Briceni	0,00	
Dondușeni	0,08	8
Drochia	0,26	5
Edineț	0,44	3
Fălești	0,51	2
Florești	0,28	4
Glodeni	0,21	6
Ocnița	0,06	10
Rîșcani	0,84	1
Sîngerei	0,07	9
Soroca	0,15	7
CENTRU	3,13	
Anenii Noi	0,836	2
Călărași	0,000	
Criuleni	0,182	5
Dubăsari	0,000	
Hîncești	0,062	8
Ialoveni	0,071	7
Nisporeni	0,000	
Orhei	0,462	3
Rezina	0,013	9
Strășeni	0,006	10
Șoldănești	0,117	6
Telenesti	1,163	1
Ungheni	0,217	4
SUD	2,89	
Basarabeasca	0,04	7
Cahul	0,86	1
Cantemir	0,19	5
Căușeni	0,39	4
Cimișlia	0,03	8

	2010 Average, TJ	Rank within the region, 2010
Leova	0,10	6
Ștefan Vodă	0,60	3
Taraclia	0,67	2
UTA GĂGĂUZIA	1,58	

Anex 6.35. Autumn rye (2009-2010 average)

	Average 2009 2010, TJ	Rank within the region, 2009 2010
TOTAL	8,80	
Development regions:		
mun.CHIȘINĂU	0,26	
NORD	2,42	
mun.Bălți	0,030	12
Briceni	0,112	7
Dondușeni	0,041	10
Drochia	0,200	5
Edineț	0,417	2
Fălești	0,379	3
Florești	0,152	6
Glodeni	0,297	4
Ocnița	0,031	11
Rîșcani	0,648	1
Sîngerei	0,043	9
Soroca	0,076	8
CENTRU	2,491	
Anenii Noi	0,671	2
Călărași	0,000	
Criuleni	0,192	5
Dubăsari	0,048	8
Hîncești	0,031	9
Ialoveni	0,081	7
Nisporeni	0,000	

	Average 2009 2010, TJ	Rank within the region, 2009 2010
Orhei	0,287	4
Rezina	0,022	10
Strășeni	0,003	11
Șoldănești	0,085	6
Telenesti	0,749	1
Ungheni	0,323	3
SUD	2,59	
Basarabasca	0,02	8
Cahul	0,55	2
Cantemir	0,54	3
Căușeni	0,32	5
Cimișlia	0,03	7
Leova	0,13	6
Ștefan Vodă	0,39	4
Taraclia	0,62	1
UTA GĂGĂUZIA	1,03	

Anex 6.36. Wheat (2009 minim)

	Total harvested area, hectares	Effective yield on total area, q	Production of waste, t / t culture, min	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			1,0	25%	14	
TOTAL	258094	5575427	557543	139386	1951399	1951,40
Development regions:						
mun.CHIȘINĂU	1395	28854	2885	721	10099	10,10
NORD	103656	2713201	271320	67830	949620	949,62
mun.Bălți	406	8122	812	203	2843	2,84
Briceni	4405	126062	12606	3152	44122	44,12
Dondușeni	6872	201447	20145	5036	70506	70,51
Drochia	14664	418857	41886	10471	146600	146,60

	Total harvested area, hectares	Effective yield on total area, q	Production of waste, t / t culture, min	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			1,0	25%	14	
Edineț	7050	195997	19600	4900	68599	68,60
Fălești	10905	307485	30749	7687	107620	107,62
Florești	15768	337905	33791	8448	118267	118,27
Glodeni	8840	249568	24957	6239	87349	87,35
Ocnîța	4515	137645	13765	3441	48176	48,18
Rîșcani	9532	269568	26957	6739	94349	94,35
Sîngerei	10093	187619	18762	4690	65667	65,67
Soroca	10606	272926	27293	6823	95524	95,52
CENTRU	58120	1095019	109502	27375	383257	383,26
Anenii Noi	7029	131104	13110	3278	45886	45,89
Călărași	488	9307	931	233	3257	3,26
Criuleni	4688	106093	10609	2652	37133	37,13
Dubăsari	3601	59591	5959	1490	20857	20,86
Hîncești	7384	150736	15074	3768	52758	52,76
Ialoveni	2669	47691	4769	1192	16692	16,69
Nisporeni	167	2703	270	68	946	0,95
Orhei	6833	108763	10876	2719	38067	38,07
Rezina	6165	89528	8953	2238	31335	31,33
Strășeni	1038	19975	1998	499	6991	6,99
Șoldănești	5004	92258	9226	2306	32290	32,29
Telenesti	5618	91829	9183	2296	32140	32,14
Ungheni	7436	185441	18544	4636	64904	64,90
SUD	70417	1349384	134938	33735	472284	472,28
Basarabeasca	2779	36529	3653	913	12785	12,79
Cahul	13081	239553	23955	5989	83844	83,84
Cantemir	5276	119599	11960	2990	41860	41,86
Căușeni	10535	205304	20530	5133	71856	71,86
Cimișlia	10006	168546	16855	4214	58991	58,99
Leova	3799	97919	9792	2448	34272	34,27
Ștefan Vodă	14298	300168	30017	7504	105059	105,06

	Total harvested area, hectares	Effective yield on total area, q	Production of waste, t / t culture, min	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			1,0	25%	14	
Taraclia	10643	181766	18177	4544	63618	63,62
UTA GĂGĂUZIA	24506	388969	38897	9724	136139	136,14

Anex 6.37. Wheat (2009 maxim)

	Total harvested area, hectares	Effective yield on total area, t	Production of waste, t / t culture, max	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			1,8	25%	14	
TOTAL	258094	5575427	1003577	250894	3512519,01	3512,52
Development regions:						
mun.CHIȘINĂU	1395	28854	5194	1298	18178,02	18,18
NORD	103656	2713201	488376	122094	1709316,63	1709,32
mun.Bălți	406	8122	1462	365	5116,86	5,12
Briceni	4405	126062	22691	5673	79419,06	79,42
Donușeni	6872	201447	36260	9065	126911,61	126,91
Drochia	14664	418857	75394	18849	263879,91	263,88
Edineț	7050	195997	35279	8820	123478,11	123,48
Fălești	10905	307485	55347	13837	193715,55	193,72
Florești	15768	337905	60823	15206	212880,15	212,88
Glodeni	8840	249568	44922	11231	157227,84	157,23
Ocnîța	4515	137645	24776	6194	86716,35	86,72
Rîșcani	9532	269568	48522	12131	169827,84	169,83
Sîngerei	10093	187619	33771	8443	118199,97	118,20
Soroca	10606	272926	49127	12282	171943,38	171,94
CENTRU	58120	1095019	197103	49276	689861,97	689,86
Anenii Noi	7029	131104	23599	5900	82595,52	82,60
Călărași	488	9307	1675	419	5863,41	5,86
Criuleni	4688	106093	19097	4774	66838,59	66,84
Dubăsari	3601	59591	10726	2682	37542,33	37,54

	Total harvested area, hectares	Effective yield on total area, t	Production of waste, t / t culture, max	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			1,8	25%	14	
Hîncești	7384	150736	27132	6783	94963,68	94,96
Ialoveni	2669	47691	8584	2146	30045,33	30,05
Nisporeni	167	2703	487	122	1702,89	1,70
Orhei	6833	108763	19577	4894	68520,69	68,52
Rezina	6165	89528	16115	4029	56402,64	56,40
Strășeni	1038	19975	3596	899	12584,25	12,58
Șoldănești	5004	92258	16606	4152	58122,54	58,12
Telenesti	5618	91829	16529	4132	57852,27	57,85
Ungheni	7436	185441	33379	8345	116827,83	116,83
SUD	70417	1349384	242889	60722	850111,92	850,11
Basarabeasca	2779	36529	6575	1644	23013,27	23,01
Cahul	13081	239553	43120	10780	150918,39	150,92
Cantemir	5276	119599	21528	5382	75347,37	75,35
Căușeni	10535	205304	36955	9239	129341,52	129,34
Cimișlia	10006	168546	30338	7585	106183,98	106,18
Leova	3799	97919	17625	4406	61688,97	61,69
Ștefan Vodă	14298	300168	54030	13508	189105,84	189,11
Taraclia	10643	181766	32718	8179	114512,58	114,51
UTA GĂGĂUZIA	24506	388969	70014	17504	245050,47	245,05

Anex 6.38. Wheat (average 2009)

	2009 Average, TJ	Rank within the region, 2009
TOTAL	2732	
Development regions:		
mun.CHIȘINĂU	14	
NORD	1329	
mun.Bălți	4	12
Briceni	62	11
Dondușeni	99	7
Drochia	205	1
Edineț	96	8
Fălești	151	3

	2009 Average, TJ	Rank within the region, 2009
Florești	166	2
Glodeni	122	6
Ocnîța	67	10
Rîșcani	132	5
Sîngerei	92	9
Soroca	134	4
CENTRU	537	
Anenii Noi	64,2	3
Călărași	4,6	12
Criuleni	52,0	5
Dubăsari	29,2	9
Hîncești	73,9	2
Ialoveni	23,4	10
Nisporeni	1,3	13
Orhei	53,3	4
Rezina	43,9	8
Strășeni	9,8	11
Șoldănești	45,2	6
Telenesti	45,0	7
Ungheni	90,9	1
SUD	661	
Basarabeasca	18	8
Cahul	117	2
Cantemir	59	6
Căușeni	101	3
Cimișlia	83	5
Leova	48	7
Ștefan Vodă	147	1
Taraclia	89	4
UTA GĂGĂUZIA	191	

Anex 6.39. **Wheat (2010 minim)**

	Total harvested area, hectares	Effective yield on total area, q	Production of waste, t / t culture, min	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			1,0	25%	14	
TOTAL	253585	6087178	608718	152179	2130512	2130,51
Development regions:						
mun.CHIȘINĂU	1093	18545	1855	464	6491	6,49

	Total harvested area, hectares	Effective yield on total area, q	Production of waste, t / t culture, min	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			1,0	25%	14	
NORD	104972	2892044	289204	72301	1012215	1012,22
mun.Bălți	410	8848	885	221	3097	3,10
Briceni	4396	119869	11987	2997	41954	41,95
Dondușeni	6782	201118	20112	5028	70391	70,39
Drochia	17032	500237	50024	12506	175083	175,08
Edineț	7423	210546	21055	5264	73691	73,69
Fălești	11614	345138	34514	8628	120798	120,80
Florești	13745	363249	36325	9081	127137	127,14
Glodeni	8025	234794	23479	5870	82178	82,18
Ocnîța	4295	121329	12133	3033	42465	42,47
Rîșcani	9853	266662	26666	6667	93332	93,33
Sîngerei	10282	239262	23926	5982	83742	83,74
Soroca	11115	280992	28099	7025	98347	98,35
CENTRU	58387	1277950	127795	31949	447283	447,28
Anenii Noi	8135	127656	12766	3191	44680	44,68
Călărași	316	5982	598	150	2094	2,09
Criuleni	5526	124421	12442	3111	43547	43,55
Dubăsari	3488	74717	7472	1868	26151	26,15
Hîncești	7009	126857	12686	3171	44400	44,40
Ialoveni	2291	50202	5020	1255	17571	17,57
Nisporeni	235	4303	430	108	1506	1,51
Orhei	6755	157826	15783	3946	55239	55,24
Rezina	6761	143004	14300	3575	50051	50,05
Strășeni	502	10753	1075	269	3764	3,76
Șoldănești	4474	116688	11669	2917	40841	40,84
Telenesti	5486	127582	12758	3190	44654	44,65
Ungheni	7409	207959	20796	5199	72786	72,79
SUD	66139	1423192	142319	35580	498117	498,12
Basarabeasca	3083	50334	5033	1258	17617	17,62
Cahul	10571	203124	20312	5078	71093	71,09

	Total harvested area, hectares	Effective yield on total area, q	Production of waste, t / t culture, min	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			1,0	25%	14	
Cantemir	4902	118999	11900	2975	41650	41,65
Căușeni	10009	211077	21108	5277	73877	73,88
Cimișlia	10159	180430	18043	4511	63151	63,15
Leova	4027	91958	9196	2299	32185	32,19
Ștefan Vodă	15285	389383	38938	9735	136284	136,28
Taraclia	8103	177887	17789	4447	62260	62,26
UTA GĂGĂUZIA	22994	475447	47545	11886	166406	166,41

Anex 6.40. Wheat (2010 maxim)

	Total harvested area, hectares	Effective yield on total area, t	Production of waste, t / t culture, max	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			1,8	25%	14	
TOTAL	253585	6087178	1095692	273923	3834922,14	3834,92
Development regions:						
mun.CHIȘINĂU	1093	18545	3338	835	11683,35	11,68
NORD	104972	2892044	520568	130142	1821987,72	1821,99
mun.Bălți	410	8848	1593	398	5574,24	5,57
Briceni	4396	119869	21576	5394	75517,47	75,52
Dondușeni	6782	201118	36201	9050	126704,34	126,70
Drochia	17032	500237	90043	22511	315149,31	315,15
Edineț	7423	210546	37898	9475	132643,98	132,64
Fălești	11614	345138	62125	15531	217436,94	217,44
Florești	13745	363249	65385	16346	228846,87	228,85
Glodeni	8025	234794	42263	10566	147920,22	147,92
Ocnîța	4295	121329	21839	5460	76437,27	76,44
Rîșcani	9853	266662	47999	12000	167997,06	168,00
Sîngerei	10282	239262	43067	10767	150735,06	150,74
Soroca	11115	280992	50579	12645	177024,96	177,02

	Total harvested area, hectares	Effective yield on total area, t	Production of waste, t / t culture, max	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			1,8	25%	14	
CENTRU	58387	1277950	230031	57508	805108,5	805,11
Anenii Noi	8135	127656	22978	5745	80423,28	80,42
Călărași	316	5982	1077	269	3768,66	3,77
Criuleni	5526	124421	22396	5599	78385,23	78,39
Dubăsari	3488	74717	13449	3362	47071,71	47,07
Hîncești	7009	126857	22834	5709	79919,91	79,92
Ialoveni	2291	50202	9036	2259	31627,26	31,63
Nisporeni	235	4303	775	194	2710,89	2,71
Orhei	6755	157826	28409	7102	99430,38	99,43
Rezina	6761	143004	25741	6435	90092,52	90,09
Strășeni	502	10753	1936	484	6774,39	6,77
Șoldănești	4474	116688	21004	5251	73513,44	73,51
Telenesti	5486	127582	22965	5741	80376,66	80,38
Ungheni	7409	207959	37433	9358	131014,17	131,01
SUD	66139	1423192	256175	64044	896610,96	896,61
Basarabasca	3083	50334	9060	2265	31710,42	31,71
Cahul	10571	203124	36562	9141	127968,12	127,97
Cantemir	4902	118999	21420	5355	74969,37	74,97
Căușeni	10009	211077	37994	9498	132978,51	132,98
Cimișlia	10159	180430	32477	8119	113670,9	113,67
Leova	4027	91958	16552	4138	57933,54	57,93
Ștefan Vodă	15285	389383	70089	17522	245311,29	245,31
Taraclia	8103	177887	32020	8005	112068,81	112,07
UTA GĂGĂUZIA	22994	475447	85580	21395	299531,61	299,53

Anex 6.41. Wheat (2010 average)

	2010 Average, TJ	Rank within the region, 2010
TOTAL	2983	
Development regions:		

	2010 Average, TJ	Rank within the region, 2010
mun.CHIȘINĂU	9	
NORD	1417	
mun.Bălți	4,3	12
Briceni	58,7	11
Dondușeni	98,5	9
Drochia	245,1	1
Edineț	103,2	8
Fălești	169,1	3
Florești	178,0	2
Glodeni	115,0	7
Ocnița	59,5	10
Rîșcani	130,7	5
Sîngerei	117,2	6
Soroca	137,7	4
CENTRU	626	
Anenii Noi	62,6	4
Călărași	2,9	12
Criuleni	61,0	7
Dubăsari	36,6	9
Hîncești	62,2	6
Ialoveni	24,6	10
Nisporeni	2,1	13
Orhei	77,3	2
Rezina	70,1	3
Strășeni	5,3	11
Șoldănești	57,2	8
Telenesti	62,5	5
Ungheni	101,9	1
SUD	697	
Basarabasca	25	8
Cahul	100	3
Cantemir	58	6
Căușeni	103	2

	2010 Average, TJ	Rank within the region, 2010
Cimișlia	88	4
Leova	45	7
Ștefan Vodă	191	1
Taraclia	87	5
UTA GĂGĂUZIA	233	

Anex 6.42. Wheat (2009-2010 average)

	Average 2009 2010, TJ	Rank within the region, 2009 2010
TOTAL	2857	
Development regions:		
mun.CHIȘINĂU	12	
NORD	1373	
mun.Bălți	4	12
Briceni	60	11
Dondușeni	99	9
Drochia	225	1
Edineț	100	8
Fălești	160	3
Florești	172	2
Glodeni	119	6
Ocnița	63	10
Rîșcani	131	5
Sîngerei	105	7
Soroca	136	4
CENTRU	581	
Anenii Noi	63	4
Călărași	4	12
Criuleni	56	6
Dubăsari	33	9
Hîncești	68	2
Ialoveni	24	10

	Average 2009 2010, TJ	Rank within the region, 2009 2010
Nisporeni	2	13
Orhei	65	3
Rezina	57	5
Strășeni	8	11
Șoldănești	51	8
Telenesti	54	7
Ungheni	96	1
SUD	679	
Basarabasca	21	8
Cahul	108	2
Cantemir	58	6
Căușeni	102	3
Cimișlia	85	5
Leova	47	7
Ștefan Vodă	169	1
Taraclia	88	4
UTA GĂGĂUZIA	212	

Anex 6.43. Barley (2009 minim)

	Total harvested area, hectares	Effective yield on total area, q	Production of waste, t / t culture, min	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			1,5	25%	14	
TOTAL	115170	2058912	308837	77209	1080929	1080,93
Development regions:						
mun.CHIȘINĂU	610	12219	1833	458	6415	6,41
NORD	35159	689959	103494	25873	362228	362,23
mun.Bălți	104	1421	213	53	746	0,75
Briceni	1496	24158	3624	906	12683	12,68
Dondușeni	2842	53891	8084	2021	28293	28,29
Drochia	3993	82865	12430	3107	43504	43,50

	Total harvested area, hectares	Effective yield on total area, q	Production of waste, t / t culture, min	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			1,5	25%	14	
Edineț	3074	64899	9735	2434	34072	34,07
Fălești	3003	63518	9528	2382	33347	33,35
Florești	5733	97245	14587	3647	51054	51,05
Glodeni	2910	71586	10738	2684	37583	37,58
Ocnîța	2167	49306	7396	1849	25886	25,89
Rîșcani	2581	59820	8973	2243	31406	31,41
Sîngerei	3429	54778	8217	2054	28758	28,76
Soroca	3827	66472	9971	2493	34898	34,90
CENTRU	23056	356862	53529	13382	187353	187,35
Anenii Noi	4924	87851	13178	3294	46122	46,12
Călărași	169	2627	394	99	1379	1,38
Criuleni	1235	24925	3739	935	13086	13,09
Dubăsari	2065	32770	4916	1229	17204	17,20
Hîncești	2043	33852	5078	1269	17772	17,77
Ialoveni	900	15114	2267	567	7935	7,93
Nisporeni	183	2236	335	84	1174	1,17
Orhei	2356	35091	5264	1316	18423	18,42
Rezina	2381	26931	4040	1010	14139	14,14
Strășeni	466	7735	1160	290	4061	4,06
Șoldănești	3118	40584	6088	1522	21307	21,31
Telenesti	2225	29070	4361	1090	15262	15,26
Ungheni	991	18076	2711	678	9490	9,49
SUD	42152	783698	117555	29389	411441	411,44
Basarabeasca	1235	15516	2327	582	8146	8,15
Cahul	7135	130422	19563	4891	68472	68,47
Cantemir	4890	98773	14816	3704	51856	51,86
Căușeni	9204	154559	23184	5796	81143	81,14
Cimișlia	4663	75958	11394	2848	39878	39,88
Leova	2482	52147	7822	1956	27377	27,38
Ștefan Vodă	6285	143306	21496	5374	75236	75,24

	Total harvested area, hectares	Effective yield on total area, q	Production of waste, t / t culture, min	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			1,5	25%	14	
Taraclia	6258	113017	16953	4238	59334	59,33
UTA GĂGĂUZIA	14193	216174	32426	8107	113491	113,49

Anex 6.44. Barley (2009 Maxim)

	Total harvested area, hectares	Effective yield on total area, t	Production of waste, t / t culture, max	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			1,8	25%	14	
TOTAL	115170	2058912	370604	92651	1297114,56	1297,11
Development regions:						
mun.CHIȘINĂU	610	12219	2199	550	7697,97	7,70
NORD	35159	689959	124193	31048	434674,17	434,67
mun.Bălți	104	1421	256	64	895,23	0,90
Briceni	1496	24158	4348	1087	15219,54	15,22
Dondușeni	2842	53891	9700	2425	33951,33	33,95
Drochia	3993	82865	14916	3729	52204,95	52,20
Edineț	3074	64899	11682	2920	40886,37	40,89
Fălești	3003	63518	11433	2858	40016,34	40,02
Florești	5733	97245	17504	4376	61264,35	61,26
Glodeni	2910	71586	12885	3221	45099,18	45,10
Ocnîța	2167	49306	8875	2219	31062,78	31,06
Rîșcani	2581	59820	10768	2692	37686,6	37,69
Sîngerei	3429	54778	9860	2465	34510,14	34,51
Soroca	3827	66472	11965	2991	41877,36	41,88
CENTRU	23056	356862	64235	16059	224823,06	224,82
Anenii Noi	4924	87851	15813	3953	55346,13	55,35
Călărași	169	2627	473	118	1655,01	1,66
Criuleni	1235	24925	4487	1122	15702,75	15,70

	Total harvested area, hectares	Effective yield on total area, t	Production of waste, t / t culture, max	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			1,8	25%	14	
Dubăsari	2065	32770	5899	1475	20645,1	20,65
Hîncești	2043	33852	6093	1523	21326,76	21,33
Ialoveni	900	15114	2721	680	9521,82	9,52
Nisporeni	183	2236	402	101	1408,68	1,41
Orhei	2356	35091	6316	1579	22107,33	22,11
Rezina	2381	26931	4848	1212	16966,53	16,97
Strășeni	466	7735	1392	348	4873,05	4,87
Șoldănești	3118	40584	7305	1826	25567,92	25,57
Telenesti	2225	29070	5233	1308	18314,1	18,31
Ungheni	991	18076	3254	813	11387,88	11,39
SUD	42152	783698	141066	35266	493729,74	493,73
Basarabeasca	1235	15516	2793	698	9775,08	9,78
Cahul	7135	130422	23476	5869	82165,86	82,17
Cantemir	4890	98773	17779	4445	62226,99	62,23
Căușeni	9204	154559	27821	6955	97372,17	97,37
Cimișlia	4663	75958	13672	3418	47853,54	47,85
Leova	2482	52147	9386	2347	32852,61	32,85
Ștefan Vodă	6285	143306	25795	6449	90282,78	90,28
Taraclia	6258	113017	20343	5086	71200,71	71,20
UTA GĂGĂUZIA	14193	216174	38911	9728	136189,62	136,19

Anex 6.46. Barley (2009 average)

	2009 Average, TJ	Rank within the region, 2009
TOTAL	1189	
Development regions:		
mun.CHIȘINĂU	7	
NORD	398	
mun.Bălți	0,8	12
Briceni	14,0	11

	2009 Average, TJ	Rank within the region, 2009
Dondușeni	31,1	9
Drochia	47,9	2
Edineț	37,5	5
Fălești	36,7	6
Florești	56,2	1
Glodeni	41,3	3
Ocnița	28,5	10
Rîșcani	34,5	7
Sîngerei	31,6	8
Soroca	38,4	4
CENTRU	206	
Anenii Noi	50,7	1
Călărași	1,5	12
Criuleni	14,4	8
Dubăsari	18,9	5
Hîncești	19,5	4
Ialoveni	8,7	10
Nisporeni	1,3	13
Orhei	20,3	3
Rezina	15,6	7
Strășeni	4,5	11
Șoldănești	23,4	2
Telenesti	16,8	6
Ungheni	10,4	9
SUD	453	
Basarabasca	9	8
Cahul	75	3
Cantemir	57	5
Căușeni	89	1
Cimișlia	44	6
Leova	30	7
Ștefan Vodă	83	2
Taraclia	65	4

	2009 Average, TJ	Rank within the region, 2009
UTA GĂGĂUZIA	125	

Anex 6.47. Barley (2010 minim)

	Total harvested area, hectares	Effective yield on total area, q	Production of waste, t / t culture, min	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			1,5	25%	14	
TOTAL	93886	1573196	235979	58995	825928	825,93
Development regions:						
mun.CHIȘINĂU	379	5687	853	213	2986	2,99
NORD	29306	606234	90935	22734	318273	318,27
mun.Bălți	80	1130	170	42	593	0,59
Briceni	1028	18791	2819	705	9865	9,87
Dondușeni	2739	60879	9132	2283	31961	31,96
Drochia	4015	91058	13659	3415	47805	47,81
Edineț	2231	42573	6386	1596	22351	22,35
Fălești	2987	62440	9366	2342	32781	32,78
Florești	3447	74395	11159	2790	39057	39,06
Glodeni	2158	42455	6368	1592	22289	22,29
Ocnîța	1677	39479	5922	1480	20726	20,73
Rîșcani	2273	48198	7230	1807	25304	25,30
Sîngerei	3645	67134	10070	2518	35245	35,25
Soroca	3026	57702	8655	2164	30294	30,29
CENTRU	19018	292918	43938	10984	153782	153,78
Anenii Noi	4096	44992	6749	1687	23621	23,62
Călărași	96	1305	196	49	685	0,69
Criuleni	1349	23645	3547	887	12414	12,41
Dubăsari	1295	23527	3529	882	12352	12,35
Hîncești	1904	25753	3863	966	13520	13,52
Ialoveni	1037	18275	2741	685	9594	9,59
Nisporeni	171	3344	502	125	1756	1,76
Orhei	2754	50283	7542	1886	26399	26,40

	Total harvested area, hectares	Effective yield on total area, q	Production of waste, t / t culture, min	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			1,5	25%	14	
Rezina	1888	29919	4488	1122	15707	15,71
Strășeni	303	5249	787	197	2756	2,76
Șoldănești	1322	25620	3843	961	13451	13,45
Telenesti	2044	29949	4492	1123	15723	15,72
Ungheni	759	11057	1659	415	5805	5,80
SUD	34007	503280	75492	18873	264222	264,22
Basarabasca	836	10030	1505	376	5266	5,27
Cahul	5241	68664	10300	2575	36049	36,05
Cantemir	4125	65049	9757	2439	34151	34,15
Căușeni	6472	88474	13271	3318	46449	46,45
Cimișlia	3838	51562	7734	1934	27070	27,07
Leova	2568	44200	6630	1658	23205	23,21
Ștefan Vodă	5608	96983	14547	3637	50916	50,92
Taraclia	5319	78318	11748	2937	41117	41,12
UTA GĂGĂUZIA	11176	165077	24762	6190	86665	86,67

Anex 6.48. Barley 2010 maxim

	Total harvested area, hectares	Effective yield on total area, t	Production of waste, t / t culture, max	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			1,8	25%	14	
TOTAL	93886	1573196	283175	70794	991113,48	991,11
Development regions:						
mun.CHIȘINĂU	379	5687	1024	256	3582,81	3,58
NORD	29306	606234	109122	27281	381927,42	381,93
mun.Bălți	80	1130	203	51	711,9	0,71
Briceni	1028	18791	3382	846	11838,33	11,84
Donușeni	2739	60879	10958	2740	38353,77	38,35
Drochia	4015	91058	16390	4098	57366,54	57,37

	Total harvested area, hectares	Effective yield on total area, t	Production of waste, t / t culture, max	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			1,8	25%	14	
Edineț	2231	42573	7663	1916	26820,99	26,82
Fălești	2987	62440	11239	2810	39337,2	39,34
Florești	3447	74395	13391	3348	46868,85	46,87
Glodeni	2158	42455	7642	1910	26746,65	26,75
Ocnîța	1677	39479	7106	1777	24871,77	24,87
Rîșcani	2273	48198	8676	2169	30364,74	30,36
Sîngerei	3645	67134	12084	3021	42294,42	42,29
Soroca	3026	57702	10386	2597	36352,26	36,35
CENTRU	19018	292918	52725	13181	184538,34	184,54
Anenii Noi	4096	44992	8099	2025	28344,96	28,34
Călărași	96	1305	235	59	822,15	0,82
Criuleni	1349	23645	4256	1064	14896,35	14,90
Dubăsari	1295	23527	4235	1059	14822,01	14,82
Hîncești	1904	25753	4636	1159	16224,39	16,22
Ialoveni	1037	18275	3290	822	11513,25	11,51
Nisporeni	171	3344	602	150	2106,72	2,11
Orhei	2754	50283	9051	2263	31678,29	31,68
Rezina	1888	29919	5385	1346	18848,97	18,85
Strășeni	303	5249	945	236	3306,87	3,31
Șoldănești	1322	25620	4612	1153	16140,6	16,14
Telenesti	2044	29949	5391	1348	18867,87	18,87
Ungheni	759	11057	1990	498	6965,91	6,97
SUD	34007	503280	90590	22648	317066,4	317,07
Basarabeasca	836	10030	1805	451	6318,9	6,32
Cahul	5241	68664	12360	3090	43258,32	43,26
Cantemir	4125	65049	11709	2927	40980,87	40,98
Căușeni	6472	88474	15925	3981	55738,62	55,74
Cimișlia	3838	51562	9281	2320	32484,06	32,48
Leova	2568	44200	7956	1989	27846	27,85
Ștefan Vodă	5608	96983	17457	4364	61099,29	61,10

	Total harvested area, hectares	Effective yield on total area, t	Production of waste, t / t culture, max	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			1,8	25%	14	
Taraclia	5319	78318	14097	3524	49340,34	49,34
UTA GĂGĂUZIA	11176	165077	29714	7428	103998,51	104,00

Anex 6.49. Barley 2010 average

	2010 Average, TJ	Rank within the region, 2010
TOTAL	909	
Development regions:		
mun.CHIȘINĂU	3	
NORD	350	
mun.Bălți	0,7	12
Briceni	10,9	11
Dondușeni	35,2	5
Drochia	52,6	1
Edineț	24,6	8
Fălești	36,1	4
Florești	43,0	2
Glodeni	24,5	9
Ocnîța	22,8	10
Rîșcani	27,8	7
Sîngerei	38,8	3
Soroca	33,3	6
CENTRU	169	
Anenii Noi	25,98	2
Călărași	0,75	12
Criuleni	13,65	6
Dubăsari	13,59	7
Hîncești	14,87	4
Ialoveni	10,55	8
Nisporeni	1,93	11
Orhei	29,04	1
Rezina	17,28	3
Strășeni	3,03	10
Șoldănești	14,80	5
Telenesti	17,30	2
Ungheni	6,39	9
SUD	291	

	2010 Average, TJ	Rank within the region, 2010
Basarabeasca	6	8
Cahul	40	4
Cantemir	38	5
Căușeni	51	2
Cimișlia	30	6
Leova	26	7
Ștefan Vodă	56	1
Taraclia	45	3
UTA GĂGĂUZIA	95	

Anex 6.50. Barley (2009-2010 average)

	Average 2009 2010, TJ	Rank within the region, 2009 2010
TOTAL	1049	
Development regions:		
mun.CHIȘINĂU	5	
NORD	374	
mun.Bălți	0,7	12
Briceni	12,4	11
Dondușeni	33,1	6
Drochia	50,2	1
Edineț	31,0	9
Fălești	36,4	3
Florești	49,6	2
Glodeni	32,9	7
Ocnița	25,6	10
Rîșcani	31,2	8
Sîngerei	35,2	5
Soroca	35,9	4
CENTRU	188	
Anenii Noi	38,4	1
Călărași	1,1	13
Criuleni	14,0	8
Dubăsari	16,3	7
Hîncești	17,2	4

	Average 2009 2010, TJ	Rank within the region, 2009 2010
Ialoveni	9,6	9
Nisporeni	1,6	12
Orhei	24,7	2
Rezina	16,4	6
Strășeni	3,7	11
Șoldănești	19,1	3
Telenesti	17,0	5
Ungheni	8,4	10
SUD	372	
Basarabeasca	7	8
Cahul	57	3
Cantemir	47	5
Căușeni	70	1
Cimișlia	37	6
Leova	28	7
Ștefan Vodă	69	2
Taraclia	55	4
UTA GĂGĂUZIA	110	

Anex 6.51. Buckwheat(2009 minim)

	Total harvested area, hectares	Effective yield on total area, q	Production of waste, t / t culture, min	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			0,9	70%	14	
TOTAL	255	512	46	32	452	0,45
Development regions:						
mun.CHIȘINĂU						
NORD	255	512	46	32	452	0,45
mun.Bălți						
Briceni						
Dondușeni	108	86	8	5	76	0,08

	Total harvested area, hectares	Effective yield on total area, q	Production of waste, t / t culture, min	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			0,9	70%	14	
Drochia	3	48	4	3	42	0,04
Edineț	30	129	12	8	114	0,11
Fălești	34	17	2	1	15	0,01
Florești						
Glodeni	3	22	2	1	19	0,02
Ocnîța						
Rișcani	45	164	15	10	145	0,14
Sîngerei	12	11	1	1	10	0,01
Soroca	20	35	3	2	31	0,03
CENTRU						
Anenii Noi						
Călărași						
Criuleni						
Dubăsari						
Hîncești						
Ialoveni						
Nisporeni						
Orhei						
Rezina						
Strășeni						
Șoldănești						
Telenesti						
Ungheni						
SUD						
Basarabeasca						
Cahul						
Cantemir						
Căușeni						
Cimișlia						
Leova						

	Total harvested area, hectares	Effective yield on total area, q	Production of waste, t / t culture, min	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			0,9	70%	14	
Ștefan Vodă						
Taraclia						
UTA GĂGĂUZIA						

Anex 6.52. Buckwheat2009 maxim

	Total harvested area, hectares	Effective yield on total area, t	Production of waste, t / t culture, max	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			1,2	70%	14	
TOTAL	255	512	61	43	602,112	0,60
Development regions:						
mun.CHIȘINĂU						
NORD	255	512	61	43	602,112	0,60
mun.Bălți						
Briceni						
Dondușeni	108	86	10	7	101,136	0,10
Drochia	3	48	6	4	56,448	0,06
Edineț	30	129	15	11	151,704	0,15
Fălești	34	17	2	1	19,992	0,02
Florești						
Glodeni	3	22	3	2	25,872	0,03
Ocnîța						
Rîșcani	45	164	20	14	192,864	0,19
Sîngerei	12	11	1	1	12,936	0,01
Soroca	20	35	4	3	41,16	0,04
CENTRU						
Anenii Noi						
Călărași						
Criuleni						

	Total harvested area, hectares	Effective yield on total area, t	Production of waste, t / t culture, max	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			1,2	70%	14	
Dubăsari						
Hîncești						
Ialoveni						
Nisporeni						
Orhei						
Rezina						
Strășeni						
Șoldănești						
Telenesti						
Ungheni						
SUD						
Basarabeasca						
Cahul						
Cantemir						
Căușeni						
Cimișlia						
Leova						
Ștefan Vodă						
Taraclia						
UTA GĂGĂUZIA						

Anex 6.53. average 2009

	2009 Average, TJ	Rank within the region, 2009
TOTAL	1	
Development regions:		
mun.CHIȘINĂU		
NORD	1	
mun.Bălți		
Briceni		

	2009 Average, TJ	Rank within the region, 2009
Dondușeni	0,088	3
Drochia	0,049	4
Edineț	0,133	2
Fălești	0,017	7
Florești		
Glodeni	0,023	6
Ocnîța		
Rîșcani	0,169	1
Sîngerei	0,011	8
Soroca	0,036	5
CENTRU		
Anenii Noi		
Călărași		
Criuleni		
Dubăsari		
Hîncești		
Ialoveni		
Nisporeni		
Orhei		
Rezina		
Strășeni		
Șoldănești		
Telenesti		
Ungheni		
SUD		
Basarabeasca		
Cahul		
Cantemir		
Căușeni		
Cîmișlia		
Leova		
Ștefan Vodă		
Taraclia		
UTA GĂGĂUZIA		

Anex 6.54. Buckwheat 2010 minimum

	Total harvested area, hectares	Effective yield on total area, q	Production of waste, t / t culture, min	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			0,9	70%	14	
TOTAL	85	521	47	33	460	0,46
Development regions:						
mun.CHIȘINĂU						
NORD	60	469	42	30	414	0,41
mun.Bălți						
Briceni						
Dondușeni						
Drochia	4	15	1	1	13	0,01
Edineț						
Fălești						
Florești						
Glodeni	4	34	3	2	30	0,03
Ocnîța						
Rîșcani	39	329	30	21	290	0,29
Sîngerei	9	44	4	3	39	0,04
Soroca	4	47	4	3	41	0,04
CENTRU	25	52	5	3	46	0,05
Anenii Noi						
Călărași						
Criuleni						
Dubăsari						
Hîncești						
Ialoveni						
Nisporeni						
Orhei	6	14	1	1	12	0,01
Rezina	16	37	3	2	33	0,03
Strășeni						

	Total harvested area, hectares	Effective yield on total area, q	Production of waste, t / t culture, min	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			0,9	70%	14	
Șoldănești	3	1	0	0	1	0,00
Telenesti						
Ungheni						
SUD						
Basarabeasca						
Cahul						
Cantemir						
Căușeni						
Cimișlia						
Leova						
Ștefan Vodă						
Taraclia						
UTA GĂGĂUZIA						

Anex 6.55. Buckwheat 2010 maximum

	Total harvested area, hectares	Effective yield on total area, t	Production of waste, t / t culture, max	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			0,9	70%	14	
TOTAL	85	521	47	33	459,522	0,46
Development regions:						
mun.CHIȘINĂU						
NORD	60	469	42	30	413,658	0,41
mun.Bălți						
Briceni						
Dondușeni						
Drochia	4	15	1	1	13,23	0,01
Edineț						

	Total harvested area, hectares	Effective yield on total area, t	Production of waste, t / t culture, max	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			0,9	70%	14	
Fălești						
Florești						
Glodeni	4	34	3	2	29,988	0,03
Ocnița						
Rișcani	39	329	30	21	290,178	0,29
Sîngerei	9	44	4	3	38,808	0,04
Soroca	4	47	4	3	41,454	0,04
CENTRU	25	52	5	3	45,864	0,05
Anenii Noi						
Călărași						
Criuleni						
Dubăsari						
Hîncești						
Ialoveni						
Nisporeni						
Orhei	6	14	1	1	12,348	0,01
Rezina	16	37	3	2	32,634	0,03
Strășeni						
Șoldănești	3	1	0	0	0,882	0,00
Telenesti						
Ungheni						
SUD						
Basarabeasca						
Cahul						
Cantemir						
Căușeni						
Cimișlia						
Leova						
Ștefan Vodă						

	Total harvested area, hectares	Effective yield on total area, t	Production of waste, t / t culture, max	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			0,9	70%	14	
Taraclia						
UTA GĂGĂUZIA						

Anex 6.56. Buckwheat2010 average

	2010 Average, TJ	Rank within the region, 2010
TOTAL	0	
Development regions:		
mun.CHIȘINĂU		
NORD	0	
mun.Bălți		
Briceni		
Dondușeni		
Drochia	0,013	5
Edineț		
Fălești		
Florești		
Glodeni	0,030	4
Ocnîța		
Rîșcani	0,290	1
Sîngerei	0,039	3
Soroca	0,041	2
CENTRU		
Anenii Noi		
Călărași		
Criuleni		
Dubăsari		
Hîncești		
Ialoveni		
Nisporeni		

	2010 Average, TJ	Rank within the region, 2010
Orhei	0,012	2
Rezina	0,033	1
Strășeni		
Șoldănești	0,001	3
Telenesti		
Ungheni		
SUD		
Basarabasca		
Cahul		
Cantemir		
Căușeni		
Cimișlia		
Leova		
Ștefan Vodă		
Taraclia		
UTA GĂGĂUZIA		

Anex 6.57. **Buckwheat (2009-2010 average)**

	Average 2008 2009, TJ	Rank within the region, 2008 2009
TOTAL	0	
Development regions:		
mun.CHIȘINĂU		
NORD	0	
mun.Bălți		
Briceni		
Dondușeni	0,044	3
Drochia	0,031	5
Edineț	0,066	2
Fălești	0,009	8
Florești		

	Average 2008 2009, TJ	Rank within the region, 2008 2009
Glodeni	0,026	6
Ocnîța		
Rîșcani	0,229	1
Singerei	0,025	7
Soroca	0,039	4
CENTRU		
Anenii Noi		
Călărași		
Criuleni		
Dubăsari		
Hîncești		
Ialoveni		
Nisporeni		
Orhei	0,0062	2
Rezina	0,0163	1
Strășeni		
Șoldănești	0,0004	3
Telenesti		
Ungheni		
SUD		
Basarabeasca		
Cahul		
Cantemir		
Căușeni		
Cimișlia		
Leova		
Ștefan Vodă		
Taraclia		
UTA GĂGĂUZIA		

Anex 6.58. Corn (2009 minim)

	Total harvested area, hectares	Effective yield on total area, q	Production of waste, t / t culture, min	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			1,2	65%	14	
TOTAL	62846	1220364	146444	95188	1332637	1332,64
Development regions:						
mun.CHIȘINĂU	257	4916	590	383	5368	5,37
NORD	20435	477000	57240	37206	520884	520,88
mun.Bălți	40	592	71	46	646	0,65
Briceni	966	19571	2349	1527	21372	21,37
Dondușeni	1352	53178	6381	4148	58070	58,07
Drochia	2311	60649	7278	4731	66229	66,23
Edineț	1298	24945	2993	1946	27240	27,24
Fălești	2105	49876	5985	3890	54465	54,46
Florești	4097	76613	9194	5976	83661	83,66
Glodeni	1779	41459	4975	3234	45273	45,27
Ocnîța	829	27544	3305	2148	30078	30,08
Rîșcani	3049	74557	8947	5815	81416	81,42
Sîngerei	1455	19810	2377	1545	21633	21,63
Soroca	1154	28206	3385	2200	30801	30,80
CENTRU	15476	255621	30675	19938	279138	279,14
Anenii Noi	1790	21514	2582	1678	23493	23,49
Călărași	140	2485	298	194	2714	2,71
Criuleni	2253	32712	3925	2552	35722	35,72
Dubăsari	973	20425	2451	1593	22304	22,30
Hîncești	1501	20347	2442	1587	22219	22,22
Ialoveni	464	7870	944	614	8594	8,59
Nisporeni	95	1382	166	108	1509	1,51
Orhei	827	12395	1487	967	13535	13,54
Rezina	1351	24499	2940	1911	26753	26,75
Strășeni	294	3717	446	290	4059	4,06
Șoldănești	2213	26095	3131	2035	28496	28,50
Telenesti	1877	24796	2976	1934	27077	27,08

	Total harvested area, hectares	Effective yield on total area, q	Production of waste, t / t culture, min	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			1,2			
Ungheni	1698	57384	6886	4476	62663	62,66
SUD	20867	372161	44659	29029	406400	406,40
Basarabasca	522	7776	933	607	8491	8,49
Cahul	3912	72450	8694	5651	79115	79,12
Cantemir	3005	58742	7049	4582	64146	64,15
Căușeni	2213	43017	5162	3355	46975	46,97
Cimișlia	1617	19540	2345	1524	21338	21,34
Leova	1818	33105	3973	2582	36151	36,15
Ștefan Vodă	3550	75712	9085	5906	82678	82,68
Taraclia	4230	61819	7418	4822	67506	67,51
UTA GĂGĂUZIA	5811	110666	13280	8632	120847	120,85

Anex 6.59. Corn 2009 maxim

	Total harvested area, hectares	Effective yield on total area, t	Production of waste, t / t culture, max	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			2,5			
TOTAL	62846	1220364	305091	198309	2776328,1	2776,33
Development regions:						
mun.CHIȘINĂU	257	4916	1229	799	11183,9	11,18
NORD	20435	477000	119250	77513	1085175	1085,18
mun.Bălți	40	592	148	96	1346,8	1,35
Briceni	966	19571	4893	3180	44524,025	44,52
Dondușeni	1352	53178	13295	8641	120979,95	120,98
Drochia	2311	60649	15162	9855	137976,475	137,98
Edineț	1298	24945	6236	4054	56749,875	56,75
Fălești	2105	49876	12469	8105	113467,9	113,47
Florești	4097	76613	19153	12450	174294,575	174,29
Glodeni	1779	41459	10365	6737	94319,225	94,32

	Total harvested area, hectares	Effective yield on total area, t	Production of waste, t / t culture, max	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			2,5	65%	14	
Ocnita	829	27544	6886	4476	62662,6	62,66
Riscani	3049	74557	18639	12116	169617,175	169,62
Singerei	1455	19810	4953	3219	45067,75	45,07
Soroca	1154	28206	7052	4583	64168,65	64,17
CENTRU	15476	255621	63905	41538	581537,775	581,54
Anenii Noi	1790	21514	5379	3496	48944,35	48,94
Calarasi	140	2485	621	404	5653,375	5,65
Criuleni	2253	32712	8178	5316	74419,8	74,42
Dubasari	973	20425	5106	3319	46466,875	46,47
Hincesti	1501	20347	5087	3306	46289,425	46,29
Ialoveni	464	7870	1968	1279	17904,25	17,90
Nisporeni	95	1382	346	225	3144,05	3,14
Orhei	827	12395	3099	2014	28198,625	28,20
Rezina	1351	24499	6125	3981	55735,225	55,74
Straseni	294	3717	929	604	8456,175	8,46
Soldanesti	2213	26095	6524	4240	59366,125	59,37
Telenesti	1877	24796	6199	4029	56410,9	56,41
Ungheni	1698	57384	14346	9325	130548,6	130,55
SUD	20867	372161	93040	60476	846666,275	846,67
Basarabeasca	522	7776	1944	1264	17690,4	17,69
Cahul	3912	72450	18113	11773	164823,75	164,82
Cantemir	3005	58742	14686	9546	133638,05	133,64
Causeni	2213	43017	10754	6990	97863,675	97,86
Cimislia	1617	19540	4885	3175	44453,5	44,45
Leova	1818	33105	8276	5380	75313,875	75,31
Stefan Vodă	3550	75712	18928	12303	172244,8	172,24
Taraclia	4230	61819	15455	10046	140638,225	140,64
UTA GĂGĂUZIA	5811	110666	27667	17983	251765,15	251,77

Anex 6.70. Corn 2009 average

	2009 Average, TJ	Rank within the region, 2009
TOTAL	2054	
Development regions:		
mun.CHIȘINĂU	8	
NORD	803	
mun.Bălți	1,0	12
Briceni	32,9	11
Dondușeni	89,5	4
Drochia	102,1	3
Edineț	42,0	9
Fălești	84,0	5
Florești	129,0	1
Glodeni	69,8	6
Ocnîța	46,4	8
Rîșcani	125,5	2
Sîngerei	33,4	10
Soroca	47,5	7
CENTRU	430	
Anenii Noi	36,2	6
Călărași	4,2	12
Criuleni	55,1	2
Dubăsari	34,4	7
Hîncești	34,3	8
Ialoveni	13,2	10
Nisporeni	2,3	13
Orhei	20,9	9
Rezina	41,2	5
Strășeni	6,3	11
Șoldănești	43,9	3
Telenesti	41,7	4
Ungheni	96,6	1
SUD	627	

	2009 Average, TJ	Rank within the region, 2009
Basarabasca	13	8
Cahul	122	2
Cantemir	99	4
Căușeni	72	5
Cimișlia	33	7
Leova	56	6
Ștefan Vodă	127	1
Taraclia	104	3
UTA GĂGĂUZIA	186	

Anex 6.71. Corn 2010 minimum

	Total harvested area, hectares	Effective yield on total area, q	Production of waste, t / t culture, min	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			1,2	65%	14	
TOTAL	77393	2385147	286218	186041	2604581	2604,58
Development regions:						
mun.CHIȘINĂU	262	6463	776	504	7058	7,06
NORD	26977	941233	112948	73416	1027826	1027,83
mun.Bălți	39	423	51	33	462	0,46
Briceni	1026	32474	3897	2533	35462	35,46
Dondușeni	2158	95677	11481	7463	104479	104,48
Drochia	2792	122988	14759	9593	134303	134,30
Edineț	1843	61631	7396	4807	67301	67,30
Fălești	2863	87612	10513	6834	95672	95,67
Florești	4344	156650	18798	12219	171062	171,06
Glodeni	2284	79936	9592	6235	87290	87,29
Ocnîța	1037	34423	4131	2685	37590	37,59
Rîșcani	4146	135601	16272	10577	148076	148,08
Sîngerei	2680	62176	7461	4850	67896	67,90
Soroca	1765	71642	8597	5588	78233	78,23

	Total harvested area, hectares	Effective yield on total area, q	Production of waste, t / t culture, min	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			1,2	65%	14	
CENTRU	19761	496471	59577	38725	542146	542,15
Anenii Noi	2004	36215	4346	2825	39547	39,55
Călărași	154	4139	497	323	4520	4,52
Criuleni	2620	72534	8704	5658	79207	79,21
Dubăsari	1201	36101	4332	2816	39422	39,42
Hîncești	1844	43023	5163	3356	46981	46,98
Ialoveni	800	25483	3058	1988	27827	27,83
Nisporeni	159	5494	659	429	5999	6,00
Orhei	1244	28989	3479	2261	31656	31,66
Rezina	2424	44455	5335	3467	48545	48,54
Strășeni	520	21888	2627	1707	23902	23,90
Șoldănești	1963	31363	3764	2446	34248	34,25
Telenesti	1853	35589	4271	2776	38863	38,86
Ungheni	2975	111198	13344	8673	121428	121,43
SUD	21552	709591	85151	55348	774873	774,87
Basarabasca	529	6795	815	530	7420	7,42
Cahul	4535	177226	21267	13824	193531	193,53
Cantemir	2999	120608	14473	9407	131704	131,70
Căușeni	2307	74356	8923	5800	81197	81,20
Cimișlia	1570	27549	3306	2149	30084	30,08
Leova	1698	62368	7484	4865	68106	68,11
Ștefan Vodă	3909	122848	14742	9582	134150	134,15
Taraclia	4005	117841	14141	9192	128682	128,68
UTA GĂGĂUZIA	8841	231389	27767	18048	252677	252,68

Anex 6.72. Corn 2010 maximum

	Total harvested area, hectares	Effective yield on total area, t	Production of waste, t / t culture, max	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			2,5	65%	14	
TOTAL	77393	2385147	596287	387586	5426209,425	5426,21
Development regions:						
mun.CHIȘINĂU	262	6463	1616	1050	14703,325	14,70
NORD	26977	941233	235308	152950	2141305,075	2141,31
mun.Bălți	39	423	106	69	962,325	0,96
Briceni	1026	32474	8119	5277	73878,35	73,88
Dondușeni	2158	95677	23919	15548	217665,175	217,67
Drochia	2792	122988	30747	19986	279797,7	279,80
Edineț	1843	61631	15408	10015	140210,525	140,21
Fălești	2863	87612	21903	14237	199317,3	199,32
Florești	4344	156650	39163	25456	356378,75	356,38
Glodeni	2284	79936	19984	12990	181854,4	181,85
Ocnîța	1037	34423	8606	5594	78312,325	78,31
Rîșcani	4146	135601	33900	22035	308492,275	308,49
Sîngerei	2680	62176	15544	10104	141450,4	141,45
Soroca	1765	71642	17911	11642	162985,55	162,99
CENTRU	19761	496471	124118	80677	1129471,525	1129,47
Anenii Noi	2004	36215	9054	5885	82389,125	82,39
Călărași	154	4139	1035	673	9416,225	9,42
Criuleni	2620	72534	18134	11787	165014,85	165,01
Dubăsari	1201	36101	9025	5866	82129,775	82,13
Hîncești	1844	43023	10756	6991	97877,325	97,88
Ialoveni	800	25483	6371	4141	57973,825	57,97
Nisporeni	159	5494	1374	893	12498,85	12,50
Orhei	1244	28989	7247	4711	65949,975	65,95
Rezina	2424	44455	11114	7224	101135,125	101,14
Strășeni	520	21888	5472	3557	49795,2	49,80
Șoldănești	1963	31363	7841	5096	71350,825	71,35
Telenesti	1853	35589	8897	5783	80964,975	80,96

	Total harvested area, hectares	Effective yield on total area, t	Production of waste, t / t culture, max	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			2,5	65%	14	
Ungheni	2975	111198	27800	18070	252975,45	252,98
SUD	21552	709591	177398	115309	1614319,525	1614,32
Basarabasca	529	6795	1699	1104	15458,625	15,46
Cahul	4535	177226	44307	28799	403189,15	403,19
Cantemir	2999	120608	30152	19599	274383,2	274,38
Căușeni	2307	74356	18589	12083	169159,9	169,16
Cimișlia	1570	27549	6887	4477	62673,975	62,67
Leova	1698	62368	15592	10135	141887,2	141,89
Ștefan Vodă	3909	122848	30712	19963	279479,2	279,48
Taraclia	4005	117841	29460	19149	268088,275	268,09
UTA GĂGĂUZIA	8841	231389	57847	37601	526409,975	526,41

Anex 6.73. Corn 2010 average

	2010 Average, TJ	Rank within the region, 2010
TOTAL	4015	
Development regions:		
mun.CHIȘINĂU	11	
NORD	1585	
mun.Bălți	0,7	12
Briceni	54,7	11
Dondușeni	161,1	4
Drochia	207,1	3
Edineț	103,8	9
Fălești	147,5	5
Florești	263,7	1
Glodeni	134,6	6
Ocnîța	58,0	10
Rîșcani	228,3	2
Singerei	104,7	8

	2010 Average, TJ	Rank within the region, 2010
Soroca	120,6	7
CENTRU	836	
Anenii Noi	61,0	5
Călărași	7,0	13
Criuleni	122,1	2
Dubăsari	60,8	6
Hîncești	72,4	4
Ialoveni	42,9	10
Nisporeni	9,2	12
Orhei	48,8	9
Rezina	74,8	3
Strășeni	36,8	11
Șoldănești	52,8	8
Telenesti	59,9	7
Ungheni	187,2	1
SUD	1195	
Basarabeasca	11	8
Cahul	298	1
Cantemir	203	3
Căușeni	125	5
Cimișlia	46	7
Leova	105	6
Ștefan Vodă	207	2
Taraclia	198	4
UTA GĂGĂUZIA	390	

Anex 6.74. Corn average 2009-2010

	Average 2009 2010, TJ	Rank within the region, 2009 2010
TOTAL	3035	
Development regions:		
mun.CHIȘINĂU	10	

	Average 2009 2010, TJ	Rank within the region, 2009 2010
NORD	1194	
mun.Bălți	1	12
Briceni	44	11
Dondușeni	125	4
Drochia	155	3
Edineț	73	8
Fălești	116	5
Florești	196	1
Glodeni	102	6
Ocnîța	52	10
Rîșcani	177	2
Sîngerei	69	9
Soroca	84	7
CENTRU	633	
Anenii Noi	48,6	6
Călărași	5,6	13
Criuleni	88,6	2
Dubăsari	47,6	8
Hîncești	53,3	4
Ialoveni	28,1	10
Nisporeni	5,8	12
Orhei	34,8	9
Rezina	58,0	3
Strășeni	21,6	11
Șoldănești	48,4	7
Telenesti	50,8	5
Ungheni	141,9	1
SUD	911	
Basarabasca	12,3	8
Cahul	210,2	1
Cantemir	151,0	4
Căușeni	98,8	5

	Average 2009 2010, TJ	Rank within the region, 2009 2010
Cimişlia	39,6	7
Leova	80,4	6
Ştefan Vodă	167,1	2
Taraclia	151,2	3
UTA GĂGĂUZIA	288	

Anex 6.75. Top cereals 2009 minim wheat

	Total harvested area, hectares	Effective yield on total area, q	Production of waste, t / t culture, min	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
TOTAL	375557	7659234	870815	217724	3048141	3048
Development regions:	0	0	0	0	0	0
mun.CHIŞINĂU	2031	41526	4800	1200	16799	17
NORD	139649	3413139	376564	94162	1318265	1318
mun.Bălţi	514	9637	1042	261	3648	4
Briceni	5966	151677	16492	4123	57723	58
Donduşeni	9822	255424	28236	7063	98875	99
Drochia	18709	502605	54470	13619	190672	191
Edineţ	10308	262479	29608	7407	103701	104
Făleşti	13970	371413	40348	10088	141229	141
Floreşti	21651	438122	48912	12228	171193	171
Glodeni	11796	322056	35855	8965	125505	126
Ocnîţa	6682	186951	21160	5290	74061	74
Rişcani	12211	330383	36094	9030	126422	126
Sîngerei	13566	242949	27077	6770	94776	95
Soroca	14454	339443	37268	9319	130459	130
CENTRU	82007	1460362	164558	41139	575952	576
Anenii Noi	12047	219772	26435	6609	92523	93
Călăraşi	657	11934	1325	331	4637	5
Criuleni	5993	131917	14510	3627	50785	51

	Total harvested area, hectares	Effective yield on total area, q	Production of waste, t / t culture, min	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
Dubăsari	5793	94368	11236	2809	39326	39
Hîncești	9427	184588	20151	5038	70530	71
Ialoveni	3588	62949	7062	1766	24717	25
Nisporeni	351	4958	609	152	2132	2
Orhei	9262	144152	16194	4048	56678	57
Rezina	8821	119459	13532	3383	47364	47
Strășeni	1504	27710	3158	789	11052	11
Șoldănești	8137	132926	15329	3832	53650	54
Telenesti	7953	121431	13639	3410	47737	48
Ungheni	8474	204198	21378	5345	74823	75
SUD	113056	2138325	253437	63359	887029	887
Basarabeasca	4014	52045	5980	1495	20931	21
Cahul	20279	370363	43588	10897	152560	153
Cantemir	10261	219785	27030	6758	94606	95
Căușeni	19794	360266	43787	10947	153254	153
Cimișlia	14733	245448	28418	7105	99464	99
Leova	6331	150986	17780	4445	62228	62
Ștefan Vodă	20628	443749	51562	12891	180468	180
Taraclia	17016	295683	35291	8823	123519	124
UTA GĂGĂUZIA	38814	605882	71456	17864	250096	250

Anex 6.76. Top cereals 2009 maxim wheat

	Total harvested area, hectares	Effective yield on total area, t	Production of waste, t / t culture, max	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			1,8	25%	14	
TOTAL	375557	7659234	1378904	344754	4826551	4827
Development regions:	0	0	0	0	0	0
mun.CHIȘINĂU	2031	41526	7477	1869	26168	26
NORD	139649	3413139	614462	153643	2151006	2151

	Total harvested area, hectares	Effective yield on total area, t	Production of waste, t / t culture, max	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			1,8	25%	14	
mun.Bălți	514	9637	1735	434	6071	6
Briceni	5966	151677	27324	6831	95634	96
Dondușeni	9822	255424	45971	11497	160964	161
Drochia	18709	502605	90478	22622	316710	317
Edineț	10308	262479	47255	11821	165491	165
Fălești	13970	371413	66853	16714	233999	234
Florești	21651	438122	78921	19730	276223	276
Glodeni	11796	322056	57974	14495	202927	203
Ocnița	6682	186951	33651	8413	117779	118
Rișcani	12211	330383	59461	14874	208239	208
Sîngerei	13566	242949	43741	10936	153100	153
Soroca	14454	339443	61098	15276	213869	214
CENTRU	82007	1460362	262976	65744	920416	920
Anenii Noi	12047	219772	39559	9890	138457	138
Călărași	657	11934	2148	537	7518	8
Criuleni	5993	131917	23757	5939	83148	83
Dubăsari	5793	94368	17023	4256	59582	60
Hîncești	9427	184588	33226	8306	116290	116
Ialoveni	3588	62949	11331	2833	39658	40
Nisporeni	351	4958	893	223	3125	3
Orhei	9262	144152	25950	6487	90824	91
Rezina	8821	119459	21562	5390	75466	75
Strășeni	1504	27710	4988	1247	17457	17
Șoldănești	8137	132926	23927	5982	83743	84
Telenesti	7953	121431	21858	5464	76502	77
Ungheni	8474	204198	36756	9189	128645	129
SUD	113056	2138325	384930	96233	1347256	1347
Basarabasca	4014	52045	9368	2342	32788	33
Cahul	20279	370363	66665	16666	233329	233
Cantemir	10261	219785	39561	9890	138465	138
Căușeni	19794	360266	64848	16212	226968	227
Cimișlia	14733	245448	44199	11050	154696	155
Leova	6331	150986	27191	6798	95169	95
Ștefan Vodă	20628	443749	79875	19969	279562	280
Taraclia	17016	295683	53223	13306	186280	186
UTA GĂGĂUZIA	38814	605882	109059	27265	381706	382

Anex 6.77. Top cereals 2009 average wheat

	2009 Average, TJ	Rank within the region, 2009
TOTAL	3937	
Development regions:		
mun.CHIȘINĂU	21	
NORD	1735	
mun.Bălți	5	12
Briceni	77	11
Dondușeni	130	8
Drochia	254	1
Edineț	135	7
Fălești	188	3
Florești	224	2
Glodeni	164	6
Ocnița	96	10
Rîșcani	167	5
Sîngerei	124	9
Soroca	172	4
CENTRU	748	
Anenii Noi	115	1
Călărași	6	12
Criuleni	67	6
Dubăsari	49	9
Hîncești	93	3
Ialoveni	32	10
Nisporeni	3	13
Orhei	74	4
Rezina	61	8
Strășeni	14	11
Șoldănești	69	5
Telenesti	62	7
Ungheni	102	2
SUD	1117	
Basarabeasca	27	8
Cahul	193	2
Cantemir	117	6
Căușeni	190	3
Cimișlia	127	5
Leova	79	7
Ștefan Vodă	230	1
Taraclia	155	4
UTA GĂGĂUZIA	316	

Anex 6.78. Top cereals 2010 minim wheat

	Total harvested area, hectares	Effective yield on total area, q	Production of waste, t / t culture, min	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			1,0	25%	14	
TOTAL	349931	7693799	850667	212688	2977629	2978
Development regions:	0	0	0	0	0	0
mun.CHIȘINĂU	1506	24796	2809	702	9832	10
NORD	134815	3507945	381837	95478	1336697	1337
mun.Bălți	490	9978	1054	264	3690	4
Briceni	5434	138904	14849	3712	51973	52
Dondușeni	9526	262127	29267	7317	102435	102
Drochia	21076	591920	63794	15949	223286	223
Edineț	9719	254165	27629	6907	96701	97
Fălești	14682	408931	44123	11031	154432	154
Florești	17231	438095	47565	11891	166479	166
Glodeni	10216	277752	29935	7485	104792	105
Ocnîța	5976	160906	18072	4518	63253	63
Rîșcani	12344	319521	34705	8690	121655	122
Sîngerei	13952	306665	34041	8512	119168	119
Soroca	14169	338981	36802	9202	128833	129
CENTRU	78164	1581600	173660	43417	607839	608
Anenii Noi	12334	174039	19765	4941	69177	69
Călărași	412	7287	794	198	2779	3
Criuleni	6916	148590	16083	4021	56291	56
Dubăsari	4859	99592	11243	2811	39352	39
Hîncești	8934	152909	16602	4151	58109	58
Ialoveni	3336	68590	7782	1945	27236	27
Nisporeni	406	7647	932	233	3262	3
Orhei	9606	209220	23524	5882	82341	82
Rezina	8809	175480	19245	4813	67379	67
Strășeni	806	16012	1864	466	6526	7
Șoldănești	5849	143117	15657	3914	54801	55
Telenesti	7685	159377	17583	4396	61540	62
Ungheni	8212	219740	22585	5646	79047	79
SUD	101039	1936419	219602	54900	768606	769
Basarabeasca	3935	60425	6549	1637	22921	23
Cahul	16386	278489	31818	7955	111364	111

	Total harvested area, hectares	Effective yield on total area, q	Production of waste, t / t culture, min	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			1,0	25%	14	
Cantemir	9064	184352	21712	5428	75992	76
Căușeni	16550	300170	34490	8623	120716	121
Cimișlia	14007	232042	25786	6447	90252	90
Leova	6617	136320	15855	3964	55492	55
Ștefan Vodă	20953	487349	53663	13416	187819	188
Taraclia	13527	257272	29728	7432	104050	104
UTA GĂGĂUZIA	34407	643039	72759	18190	254656	255

Anex 6.79. Top cereals 2010 maxim wheat

	Total harvested area, hectares	Effective yield on total area, t	Production of waste, t / t culture, max	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			1,8	25%	14	
TOTAL	349931	7693799	1385151	346309	4848325	4848
Development regions:	0	0	0	0	0	0
mun.CHIȘINĂU	1506	24796	4465	1116	15628	16
NORD	134815	3507945	631479	157889	2210443	2210
mun.Bălți	490	9978	1796	449	6286	6
Briceni	5434	138904	25008	6252	87527	88
Dondușeni	9526	262127	47183	11796	165140	165
Drochia	21076	591920	106548	26638	372927	373
Edineț	9719	254165	45757	11439	160148	160
Fălești	14682	408931	73618	18405	257665	258
Florești	17231	438095	78857	19714	276000	276
Glodeni	10216	277752	49995	12500	175002	175
Ocnîța	5976	160906	28963	7241	101371	101
Rîșcani	12344	319521	57544	14399	201591	202
Sîngerei	13952	306665	55198	13801	193218	193
Soroca	14169	338981	61012	15255	213570	214
CENTRU	78164	1581600	284798	71201	996821	997
Anenii Noi	12334	174039	31328	7832	109649	110
Călărași	412	7287	1312	328	4591	5

	Total harvested area, hectares	Effective yield on total area, t	Production of waste, t / t culture, max	Technical availability coefficient	Reference heat capacity, MJ / kg	Heat capacity, TJ
			1,8	25%	14	
Criuleni	6916	148590	26751	6688	93628	94
Dubăsari	4859	99592	17954	4488	62837	63
Hincești	8934	152909	27528	6882	96347	96
Ialoveni	3336	68590	12346	3087	43212	43
Nisporeni	406	7647	1376	344	4818	5
Orhei	9606	209220	37666	9417	131838	132
Rezina	8809	175480	31633	7910	110737	111
Strășeni	806	16012	2882	721	10088	10
Șoldănești	5849	143117	25773	6443	90208	90
Telenesti	7685	159377	28688	7172	100408	100
Ungheni	8212	219740	39561	9890	138463	138
SUD	101039	1936419	348663	87166	1220319	1220
Basarabasca	3935	60425	10877	2719	38068	38
Cahul	16386	278489	50235	12559	175821	176
Cantemir	9064	184352	33183	8296	116142	116
Căușeni	16550	300170	54031	13508	189107	189
Cimișlia	14007	232042	41768	10442	146186	146
Leova	6617	136320	24538	6134	85882	86
Ștefan Vodă	20953	487349	87723	21931	307032	307
Taraclia	13527	257272	46309	11577	162081	162
UTA GĂGĂUZIA	34407	643039	115747	28937	405115	405

Anex 6.79. Top cereals 2010 average

	2010 Average, TJ	Rank within the region, 2010
TOTAL	3913	
Development regions:		
mun.CHIȘINĂU	13	
NORD	1774	
mun.Bălți	5	12
Briceni	70	11
Dondușeni	134	8
Drochia	298	1
Edineț	128	9
Fălești	206	3

	Average 2009 2010, TJ	Rank within the region, 2009 2010
Florești	221	2
Glodeni	140	7
Ocnîța	82	10
Rîșcani	162	5
Sîngerei	156	6
Soroca	171	4
CENTRU	802	
Anenii Noi	89,4	3
Călărași	3,7	13
Criuleni	75,0	7
Dubăsari	51,1	9
Hincești	77,2	6
Ialoveni	35,2	10
Nisporeni	4,0	12
Orhei	107,1	2
Rezina	89,1	4
Strășeni	8,3	11
Șoldănești	72,5	8
Telenesti	81,0	5
Ungheni	108,8	1
SUD	994	
Basarabeasca	30	8
Cahul	144	3
Cantemir	96	6
Căușeni	155	2
Cimișlia	118	5
Leova	71	7
Ștefan Vodă	247	1
Taraclia	133	4
UTA GĂGĂUZIA	330	

Anex 6.8. Top cereals average 2009-2010

	Average 2009 2010, TJ	Rank within the region, 2009 2010
TOTAL	3925	
Development regions:		
mun.CHIȘINĂU	17	
NORD	1754	

	Average 2009 2010, TJ	Rank within the region, 2009 2010
mun.Bălți	5	12
Briceni	73,2	11
Dondușeni	131,9	8
Drochia	275,9	1
Edineț	131,5	9
Fălești	196,8	3
Florești	222,5	2
Glodeni	152,1	6
Ocnița	89,1	10
Rîșcani	164,5	5
Sîngerei	140,1	7
Soroca	172	4
CENTRU	775	
Anenii Noi	102	2
Călărași	4,9	12
Criuleni	71,0	7
Dubăsari	50,3	9
Hîncești	85,3	4
Ialoveni	33,7	10
Nisporeni	3,3	13
Orhei	90,4	3
Rezina	75,2	5
Strășeni	11,3	11
Șoldănești	70,6	8
Telenesti	71,5	6
Ungheni	105	1
SUD	1056	
Basarabeasca	29	8
Cahul	168	3
Cantemir	106	6
Căușeni	173	2
Cimișlia	123	5
Leova	75	7
Ștefan Vodă	239	1
Taraclia	144	4
UTA GĂGĂUZIA	323	

Anex 7.1

Total biomass potential for energy by regions	Energy potential of orchards, TJ	Energy potential of beans and oil crops, tabaco, TJ	Energy potential of vineyards, TJ	Energy potential of forests, TJ	Energy potential of Corn, TJ	Energy potential of cereals, TJ	Total Energy potential of biomass, TJ	Rank
TOTAL	659,00	13889,10	424,23	652,76	3034,94	3925,16	22585	
Development regions								
m. CHIȘINĂU	16,73	23,58	13,88	32,54	10	17	113	
NORD	361,26	8243,81	6,52	144,37	1194	1754	11704	
mun.Bălți	1,50	13,43	0,00	7,23	1	5	28	12
Briceni	34,65	593,31	0,00	11,10	44	73	756	11
Dondușeni	34,04	538,20	0,04	6,94	125	132	836	8
Drochia	22,75	1078,62	0,00	4,22	155	276	1536	1
Edineț	23,95	905,99	0,06	32,15	73	132	1167	4
Fălești	23,93	534,48	1,68	13,96	116	197	887	7
Florești	38,92	773,32	0,59	9,70	196	222	1241	3
Glodeni	29,92	753,69	0,55	14,85	102	152	1053	6
Ocnîța	33,22	649,85	0,00	9,67	52	89	834	9
Rîșcani	34,98	1078,56	0,17	9,48	177	164	1465	2
Sîngerei	30,19	560,92	3,08	13,39	69	140	817	10
Soroca	53,20	763,43	0,36	11,69	84	172	1084	5
CENTRU	163,84	2000,49	99,83	313,67	633	775	3986	
Anenii Noi	19,43	134,12	20,89	14,29	49	102	340	8
Călărași	4,26	6,15	7,82	46,79	6	5	75	12
Criuleni	10,09	174,90	3,78	12,80	89	71	361	7
Dubăsari	13,33	102,52	0,48	3,33	48	50	218	9
Hîncești	20,67	202,39	32,07	71,66	53	85	465	2
Ialoveni	7,67	42,18	10,08	8,65	28	34	130	10
Nisporeni	0,52	9,25	0,28	9,23	6	3	28	13
Orhei	26,33	254,46	6,50	36,23	35	90	449	3
Rezina	10,96	239,86	0,00	11,76	58	75	396	5
Strășeni	10,25	15,68	6,05	33,06	22	11	98	11
Șoldănești	15,82	279,36	6,30	24,06	48	71	445	4

Total biomass potential for energy by regions	Energy potential of orchards, TJ	Energy potential of beans and oil crops, tabaco, TJ	Energy potential of vineyards, TJ	Energy potential of forests, TJ	Energy potential of Corn, TJ	Energy potential of cereals, TJ	Total Energy potential of biomass, TJ	Rank
Telenesti	11,81	202,46	2,57	25,77	51	72	365	6
Ungheni	12,70	337,17	3,03	25,61	142	105	626	1
SUD	96,21	2746,76	221,20	98,27	911	1056	5129	
Basarabasca	4,99	85,36	12,77	3,08	12	29	147	8
Cahul	13,81	425,97	45,95	21,07	210	168	885	2
Cantemir	13,81	370,64	27,23	14,90	151	106	684	5
Căușeni	9,59	372,84	13,30	18,50	99	173	686	4
Cimișlia	12,28	243,74	27,29	14,84	40	123	460	7
Leova	3,77	300,17	14,49	7,17	80	75	481	6
Ștefan Vodă	25,02	621,31	24,31	11,12	167	239	1088	1
Taraclia	12,93	326,72	55,86	7,22	151	144	698	3
UTA GĂGĂUZIA	20,97	874,46	82,80	21,04	288	323	1610	

