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## **Issues in Biofuel Production for Romanian Subsistence Farmers**

### **Introduction**

Subsistence farming is a practice that has existed since the beginning of civilization. Growing only enough food to eat with little or nothing to sell is a way of life for many people around the world. According to the U.S. State Department, “more than 900 million people on our planet barely survive through subsistence farming” (Tata).

One such country that has seen a sharp rise in the abundance of these subsistence farms is the nation of Romania. Located in southeastern Europe and occupying the northeastern section of the Balkan Peninsula sits this beautiful country. Romania has several European countries with which she shares borders including Bulgaria, Serbia, Hungary, Ukraine, and Moldova. While there are numerous countries that surround Romania, the Black Sea is its prominent water source. The Danube River runs through Romania and connects central Europe with the Black and Mediterranean seas. The landscape of Romania is dominated by the Carpathian Mountains which covers about one-third of its total area, and thickly covered forests consume over six million hectares of land. Containing roughly around 23.8 million hectares of land, Romania is about the same size as the state of Oregon (“Romania”).

Like other countries in southeastern Europe, Romania is known for its fertile plains with agriculture being a very important part of its economy. Of its twenty-two million people, about ten million are employed in agriculture in some way, many of which are subsistence farmers. Agriculture is an integral part of the Romanian economy by employing half of its workforce and supplying twenty percent of the nation’s Gross Domestic Product. Of its several million hectares of land, about sixty percent of it is used for agricultural reasons (“Romania: Natural Conditions, Farming Traditions, and Agricultural Standards”).

For most of its history, foreign powers have controlled Romania or parts of it. In 1878 it became a fully independent country, but was once again taken over in 1948 by Soviet Russia (“Romania”). Since Romania was previously a satellite state of the former Soviet Union, all the farms were under the collective system. This insured that most farmland belonged to the state. Now that its government is a free system, Romania is making a push to capitalism and is trying to put all the farmland into the hands of its rightful owners or their heirs. This has been a very difficult job and one that continues to this day to be a source of confusion for Romanian citizens.

### **Romanian Families**

Romanian farming families are much like those in other European countries. They typically consist of the parents, one or two children, and on occasion, a widowed grandparent. Subsistence farm families as well as other families in Romania are very poor. In fact, according to a report compiled by the World Vision organization, many Romanian families do not even have \$1.35 to use everyday. Their study also indicates that “two out of three families in rural areas have no cash income.” (“Equipping Romanian Farmers with New Skills”). The farm families typically live on 2.2 hectares of land (approximately 5.5 acres) that was returned to them after the fall of communism. (“Romania: Natural Conditions, Farming Traditions, and Agriculture Structures”).

Like other rural families, those in Romania usually eat what they grow. Since much corn is grown in Romania, it is a staple of many diets. Corn mush is readily available to rural Romanians, and many times the porridge will be flavored with special items like cabbage, cheese, onion, or milk. Romanians normally do not eat fresh meat or vegetables, since they are trying to sell these goods for income (“Romania: Natural Conditions, Farming Traditions, and Agricultural Structures”).

Often, high poverty is associated with low education of its citizens. This is not the case in Romania. About ninety-six percent of Romanians have at least a primary education and a majority has also received some secondary schooling (“Romania: Natural Conditions, Farming Traditions, and Agricultural Structures”). With the break up of communist control, the industrial sector of Romania forced many people to leave the urban areas. The rural and agriculture populations grew, but the lack of education in farming practices played a key role in keeping so many at the poverty level or below.

### **Agriculture Practices**

Because of the fertile soil of this region, many crops can be grown. The two major crops grown in Romania are corn and wheat. In the 1980s, these crops occupied nearly two-thirds of the arable land available. Substantial amounts of rapeseed, sunflowers, potatoes, and grapes can also be produced. Minor crops include rye, barley, oats, and rice (Bachman).

Poor agricultural practices in the past have led to many of the present problems facing the farmers of Romania. Only one-third of Romania’s cropland is irrigated, while seven million hectares struggle with drought conditions. This is most widespread in the southern and eastern areas. Poor crop rotation has also played a significant role in depleting the soil of nutrients needed. Crop rotation was rarely used with corn and wheat being grown on the same land repeatedly. The amounts of fertilizers used were very low, making it so that nitrogen was not placed back into the soil. Also, a lack of mechanized equipment limits how much the farmers can harvest (Bachman).

The marketing of crops from subsistence farmers is low since very little if anything can be sold to the market. High transportation costs also make it very difficult and expensive for the farmers to transport their products. According to Barbola Eszter Balint, “Subsistence farmers can only occasionally supply the market, which leads to food insecurity for those relying on the food markets and results in price instability.” (Balint)

### **Barriers**

There are many factors which hinder agricultural productivity for subsistence farmers in Romania. One of the key concerns farmers face is insecure property rights. Because notary fees are expensive, there are many informal transactions that occur. This often leads to property disputes among farmers as to who actually owns the land. This in turn makes it challenging to sell or lease property to others since there is no clear title to the land. Thus it is difficult for farmers to enlarge their farms to grow more food or lease other land for profit (Balint). As the situation stands now, the subsistence farmers are able to obtain food for family consumption only.

Another factor farmers face that hinders their productivity is the lack of adequate financing. This is not surprising since the banking system prefers to work with large businesses and is not set up to deal with small farms (Vidican). Very few farmers get loans due to the low application and high rejection rates (Balint). The few who do receive loans are unable to pay them back since the loans come with ridiculously high interest rates (Vidican). Because farmers have few financial resources or options, they are unable to purchase much needed equipment or supplies. Many continue to use horse and carts because out-dated, over-sized tractors only served to damage the land.

Thirdly, a lack of an efficient agricultural infrastructure slows economic development. The high number of Romanian agriculture workers, which is around thirty-two percent, makes the profession very crowded in respect to the amount of land being farmed. This is in contrast to other nations with smaller percentages of the population working in agriculture, like the United States, which feed their people, because of a more efficient infrastructure. Also, the lack of co-ops hurts the small farmer. Many Romanians do not like the idea of the co-op since it reminds them of the collectivized system of the Communists. Another infrastructure problem facing Romanian farmers is its irrigation practices. Much of Romania is not irrigated. The 1970s irrigation system that is currently in place only covers thirty percent of the arable land. The irrigation system needs to be modernized “to reduce drought and increase yields, by regulating the amount of water land receives” (Smadeanu).

A final component of concerns facing Romanian farmers is trade policies and problems created by globalization. While some trade policies caused by globalization have provided benefits, many have also created problems for the Romanian subsistence farmers. In most cases, the trade policies were affected by the recent accession to the European Union. One farmer, Ion Alexandru, says this about the EU policies, “Now we have to plan everything in advance—even how many liters of milk the cow has to provide and how many we liters we can sell. I think EU legislation is worse than what Ceausesco was doing.” The recent globalization has caused too much planning in this unpredictable market and is hard for Romanian farmers to receive EU aid. There are also restrictions placed on what a farmer must do to receive foreign aid. For instance, using uncertified seed, which thirty-five percent of Romanian corn farmers use, can prevent them from receiving much needed support. Another problem brought about because of joining the EU was the farmers’ lack of being able to use biotech crops. The use of genetically modified crops was discontinued when Romania joined the EU on January 1, 2007. This policy has kept Romanian farmers from using high-yield varieties of crops and glyphosate resistant soybeans to increase their yields, which had become a common practice before Romania was accepted into the European Union. Other regulations have also placed restrictions on specialty items such as Romania’s famous tomatoes. With EU laws favoring mass production of food, local favorites like the Romanian tomato may lose their competitiveness in the markets. Since joining the EU, the Romanian subsistence farmers must now compete against agricultural powers like France, Germany, and the United Kingdom. This situation is problematic for Romanian farmers since French farmers get four hundred euros of support per hectare while Romanian farmers only get fifty for every hectare farmed (Smadeanu).

## **Biofuels**

The production of biofuels in Romania could affect subsistence farmers in a positive manner. Crops that have the highest potential to be made into biofuels include rape seed and sunflower seed. These are Romania’s main non-cereal crops. Dan Farcas of Aectra Agrochemicals states that “Rape might be a life-buoy for the Romanian farmer. Europe does not have enough raw materials and Romania has a big surface area of unexploited land. Rape cultures have doubled in the last two years and this year will cover almost 350,000 hectares” (Smadeanu). With the EU mandating that 5.75% of their fuels be made from biofuels by 2010, there is great demand for oil producing crops. Simple economics lets us know that when the demand is high, the price of the product will increase. Thus the rape seed producer will see an increase in his income.

Due to the demand for biofuels, production centers are being constructed across Romania. The first biodiesel plant opened on July 31, 2007, in Vasliu (“Romania First Biodiesel Plant”). It will produce 7 million gallons of biodiesel a year by processing 12,000 tons of seed each month (“Romania Gets First Biodiesel Plant”). Another biodiesel production center is under construction in Lehli Gara (“Latest Developments: Romanian Biofuels Projects Receive Financing”) and one in Tirgu Mura has already

tested its production capacity. This facility can produce 20 tons of fuel a day (“Biodiesel Production has started in Romania”).

The use of biofuels will help increase the income and food security of the Romanian subsistence farmer. The presence of the biofuel plants have created new markets for the farmers and have driven up crop prices. If more biofuel plants are created in other parts of Romania, the farmers will have greater access to the production centers, thus making it easier for more local farmers to sell their crops and increase their income. With the heightened crop demand, the farmer will grow more food and be able to sustain family members with this new income.

## **Recommendations**

For Romanian farmers to improve their economic standing, several recommendations need to be considered. One area that needs to be evaluated is that of restructuring the land. High notary fees citizens face in the courts today need to be lowered so that legal land transactions can take place. This will make it easier for both those who want to sell their land and those who need to buy more land to increase their farm size. Also, the government needs to be willing to buy back some of the land at Fair Market Value for those who are willing to sell. They can then redistribute the land to farmers who apply for extra land.

The agricultural infrastructure is another area that needs to be addressed since it has not been improved since the end of communism. The road and rail systems of Romania need improvement to increase their coverage and accessibility to help the transportation of crops. Increasing storage capabilities will help tremendously. Having a safe place to keep extra crops for a long period of time will allow farmers to store crops to sell at another time. Co-ops are also necessary to the infrastructure of Romania. They would allow farmers to band together and have more buying and selling power.

Another recommendation to consider is that agricultural education needs to be improved. While most Romanians receive a good education, their agricultural education is severely lacking. Extension agencies can help farmers by providing educational materials on agriculture and by giving them information about new agriculture practices. The extension service could also teach children and young adults by starting 4-H programs. It would also be beneficial for secondary schools to offer agriculture classes as an elective for students. A Romanian version of FFA should be considered to teach interested youth about agriculture.

## **Appropriate Roles**

To lower the number of subsistence farmers in Romania, several organizations need to give assistance in a variety of ways. World Bank, which is an organization composed of 185 member countries, needs to provide loans and micro credit to Romania. The micro credit provided by World Bank could be especially helpful to the farmers since the loans have a low interest rate or no interest rate at all. There is currently a project sponsored by the World Bank to give assistance towards improving the quality of Romania’s national roads and railway networks (“Transport Sector Support Project”). This is a direct benefit to the farmer as crops are transported.

Another organization that aids the Romanian farmer is World Vision. This Christian missionary group uses agriculture as one of its main ministry opportunities. Its continued support serves as an example to other private organizations wanting to influence and assist farmers. The agricultural teachers, financial aid, and equipment they provide for the subsistence farmer is vital for Romania.

The government of Romania must also take a larger role to help the farmers of its country. The courts need to settle the land ownership disputes in a fair and timely manner so that the farmers can use

their land as soon as possible. The government should also lower taxes or at least provide tax incentives for the agriculture workers. In February of this year, the recently created Association of Cow Breeders and Farmers called on the Romanian government to cancel road taxes for farm vehicles and consult farmers about laws affecting the agriculture sector (“Romanian Farmers Call for More Subsidies”).

### **Conclusion**

While Romania has existed for many centuries, it has only been an independent nation for the past 18 years. Communism fell in 1989 and yet its effects are still evident today, especially in the agriculture industry. The Romanian government has started to make improvements through economic and democratic reforms, but the progress has been quite slow. There are still major problems concerning private land ownership that must be reconciled before significant progress can be made to help Romanian farmers. Access to financial aid must be made available to the farmer through low interest loans to make it possible for the farmers to expand their holdings and modernize their equipment. Improving marketing and infrastructure will aid not only the Romanian farmer but other citizens as well.

Despite the hardships Romania faces, its future looks very promising. Romania joined the EU in January 2007. This has provided Romania with more financial aid to overcome the various barriers it faces, and being part of the EU also enlarges Romania’s trading capacity with member nations. But possibly the brightest spot in Romania’s future is the growth in biofuel production. Because of Romania’s climate and availability of cheap labor, the production of biofuel crops can be widely grown. According to *The Diplomat*, a Romanian newspaper, analysts conclude that Romania could become a “net exporter of biofuels to other EU countries to fulfill their green quotas (Smadeanu). The income from biofuels could greatly improve the food security crisis some Romanians currently face, and perhaps one day soon Romania will once again be “the breadbasket of Europe”.

## Works Cited

- Bachman, Ronald D. "Romania: A Country Study." 1989. Library of Congress. [countrystudies.us](http://countrystudies.us). 25 Aug. 2007. <<http://countrystudies.us/romania/63.htm>>.
- Balint, Borbola Eszter. "Determinants of Commercial Orientation and Sustainability of Agricultural Production of the Individual Farms in Romania." April 2003. University of Bonn. 22 Aug. 2007. <[http://www.pasad.uni-bonn.de/determinants\\_of\\_commercial\\_orientation.htm](http://www.pasad.uni-bonn.de/determinants_of_commercial_orientation.htm)>.
- "Biodiesel Production has Started in Romania." [www.biofuelmarketplace.com](http://www.biofuelmarketplace.com). 29 March 2007. Biofuel Market Place News. 19 Sept. 2007. <[http://www.biofuelmarketplace.com/\(S\(h1g3rz45xqfsnj2rbecrckac\)\)/Anonym/NewsAll.aspx?newsid](http://www.biofuelmarketplace.com/(S(h1g3rz45xqfsnj2rbecrckac))/Anonym/NewsAll.aspx?newsid)>
- "Equipping Romanian Farmers with New Skills." [www.worldvision.org](http://www.worldvision.org). 2006. World Vision, Aug. 2007. <<http://www.worldvision.org/donate.nsf/67b46ebd84ec93748825714600775448/>>
- "Latest Developments: Romanian Biofuels projects Receive Financing". [www.ebrdrenewables.com](http://www.ebrdrenewables.com) 30 Nov. 2006. Renewable Development Initiative. 25 Aug. 2007. <[http://www.thediplomat.ro/econ\\_news1206.htm](http://www.thediplomat.ro/econ_news1206.htm)>
- "Romania." [Encarta.msn.com](http://Encarta.msn.com). 2007. Encarta Encyclopedia. 21 Aug. 2007. <[http://encarta.msn.com/encyclopedia\\_761554516/Romania.html](http://encarta.msn.com/encyclopedia_761554516/Romania.html)>.
- "Romanian Farmers Call for More Subsidies". Boston.com. 28 Feb. 2007. Associated Press. 21 Aug. 2007. <<http://www.boston.com/news/world/Europe/articles/2007/02/28/>>.
- "Romania First Biodiesel Plant." [palmoiltruthfoundation.com](http://palmoiltruthfoundation.com). 21 Aug. 2007. <[http://www.palmoiltruthfoundation.com/index.php?option=com\\_content&task=view&id=520&Item=413](http://www.palmoiltruthfoundation.com/index.php?option=com_content&task=view&id=520&Item=413)>.
- "Romania: Natural Conditions, Farming Traditions, and Agricultural Structures." [www.fao.org](http://www.fao.org). 1999. FAO. 21 Aug. 2007. <<http://www.fao.org/regional/seur/Review/Romania.htm>>.
- Smadeanu, Ana Marie, Mihai Alexandrescu and Michael Bird. "Promised Land". [The Diplomat](http://TheDiplomat.com). Feb. 2007. Bucharest. 25 Aug. 2007. <[http://www.thediplomat.ro/features\\_0207\\_2.htm](http://www.thediplomat.ro/features_0207_2.htm)>.
- Tata, Zenia. "Fighting Poverty with Profits". [eJournalUSA: Economic Perspective](http://eJournalUSA.com). Aug. 2005. US Dept of State. 28 Aug. 2007. <<http://usinfo.state.gov/journals/ites/0805/ijee/tata.htm>>.
- "Transport Sector Support Project". [www.worldbank.org](http://www.worldbank.org). 17 Oct. 2006. World Bank, 19 Sept. 2007. <[www.worldbank.org/external/projects](http://www.worldbank.org/external/projects)>.
- Vidican, Georgeta. "Land Reform and Economic Development Case Study on Romania". [web.mit.edu](http://web.mit.edu). 15 May, 2004. Massachusetts Institute of Technology. 28 Aug. 2007. <<http://web.mit.edu/gvidican/www/Land%20Reform%20Romania.pdf>>.