

## **Organic Fuel**

### **Organic Fuel Ate the Food of the People**

**Wheat and corn as food for cars, while the human being cannot find bread**

**The ghost of an economic crisis appearing,  
and famines all over the world**

Currently, wheat, corn and sugar cane has become fuel for cars, while the human beings cannot find bread, sugar or any food. When all prices went up, the scientists in the United States, Europe and Brazil started searching for an alternative.

However, the alternative came on the expense of the food of the people. Since the commencement of the revolution called bio-fuel, extracted from agricultural commodities, the prices of various food materials went sky high all over the world.

Food disappeared from shops and supermarkets to appear in the laboratories, factories and the various facilities that extract ethanol from various foods. Despite the application of bio-fuel, all prices continued to rise to the extent that one barrel of oil reached \$150 dollars for the first time in history. It is expected that oil prices will hit an excessive amount of \$200 per barrel by winter.

As a consequence, a global food crisis has emerged. It is not only the developing countries that currently feel the effects of high prices, but the advanced world as well is suffering many waves of high prices.

The phantom of famine is now threatening all countries around the world, especially as the availability of water is so scarce and the climate changes are escalating the crisis, while the global warming continues to affect the productivity of agricultural crops, thus leading to severe drought in some areas.

The world now feels the repercussions of the crisis. A vast number of calls have been voiced by politicians and experts to put an end to this crisis, which was principally induced by the application of bio-fuel. Still, the question remains: Is there any near solution to this problem? What are the possible impacts Egypt may encounter from such a crisis? Therefore, how could Egypt overcome its negative consequences? Again, what is the alternative?

"Today's Business" page decided to embark upon this issue and allocate a whole file on it. The issue is now on the minds of politicians, economists and businessmen all over the world.

Egypt has been one of the pioneer countries that started to identify the problem at hand. As a result, we began to hit the alarm bell for the great consequences of using the food materials as fuel.

President Hosny Mubarak has warned more than once in many international conferences that the problem will escalate if the advanced countries continue to insist on producing such fuel from the food of the people.

During the meetings of the economic and social councils of the United Nations, which concluded on July 3, 2008, Egypt demanded that we limit the production of bio-fuel to the agricultural side products such as the straws of rice, the molasses and other such materials.

Egypt also called for an international dialogue with the aim to put an end to this crisis, as the continuation will seek to spread poverty and famine worldwide.

As the issue is of utmost importance, due to the threat it imposes on the national economy and the development programs, as well as affecting all citizens with the rise in prices, the businessmen are now proposing a number of ideas and opinions to the government as a starting point toward formulating a strategy to face this crisis.

As a starting point, the implementation of an urgent plan must take place; solely concerned with containing the negative consequences. Then, after containment, other steps can be taken to end the crisis completely.

Various experts and businessmen were interviewed on the topic. They pointed out that the crisis has the potential to continue for an extended period of time, as international indicators suggest that both the oil and food prices would continue to rise, at least 30% over the average until 2010. This is due to the scarcity of grains in international markets and the increase of imported food materials by 40% worldwide.

The experts' opinions were mainly focused on three points: the necessity of granting the agricultural sector the due attention it deserves, increasing reclaimed land, and the need for high priority in planting the basic grains and food materials, allowing Egypt to reach a level of self-sufficiency.

They also proposed distributing the new lands to the young graduates, whilst abolishing all the obstacles that may hinder their investment into these lands.

In addition, they emphasize the importance of directing additional attention to scientific research, especially in the field of soil study. There is also a need to enhance study into ways of lowering the consumption of water in irrigation, as well as finding sufficient ways to increase the productivity of agricultural land; planting new strains of seeds or genetically engineered ones may be the solution.

Moreover, the experts demanded the search for alternatives to the bio-fuel, especially regarding the new and renewable energy as well as the application of solar and wind energy to a greater extent in Egypt.

They also pointed that Egypt has great potential in this area as the climate is ideal. . Some of them even proposed to end the export of oil and gas so that they can be preserved in storage, thus removing the threat to import high priced oil and gas in the future.

They even said that if there is an insistence on producing bio-fuel, it should be from the remnants of rice straws or corn and sugar cane byproducts. There has also been a suggestion to plant new species of plants such as the Gazonas, which has proven to be highly productive in giving bio-fuel.

The proposal is to plant the Gazonas in the Egyptian desert area and water it with the processed drainage water as an alternative for the fossil fuel. When looking at the crisis of food material and the issue of bio-fuel, it becomes a very explicit fact that the world is actually in grave danger.

The bio-fuel has eaten the food of the people. If the world is to continue producing bio-fuel as an energy source, our cars and machines will carry on working; however at the same time, human beings will vanish from the earth due to the lack of food. So, will the super powers listen and pay attention to this?

**Ambassador Abdel Moneim Mabrouk:**

**An Egyptian-Sudanese Company for Producing Bio-fuel**

The Sudanese Ambassador to Cairo, Mr. Abdel Moneim Mabrouk, says that steps are currently being taken to establish an Egyptian-Sudanese company for planting and producing the bio-fuel in order to participate in securing and diversifying the sources of energy, as well as enhancing the Egyptian economic revenues by the removal of the agricultural remnants and byproducts.

He said that the embassy is highly involved in the issues of environment, except the production of fuel from agricultural crops which is seen as a source of a wealth generation and provides the fuel for local consumption.

He also pointed out that the Sudanese lands have a great opportunity for reclamation and enhancing the Arab economic integration. This can be applied through directing the Arab and Egyptian investors and businessmen to reclaim and cultivate these lands, which would take place at a low cost.

Furthermore, he said that such Arab economic integration would contribute to achieving the self-sufficiency of the Arab world, especially since statistics show that the Arab countries are now importing around 92% of their food needs.

This achievement would stipulate the shift toward higher agricultural investments, resulting in securing a high revenue for investors in addition to contributing toward bridging the growing Arab food gap.

**Amr Asfour:**

**An Independent Authority for Facilitating the  
Land Reclamation for the Youth**

Mr. Amr Asfour, the member of Board of the General Branch for Food Materials at the General Federation for Trade Chambers, points out that despite the high cost of one barrel of bio-fuel produced from wheat, corn or Soya beans compared to one barrel of oil, the global plan will continue to move in this direction in order to prepare for the time when oil is depleted, or if prices continue to rise in the future.

Mr. Asfour says that at the local level we must start quickly to face the consequences of using a mix of wheat, Soya beans and corn for producing bio-fuel.

This will inevitably affect the supply in the international markets, as well as the prices of these commodities which are now continuing to rise. Consequently, the only alternative that would arise would be for the government to allocate top priority to the agricultural sector. This would then require the government to become seriously involved in dealing with the sector whilst monitoring all farming processes.

The European countryside project is not an experiment by which we should follow. In principle this project was dedicated for land reclamation and agriculture. However, once the land was surrounded with vastly developing trees it was sold for the establishment of resorts, thus turning it from an agricultural project into a touristic one.

Mr. Asfour demanded the establishment of an independent authority affiliated to the Ministry of Agriculture, whose main mandate would be working toward utilizing the graduates of agriculture faculties; granting them free lands and facilitating all necessary procedures for them to reclaim and cultivate that land.

This authority would be assigned to provide a variety of financial assistance to those young graduates, whilst directing them to operate through a holistic organized plan, thus specify the types of crops that they should grow whilst holding them accountable for their activities after a certain period of time. He said that by using this method to enhance agricultural growth, we can re-engineer and redevelop the agricultural sector with organized plans.

He also pointed that there are vast areas of lands that are yet to be utilized, such as the desert background of the governorates near Cairo, which converted parts of its land into urban areas such as Al Haram, Al Kalag, and Al Marg. These were all agricultural areas, however urbanization engulfed them.

He also said that we should consider searching for new sources for unconventional energy as part of confronting the food crisis, which is a direct consequence from the introduction of bio-fuel. Such new sources of energy include renewable energy, solar energy, along with other sources of alternative energy.

**Dr. Samir Radwan:**

### **Arab Economic Integration Contributes to Solving the Problem**

Dr. Samir Radwan, member of Board of General Authority for Investment and Free Zones, who is also acting as a consultant at the International Labor Organization (ILO), believes that the overall global trend toward producing bio-fuel is due to the accelerated demand for energy, which has recently increased; becoming higher than the rate of industrial development.

He said that regarding the global oil consumption, the volume has reached 85 million barrels of oil per day. Some 25 million of these barrels are produced by the Arab countries.

There is an absolute necessity to face these accelerated global rates of consumption, as this consumption is a great deal higher than the supply of oil. As a result of this, the oil prices continue to rise.

Currently, an oil barrel is sold for approximately \$145; however this amount is expected to accelerate.

Dr. Radwan says that oil, as a source of energy, is becoming a more expensive commodity, thus leading to the increase of prices of all other food and industrial commodities, as oil is the principle source of energy used to generate these economic activities.

Therefore, the trend toward producing bio-fuel is not only related to the higher prices of oil, but the high prices of oil are in themselves responsible for the increased prices of all other materials, including food.



Dr. Radwan emphasizes that there is a great increase in food consumption at the global level, while the supply of various agricultural commodities is decreasing; therefore the prices will continue to rise.

The Arab countries must revise their plans and work to vitalize the Arab economic integration, give priority to the agricultural sector, as well as make use of the relative advantage of each Arab country.

By doing this, we can increase the Arab agricultural production, thus enabling us to strive toward self-sufficiency, especially in regards to cereals such as wheat, corn and Soya beans.

We need to work toward this goal to satisfy the needs of the people of the region, and decrease our dependency on foreign markets.

**Dr. Mahmoud Soliman:**

### **A Unified Arab Position is Needed**

Dr. Mahmoud Soliman, the former Head of the 10th of Ramadan Investors Association, says that there is a fact that we should never ignore; the decrease in the food inventories of the world. This constitutes a great phenomenon and has resulted from the floods, drought and other climate change crises.

He says that this new development adds to the increased oil prices which led to the search for other alternative sources of energy. Such alternatives include the use of bio-fuel which is produced from agricultural sources.

Dr. Soliman points out that the problem becomes more complicated when statistics show that the world is consuming more food than the volume being produced. Hence, the crisis of food commodities is escalating with the potential to continue in this manner for a number of years, due to the climate changes and the expansion of growing the bio-fuel producing crops.

Furthermore, Dr. Soliman says that the prices of many food commodities have increased to more than 100% due to the decreased global inventory of cereals. Consequently, there is an absolute necessity to formulate a unified Arab position to face both the food security crisis and the bio-fuel crisis. This cannot be achieved unless the common Arab market is stimulated. However, the common Arab market has been a topic of discussion for many years and is yet to be put to the test.

It is now time to make some serious steps to implement and ensure the success of the common Arab market. We need to end the current crisis, as individually we are unable to successfully deal with the situation affecting each individual state. There is a must to bring harmony and alliance among Arab countries.

**Dr. Nader Riad:**

### **Depleting 80% of Water Resources in the World**

The Head of Board of Egyptian-German Business Council and Head of Arab Federation for Intellectual Property Rights, Dr. Nader Riad, emphasized that the expansion in producing bio-fuel from agricultural crops, especially the main cereals, is not only threatening the local food market, but it threatens to consume 80% of the water resources worldwide.

Dr. Riad said that this trend is now escalating and it has been increasing during the last two years in a way that threatens the food security in both the developing and advanced countries. This might lead to a sharp decrease in the supply of food commodities, resulting in a substantial increase in food prices.

He also said that producing one liter of bio-fuel consumes around 1,000 to 4,000 liters of water, according to United Nations experts' estimation.

This problem becomes grave under the current circumstances of global climate change. Scientists have detected the erosion of some 5 kilometers of the Ice Mountains in the Northern Pole.

If such a vast environmental disaster continues to escalate, it may lead to an increase in the water level of many seas and oceans, as well as the erosion of shores and river deltas.

Dr. Riad also highlighted a future action plan that should be implemented immediately. It is based on two principle elements.

The first is swift intervention by the active states to implement clean and renewable energy resources by means of expanding the use of solar energy for light and thermal applications, as solar energy is an abundant resource.

As the sun shines in all parts of the world, it is not a resource that is only available in Egypt. Other Arab countries also have the potential to utilize this abundant resource.

This should be parallel to increasing the funding of research and development programs in the field of making use of the advanced countries' experiences, such as Germany and Japan.

The second element of the plan would be working toward the implementation of a tight program for the rationalization of energy consumption, and enhancing the efficiency of consuming energy.

**Dr. Aly Sharaf el Din:**

### **Violations to Agricultural Lands Threaten the Start of a Famine**

The Head of the Cereals Chamber at the Federation of Egyptian Industries, Dr. Aly Sharaf el Din, points that the issue of bio-fuel is directly related to the crisis in food materials especially in regards to cereals.

Such an issue will have a vast affect on the low income countries that require the importation of food commodities. Statistics show that the food imports bill for these countries will be increased by 40% this year compared to last year, to reach \$169 billion.

He also said that Egypt is importing around 40% of its food material. From this, 45% is wheat, 40% corn, 80% oil, 56% beans and around 90% lentils.

The problem becomes more aggravated when looking at future speculations which say that the cereals production in 2008 would decrease and the prices will continue to increase. The oil seeds prices and their other products will also be increased globally which will negatively affect the local market.

Dr. Sharaf el Din said that this states the necessity that all countries should pay attention to allocating a special budget for cereals in order to face the increased prices. He said that the prices of all kinds of cereals have increased over the last two years.

Beans reached LE 700 per ton compared to LE 450 last year, where as one ton of lentils is now sold for LE 8,000 compared to LE 6,000 last year.

Flour is now sold for LE 3,600 per ton compared to LE 2,800 last year. The price of one ton of corn has exceeded LE 3,000 while it was only LE 2,010 last year.

Dr. Sharaf el Din also says that the problem arises from the fact that there is a food problem in Egypt which will consequently affect the Arab region. Egypt is the most populated country in the region and the stability in Egypt is inducing stability for the whole region.

Egypt was a leader in agricultural production and exports until the Second World War. We need to regain this recognition in order to face the current increase in food prices, especially since Egypt started by the 1960s to become a net importer to some principle food commodities such as wheat.

People in the Egyptian countryside have shifted from consuming corn to consuming wheat and they remain to be so until now. Therefore, we are importing a lot of wheat from abroad.

He also said that the widening food gap is a very worrisome issue because the decreased self-sufficiency in producing food and going to the external markets to import imposes a direct threat to our national security.

Dr. Sharaf el Din demanded that the violations to the fertile agricultural land should be stopped immediately because we have lost thousands of kilometers of agricultural land, as they have become urban areas.

We cannot afford to reclaim as much land as the land being wasted. If things continue to be like this, we would be threatened by a serious famine. We must stop wasting our agriculture.

**Mr. Mustafa el Ahwal:**

### **Egypt is Shifting Toward Environment Friendly Energy**

The Chief of Board of Transmar Company and Head of Egyptian African Business Council at the Egyptian Businessmen Association, Mr. Mustafa el Ahwal, pointed that the attitude of the Western countries in this food crisis reflects an international selfishness which will not only affect the global food security, but also the future of the third world countries which import most of its food needs from international markets.

He said that at the time where the advanced countries are producing bio-fuel as an alternative for energy, Egypt is working to shift towards other alternatives, away from using food as fuel. The State in Egypt is now more concerned with researching the new and renewable sources of energy which would be cost efficient and environment friendly.

An example of such energy sources are the wind-driven energy and the waterfalls in Egypt. Egypt is planning to produce some 20% of its energy consumption through these new means by the year 2020, through implementing an ambitious plan to study the wind and its trends in order to make the optimal use of it.

There are also extensive researches into generating solar energy; however the feasibility studies still prove that the cost is exceedingly high. Anyway, we are on the right track.

**Engineer Ahmed el Barrawy:**

### **It is Elementary to Expand Growing Wheat**

The Director of the Economic Research and Studies Center of Samtrade Group and member of Egyptian Businessmen Association, Eng. Ahmed el Barrawy, believes that there is a great gravity resulting from using corn for producing bio-fuel.

However, this will have a very negative impact on corn prices, and will lead to the increase of the global supply of corn. Statistics say that 30% of the American corn this year is directed towards generating ethanol because of the high prices of oil; the Americans will continue to increase this trend.

Ethanol is not the optimal fuel for vehicles and machines. It represents a hazard to the environment because of the increasing use of fertilizers that contain nitrates. Eventually, this will lead to an increase in gases resulting from burning this fuel, thus leading to additional greenhouse effects.

Eng. El Barrawy pointed that there is a global food crisis; however, there is another crisis which continues to affect the environment; the greenhouse effect and the gases emissions. The impact of this environmental crisis will not be very apparent before the second half of this century.

Generally, the climate changes and the increased temperature of the earth by one or two degrees will lead to a sharp decrease in tropical climate crops.

There are more speculations of increased incidents of drought and floods which would negatively affect the agriculture.



He also said that the increase of fertilizer prices inside the Egyptian market will have a high impact on the cost of agricultural processes. We need to prepare more studies to face these situations and enhance the ability to implement new strategies for agricultural growth. We need to use the assistance of the agricultural research centers and the agricultural guidance offices to face the potential decrease of food commodities.

The increased fertilizer prices will deter more people from growing certain types of crops, especially cereals such as wheat. Currently Egypt is planting only 2.5 million feddans of wheat, while China is growing 107 million feddans of wheat every year.

The Chinese do not import any of their wheat to the external markets. Brazil ranks second in this regard, planting 80 million feddans of wheat.

He pointed out that planting wheat is essential and elementary in the upcoming phase. We need to expand our plantation of wheat to avoid the outside pressures of the external markets, as only ten countries control 85% of wheat exports as a whole.

**Dr. Ibrahim Sudan:**

**The Crisis will Continue for another Four Years**

The Head of the Imports and Customs Committee at the Egyptian Businessmen Federation, Dr. Ibrahim Sudan, indicates that the current developments of the international plan for bio-fuel will lead to problems and conflicts in the world to a great extent.

Though each nation has the right to search for alternative sources for energy, this should not be at any level on the expense of the mere livelihood of all nations and the food of the people.

The upcoming problem will be in the form of lack of food availability and this shortage is expected to last for another four years.

The international organizations must take this into consideration in order to set a plan to face this situation. The key solution for Egypt in this regard is to move swiftly toward constructing an agricultural policy and inducing a great growth in food industries, as well as the other elementary commodities, in an attempt to correct the current situation.

It is not reasonable by any means that our imports of plant oils used for food should reach 80% in addition to great imports of beans, corn and wheat. Egypt is also in a dire need to face its shortage of milk production and dairy products. We need to allow for the importation of the high milk producing cows and provide the necessary requirements for their entry into the country.

Furthermore, there is a great need for providing meat in Egypt. There is a fact that all dairy products such as cheese, and others, are becoming more and more expensive. The prices are expected to escalate, so we need to confront the situation immediately.

**Dr. Abdel Alim Nawara:**

### **A Confrontation Plan of Three Points**

The Head of Egyptian-Tunisian Business Council, Dr. Abdel Alim Nawara, believes that the advanced countries, especially the United States, have a great surplus of the majority of products except oil, as they import some 80% of their oil from the Arab region and Iran. Due to the high prices of oil, they searched for other alternatives and found the solution through the use of bio-fuel.

What we now need to embark upon is how the Egyptian government is handling the situation as a state which is harmed by the current situation. The Egyptian way for handling this should be in the form of a three-point confrontation plan, based on the following:

**First:** Bringing an end to the exportation of Egyptian oil abroad, as we export our oil while we import benzene and butagas, in addition to bio-chemicals and oil derivatives.

**Second:** We must set a swift and comprehensive plan to shift all our cars and vehicles to use natural gas instead of benzene. We need to have a long-term plan to do so, in addition to the necessity of closely monitoring its implementation.

**Third:** It is vital that we focus on the agricultural sector and plant wheat in large areas. Egypt consumes around 12 million tons of wheat while the local production is only 55% of this figure. The rest is being imported from abroad. We also need to have a new pricing policy as the State should buy wheat from farmers at the international prices. In fact, the State has announced that this would encourage many peasants to grow wheat.

**Dr. Aly al Koraie**

### **The Gazonas Plant is better than Cereals**

Dr. Aly al Koraie, member of Board of Egyptian Businessmen Association and advisor to the Environment Committee, believes that Egypt has started to consider producing new energy alternatives, but not bio-fuel based on cereals. Among the main propositions is the plant of Gazonas which is widely spread in Egypt. It can be planted in Upper Egypt without difficulty.

This plant is not used as food oil, but it is very good for producing bio-fuel. It is also possible to plant it using the processed drainage water, thus making it cost efficient.

Studies and researches showed that around 300 million feddans can be planted by tree forests in Egypt with investments reaching \$1 billion by the year 2020.

This can provide around one million job opportunities and an investment revenue of up to \$20 million, which can reach \$30 million annually later on.

The Gazonas plant can be grown in the desert areas, not necessarily the fertile ones. In addition, we can obtain the Gazonas oil at a very low cost.

**El Basha Idris**

**Nobody Will Wipe our Tears Except our Hands**

The Deputy Head of the Exports Branch at the Cairo Trade Chamber, Mr. El Basha Idris, who is one of the rice exporters, states that the real problem is the delay that we have; Egypt is waiting without enforcing any actual, swift and efficient plan to face the situation resulting from the use of food as bio-fuel.

He also said that we must bear into consideration that no-one will wipe our tears except our hands. Such concept should be translated into a real action; aiming at increasing the agricultural production through cooperation with international expertise such the World Bank, which has actually expressed readiness to contribute in helping the agricultural investments in Egypt.

We must also venture into preparing thorough research and studies to achieve the outmost benefit of the available agricultural land, thus raising its productivity to the highest possible limit. We must also work for rationalizing the use of water and ending the waste we have at the moment.

Mr. Idris also said that there has been a real increase in the prices of all kinds of cereals which has currently doubled, including rice.

One ton of rice now costs LE 2,200, therefore it is a must that we increase the planted area, and cease the exportation of our products before satisfying the local needs which should have the top priority in our decisions.

**Dr. Said Abdel Khalek:**

**The Consequences are as Grave as the Landmines Planted in Wars**

The former Under-Secretary of the Ministry of Trade and Industry and the International Trade Zone, Dr. Said Abdel Khalek, emphasized that the global trend towards producing bio-fuel has contributed toward creating food crises, and the increased prices of food commodities in Egypt and all other developing countries.

The vast production of bio-fuel in the United States and the European Union (EU), as an alternative source of energy to replace oil, constitutes a crime by the Western countries against the developing ones. The use of food crops for generating energy must be made after supporting the agricultural and food energy to the limit of satisfying the basic needs of human beings.

Dr. Abdel Khalek indicated that the bread crisis in Egypt and other food crises in various African countries are nothing but an alarm against such global policies.

It is elementary that the world pays attention to the anticipated role of such policies in pushing the world toward a great food shortage that would threaten all human beings.

Dr. Abdel Khalek emphasizes that the policies of the industrial world for developing alternative energy and using food materials for producing bio-fuel will contribute to increasing the main food items such as corn, sugar and Soya beans.

The burden for such situation should be on the shoulders of the rich countries as they have created the situation.

They should increase the development assistance to the poor countries in order to limit the great consequences for their policies.

The actions made by the Western countries in this regard are no different from the landmines planted during the wars. They should work toward removing these mines and lowering the negative side effects.

**Dr. Mohamed el Harouny:**

### **Reconsidering Exporting Oil and Gas**

Dr. Mohamed el Harouny, Professor at the Leaders Qualification Institute, believes that the oil prices are heading toward a continuous increase in an accelerated way. It is expected that the increase of oil prices will continue to be at the average of 30% until 2010.

In this context, there is a need for reconsidering the strategy of exporting the depleting materials such oil and gas. He also says that we should work on preparing studies and plans to search for alternative sources for energy; whether that is through wind or solar energy, or another form which is yet to be discovered. .

This might take some years, and we should translate our studies into actual practical applications.

Dr. El Harouny points out that there are many alternative sources for energy and other ways for producing bio-fuel as well, not only from cereals.

He says that bio-fuel can be produced from the remnants and leftovers of the agricultural processes, as well as the animal waste and disposals. China has been using this technique for almost twenty years now.

There are around ten million devices currently being used that are generated on bio-gas, thus meaning they are dependent on the stools and disposals of animals. Therefore it is valid to ask: why the insistence on producing bio-fuel from cereals and human food commodities?



**Mr. Omar Balbaa:**

### **How could we use food in Operating Automotive Cars**

The Deputy Head of the General Branch for Automotive Cars and Head of Consumer Protection Committee in the General Federation for Trade Chambers, Mr. Omar Balbaa, says that it is not acceptable to use the liquid bio-fuel that is manufactured from food material and plants to produce ethanol and bio-diesel as a principle source of fuel for automotive cars.

He wonders how we could use the cereals, especially beans, corn and wheat, as an alternative fuel to oil in transportation vehicles. However, this is not acceptable on any level.

He indicates that the increase in prices of oil and benzene cannot be compensated by the food commodities which are the livelihood of the human being. He also says that there are other alternatives that we should think of as fuel for vehicles, or on another account work for rationalizing the use of benzene until we reach other alternatives to oil.

Mr. Balbaa said that Egypt is now considering extracting bio-fuel but not from cereals. The idea is to use the remnants of corn.

To do so there are many local experiments in this regard trying to make use of these remnants and process them instead of the regular conventional incineration that takes place, which is very harmful to the environment. This will also help Egypt to diversify and secure other sources for energy.

He also pointed that there are four proposed projects for producing bio-fuel in Egypt. One of them is aimed at producing bio-diesel with a capacity of 250,000 tons annually and investments of around \$250 million US.

There are also experiments to plant to Gazonas tree which consumes very little water and can be planted on the water drainage in the desert area. Some experimental farms have already started dealing with this in both Sohag and Suez.

The second main project for bio-diesel is using the straws of rice with a capacity of 200,000 tons annually and overall investments of \$150 million US. This project will consume around one million tons of rice straws.

The third project is aimed at producing bio-ethanol from molasses with a capacity of 100,000 tons annually and total investments of \$120 million US. It will consume 480,000 tons of molasses annually.

The fourth project is aimed at producing ethanol from rice straws with a capacity of 120,000 tons annually and total investments of \$150 million US.

**Hussein el Aguizy:**

**Egypt is Cooperating with Czech Republic in Manufacturing  
Bio-fuel from Rice Straws**

The Head of the Garden Crops Producers and Exporters Association, Mr. Hussein el Aguizy, says that international cooperation, to face the consequences of the current problem, must take place very swiftly and be made with full coordination and harmonization.

He pointed out that Egypt has begun to take some practical steps in this regard as it is now venturing into an agreement with the Czech Republic to cooperate in manufacturing bio-fuel from rice straws, and make use of the technological and practical expertise of our European partners in establishing plant gardens.

Egypt will send samples of its rice straws to the Czech to be analyzed and researched.

The current studies so far have proven that the Egyptian straws have high incineration capability and can be easily used for manufacturing high standard of bio-fuel.

Furthermore, he mentioned that it is elementary to move toward regulating food productivity in Egypt by means of introducing more research and development, whether at the horizontal level or the vertical one, i.e. enhancing the productivity of every single feddan and ensuring high quality in addition to making use of all the available agricultural land in a much more efficient way, and introducing a new regulatory plan for the Egyptian agriculture giving priority to the principle agricultural products such as cereals, in order to lower our dependency on the external world.