Reserves And The Production Of Biomass Microbial Use Of Nanotechnology

Zatirostami-Ahmad

Department of Science and Engineering, Sari Branch, Islamic Azad University, Sari, Iran.

Abstract: One of the main sources of production, biotechnology, biomass Microbial Is. Stock biomass as a function of behavioral economics is that competitive conditions will be achieved through the production function. Production function, production technology, and tells a more technical aspects. The supply function for direct connection with the exploration of energy sources will be completed. Discover and explore the function of acquiring reserves is uncertain. Sources of supply in the end be a step in which exploitation and sale of reserves to be mined. Therefore, the exploration of energy resources and energy can be likened to the production of economic goods. Since the energy resources and energy in the environment are possible, this relationship between economy and environment and the economy in biomass stocks Using nanotechnology, we can be of a microbe.

Key words: Microbial, Nano, Biomass, Economics, Environment, Function, Production.

INTRODUCTION

Microbial biomass, in fact, the mass of microbial cells in which the Different applications will proliferate. Typical applications such as microbial biomass, can Use them as a yeast bread, poultry and animal feed and its supplements, Food additives, pesticides and biological fertilizers cited. The institute expects Royal Dutch Shell in the first half century, Over 30 percent of global fuel needs, and various biological compounds with a value of about 150 Billion dollars, will be produced through microbial biomass. . Is predicted to In 2015, more than 15 percent of the world's pesticides worth $ 4 billion Be produced by the biotechnology industry. One of the most important types of biological pesticides World, the biomass of bacteria called Bacillus Bacillus thuringiensis.

One of the main types of microbial biomass, using They are food and food additives. The market value of the taste of food donors In 2000, about 1 / 1 billion dollars is. Economic importance to the microbial biomass Extent that some countries use sugar cane waste and fermentation technology, the production of single cell proteins (SCP) have to import food from countries Need to provide cattle and soybeans. It currently imports Feed Poultry and supplements to the country over a billion dollars a year from the production side Single-cell protein of biotechnology approaches to solve this problem in the country, while That the main raw material for production of SCP, agricultural waste, wood, oil and gas in the In all these cases, the advantage is very good. Unfortunately, in the SCP production So far the country has gone beyond the stage of the investigation, despite the start of research In the decade before the Revolution, and back in 1970.

Economic Analysis of Environmental Conditions For Microbial Biomass:

Using nanotechnology, the environment is a scarce resource because of all the resources in its pure form and excellent quality are found. Economic system, causing loss of performance quality, thus disrupting the normal function of the environment. The first role of the environment with the use of nanotechnology is that energy and material resources to produce goods and services to the manufacturing sector in the economy provides the economic system. In other words, the inputs to the energy sector (energy and materials) is the environment. Whatever the sources of energy and materials in the production of goods and services they need to be more economical as the main inputs in the production of economic goods and services rise and subsequent supply and demand for them will expand and further prepare Anne was. The workforce in the manufacturing sector is also needed as inputs. Boone's energy resources and labor force participation cannot produce the goods and services have a key role in the economy.

Being a renewable resource and is the Specialty of qualitative and quantitative, as well as other viable masses of the growth and reproduction. The first feature is a little man. The growth and reproduction increases the size, so depending on population growth or population of a country called. Specialty is the quality of human capital that will shape the knowledge, skills, experience, and an Associate of the stocks of human capital lies in their existence. The main cause of saving the economy is producing goods and services. Increase and improve knowledge of human development in key swing states will be written. Energy and material resources in a combination of economic goods and services to help human capital is used. Source of manpower for the production of consumer goods and services are offered to the manufacturing sector. Centre taking part in the procurement of capital goods production is in force.
For non-economic goods and services of manpower, material resources and energy, another important factor in production, physical capital, which is the means of production machinery. For physical capital investment and concentration of the basic tools in economics.

Money and finance sector and the country’s main source of credit and money supply and credit to the manufacturing sector. And financial institutions and credit institutions and financial instruments have the money to invest and allocate capital to the manufacturing sector. The funds invest in a country as part of the monetary system and credit supply is produced. If the manufacturing sector in the economic system, goods and services from \( X_1 \) to \( X_n \) be produced, the resources available in their production \( E \) and staffing \( L \) are involved in physical capital \( K \). Energy and material resources are completed. Fossil energy sources \( E_1 \) and source material \( E_2 \) with shows that the supply of energy and materials \( E = F(E_1, E_2) \) will be written. Energy source with \( m \) the source material with \( u \) are elements of the order as a whole \( E = E_2(J_1, \ldots, J_u) = E_2(e_1, \ldots, e_m) \) will be written. Possible energy source of the major carriers such as crude oil, natural gas, coal, uranium is formed, the source of the material elements such as gold, silver, zinc, iron, steel, mercury are formed, each of the production technology \( E_1 \) and \( E_2 \) are shown.

On the other hand, human capital in various forms and with varying quality of the product is used. The supply of capital to labor \( L = L(I_1, \ldots, I_s) \) and physical capital as \( K = K(I_1, \ldots, I_o) \) is written. Each element of the capital allocation of credit and monetary and financial resources invested in it are created.

Production function, as implied in the manufacturing sector in the economic system, as implied in the manufacturing sector in the economic system as \( F(X_1, \ldots, X_n, E, L, K) = 0 \) is written. These institutions function in the production of physical capital, human capital and economic resources to produce goods that end can be \( X_1 \) to \( X_n \). Durable goods is economic. Some low in effect immediately disappear, some are more durable. And fully or partially compensate for their future. Environment is a source of joy and happiness in the recreation department offers a wealth of environmental quality such as clean water, clean air, scenic landscapes, spectacular waterfalls, fish-free areas of Azad, a natural park and the main source of government intervention joy and peace of mind and spirit supply for humans is considered. If the environmental assets \( (Q_1, \ldots, Q_h) \) in this case, each of them to show the vitality and desirability to the consumer. If the criteria for the use of consumption goods and environmental well-being of society is desirable in this case the utility function for individual \( i \) be written \( U_i = U_i(X_1, \ldots, X_n, Q_1, \ldots, Q_h) \) in any of the environmental goods creates utility for individual \( i \). The ultimate utility of consumption per unit of final goods is a positive environment for everyone. If the debate on the utility of combined neo-classical utility that comes to people in this community as well as the welfare measure \( W = W(U_1, \ldots, U_n) \) Where \( N \) is the number of people is written. Increase in the desirability of each individual community will increase total utility. If environmental and economic goods and people to increase both the utility, total utility will be greater community. The environment provides the greatest source of joy and relaxation that is essential in improving the welfare of society. Any damage and damage to the environment such as air pollution, water-stained life, loss of natural landscapes, walkways, and the disappearance of the happiness, the good society is facing serious danger.

A major source of environmental and waste from the production and consumption in economic sectors. The recipient of various types of environmental pollution are considered. The social cost of pollution in many kinds of time to come. The social losses resulting from the degradation of natural resources for production or consumption that they continue in the future will be disruption of daily life.

Box represents the whole environment there is a connection between the economic sectors with the environment. (Chart 1) Environment and energy materials to the manufacturing sector offers. Ends energy resources and energy in nature with the letter \( E \) and the manufacturing sector in the economy with the letter \( Q \) is shown. \( E \) gets the point of the circle to the rectangle \( Q \) offers a fun and lively environment to take part in the institution offers \( A \) circular box \( C \) elevates the environment and taking part in the economy, the show. A supply of the circle to the rectangle \( C \) flows. Consumption and waste production in the economy and the environmental damage may occur.

![Chart 1](chart1.png)

Z circle bearing between the environment against waste and to waste it.
Circles A, E and Z are a member of the seasons. I’ll be the end of the source of energy, oil exploration and exploitation of that process is finished. The exploration is carried out effectively in the environment. Installation of drilling equipment for mining, drilling of test wells, development and repair is needed. When the oil is transferred from the reservoir to the surface, the work can be extracted. The lesions may be imposed on the environment and the tank is submerged in the extraction of marine life can change, if extraction of forest and range lands, the loss of life would have on land animals. After extraction of the oil refining and the refining begins. Systems analysis and design Palayshgah principles of technical and environmental standards will not cause losses in the natural environment. So how is it possible to broaden the circle E with a circle A, it will be even greater expansion of E over the circle A circle may be completely overshadowed barrels of crude oil from various oil products, this product is available in various sectors of economic and business public sector, industry, transport, agriculture and other sectors and consumer sectors are the following. Naha pollution caused by burning the waste and destruction of nature and the circle gets wider and finally Z, A circle is cut out entirely under its control. Overall consumption of all manufacturing activity in the economy, waste and tailings disposal in their nature that makes the larger circle Z, and the loss of a circle A and the entire staff of the environment.

Feature of environmental assets is that their value cannot be determined based on competitive market mechanisms, the resource allocation between economic goods and environmental goods and environmental factors with economic goods, and even institutions can not be produced. Regardless of the competitive market mechanism, the main Paratv for resource allocation in the economy that has created "the best Paratv" is known. These appropriations, the maximum total utility function of society to the society or on the maximum total utility function of a given amount of production is achieved. For example, the maximum production function \( F(X_1, \ldots, X_n, E, K, L) = 0 \) The utility function Terms \( W = W(X_1, \ldots, X_n, Q_1, \ldots, Q_h) \) of resource allocation that can maximize the utility function with the same conditions mentioned above to obtain the production function.

**The Concept of Energy Storage Materials, Microbial Biomass Economically:**

Ends of the known reserves and resources from any of them is economically affordable. Reserves related to each other during the process to reach the stage of operation. This process is the same probability. First, it is only possible reserves are reserves that may be called. Secondly, possible reserves in the tank is called the probable reserves. Finally there is the possibility of certain stocks, and certainly it is one hundred percent of known reserves, and it is called. Extraction phase in which deposits can be economically exploited. Proven mining reserves and national economy to turn into different types of products.

Price per unit costs are derived variables that are used for economic reserves. The difference between cost price and the profit from every single unit is called ultimate. The measure of profit that it can help to assess the economic reserves.

Energy and materials stocks are dead, and the masses come from the discovery using nanotechnology. Extraction, reduce stocks and to explore the function adds it, so cannot supply energy and materials to reproduce words, as the masses are dead.

The proven reserves in a major exploration effort in the exploration of the reserves that are economically affordable. Explore the function of the energy and materials stocks rise Statyk can lead to the exploration should be done in several stages to the final result will lead to economic resources. In the early stages of exploring the possibility of finding and identifying the next steps, but the store is less likely to be more certain stocks in Figure 2-1 the horizontal axis indicates the degree of confidence or likely to get certain supplies. Whatever the origin of coordinates to move to the right degree of trust and confidence to further explore the function of certain reserves. Figures on the vertical axis corresponds to the average profit per unit is inserted or extracted, starting from zero.

**Chart 2:**

<table>
<thead>
<tr>
<th>Fixed deposits (Above=Increase)</th>
<th>Probable reserves</th>
<th>Possible reserves (Right=Increase)</th>
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In this diagram the various types of deposits are economically affordable and useable. Mining stocks are a definite start and then turn to the possible reserves to probable reserves to exploit the deposits become definitive. The mining stocks are likely to turn to reserves as possible. The possible reserves to probable reserves and reserves then become definitive. The increase in exploratory studies to improve the conversion process is done. Reserves can be expanded to explore the function and prevented the end of the tank. If you explore the dynamic and continuously expanding.

Fails, the elapsed time from the mining, resource stocks are depleted, because the discovery is dynamic, so each is trying to expand its size and dimensions to be added to reserves. on top of the line OD reserves are economically efficient, because the average value of OD at the top of the line is positive AII. All in the following reserves are not economically efficient because the average profit is negative.
The average profit is composed of two elements: price and extraction cost per unit. As the price per unit increases and remain constant, profits will increase and the average fixed cost and average cost of extraction reduced profits will be more moderate. Weber moves down the line OB and OD are consistent in terms of these reserves are economically was. (Chart 2).

The result is the definitive exploration of the reserves. The discovery of the empty will prevent the exploit. Energy and materials stocks are scarce and so increase the rate of extraction of the useful life of the reserves are reduced and they are more rare. Energy and materials stocks are rare because the rise and spread of the discovery is related to Anna. Various factors affect the formation of the exploration. Expanding the excess reserves to explore the function depends on technical improvements.

**Nanotechnology in the Production of Microbial Biomass:**

The microbial biomass produced using nanotechnology, to explore the technical production function exists $F(X_1, \ldots, X_n, E, K, L) = 0$ that We showed it. Technology in the production function $F$ is shown with a certain amount of products which are converted. All products may be marketed for sale or as part of their store to sell at certain seasons of the year to maintain a certain amount, but the product of institutions, and the management of them on the layout.

Some agricultural commodities have to be stored. Storage technology to be implemented in this product, and their maintenance costs will be reviewed. Productive arable crop seeds and store the seeds in cultivation and there are countless seed. Production efficiency depends on the amount of each seed. May be a grain of wheat seed production is 10 to 20. In the case of planting a seed of wheat yields will average 20 and 10.

For the production of wheat seeds are used. This product has a major role in wheat crop production function. Increase in stored wheat grain production function depends on the reserves of energy and materials to enhance exploration of the function depends. Assume a farmer has 100 units of wheat. The period of time and we consider the next time. With zero time and with a show next time. Farmers in the present value Amount $Q_0$ of stored wheat for subsistence and $I_0$ Uses as a seed. Remember the whole wheat $Q_0$ And $I_0$ Is allocated. In this case Will $Q_0 + I_0 = 100$. Wheat production function $Q_1 = 10(I_0)^{1/2}$ is shown in $Q_1$ The amount of wheat produced in the future. It takes a year after planting the wheat seed to final product, there is wheat, the production function in the time between planting and harvest time is one year, if possible, tree planting and harvesting time of ten years or longer, the period of planting and harvesting at the optimal level is raised. seedling stage to take a few years to be economically exploited. Wheat yields can be obtained from the production function. For the purpose of $Q_1$ Than $I_0$ We derive and write the result as follows: $dQ_1/dI_0 = 5(I_0)^{-1/2}$ If a wheat farmer from 100 units to 25 units and 75 units at the time of seed, the seed yield of each crop will be calculated as follows:

$$dQ_1/dI_0 = 5(25)^{-1/2} = 1$$

The yield per unit of wheat is a wheat seed. From grain to grain as seed production is a rate of return is defined as follows:

$$h = \frac{\Delta Q_1 - \Delta I_0}{\Delta I_0} = \frac{\Delta Q_1}{\Delta I_0} - 1$$

Use of the high rates of return are calculated as follows:

$$h = 1 - 1 = 0$$

$I_0$ Wheat production $I_0 = 100-Q_0$ in the place Put the function into the Write

$$Q_1 = 10(100-Q_0)^{1/2}$$

If a farmer all his crop as seed to use in case of Wheat production is zero and the next time the unit will be OA = 100. If all the wheat farmer saved seed amounts to taking the time to zero and thus will not produce in the future $Q_0=100$ and the present value The wheat will be consumed in chart 3 - The OB is shown. AB line and its slope is equal to the unit and its rate of return is zero.

The production function depends on the type and rate of return. If the production $Q_1 = 20(I_0)^{1/2}$ of wheat This efficiency will be calculated as:

Were: $dQ_1/dI_0 = 10(I_0)^{-1/2}$ If 25 units of time in the future be used as seed production, in this case, the two thus yields a rate of return will be equal. If the time allocated for the production of all wheat in this case. The
time will come. If all the wheat consumed in the present and not used as seed in the amount of wheat being
Will \( Q_0 = 100 \). The rate of return over the CB curve for wheat in accordance with the new production unit.
Sources of energy and materials stocks that are considered to be the end, the masses are dead. These
reserves are not subject to production but are identified based on the discovery. If instead of 100 units of wheat
and 100 barrels of oil have much time \( Q_0 \). And the next time it is utilized, then the storage of oil, 100 barrels,
during the period when the effect ends completely. between inventory stocks and the total oil consumption can
be written as follows:

\[ Q_0 + Q_1 = 100 \]  

(5)

100 barrels of oil exploration is well known and proven. The curve (1), such as AB in Figure 4 - is. According
to equation (1) The slope of the curve AB \( \frac{dQ_1}{dQ_0} = -1 \) And the rate of return for the operation of 100 barrels
of oil saved is equal to zero, so the production of 100 barrels of oil and because the masses are not dead, returns
for its production rate is zero.

**Conclusion:**
Microbial biomass-based renewable resources, natural growth and reproduction are biological, hence the
possible sources are distinct. Every unit of renewable power sources such as your creativity and have over a
certain period of time can produce. So save of renewable sources such as fish populations are distinct due to the
biological growth, because biomass growth rate to catch up and it fills a void, it will prevent the fish from
extinction. If the growth rate of fish biomass exceeds storage and keep this situation continues, the fish will be
extinct. Stored in biomass, but their rate of growth of productive fishing of the store and reduce it. Biological
growth function is not possible to store the resource extraction rate is reduced during storage resource. I cannot
save the source to compensate for the loss, after several years of storage resource physically quite ends. Save
the source as soon as possible to prevent the end of the function is used to explore. Explore the source of the
increased storage volume. Therefore increase with the growth of renewable biological resource saving and
resource saving achieved with the Exploration of the function is done. The final rate of return to store because
the source is made zero. Nanotechnology to improve, expand production function and thus reduce the average
cost of supply and storage of goods and consequent increases. As a result of this nanotechnology to improve
efficiency, increase the final production.

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