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ECONOMIC EFFICIENCY OF PRODUCTION OF MEAT CATTLE BREEDING

Abstract. Meat and meat products are integral elements of the structure of the country's strategic food security. The indicators of consumption of livestock products per capita are, in fact, the main indicators characterizing the well-being of the nation. To date, the problem of providing the population with domestic meat and increasing the efficiency of production of beef cattle is one of the most important tasks for agriculture, therefore, the current state of the issue under consideration is characterized by the lack of an adequately developed theory of the problem under study in domestic economics. Cattle breeding is one of the important and complex branches of agriculture. It gives valuable food, tannery, organic fertilizer. Meat and meat products are integral elements of the structure of our country's strategic food security.

Key words: efficiency, cattle breeding, meat industry, agriculture.

Introduction. One of the leading factors of economic growth in the medium term is an increase in government investment spending on the development of cattle breeding, improving the structure and quality of state targeted programs.

An equally important problem facing livestock raising is improving the quality of harvested feeds. Often, due to untimely harvesting of fodder crops, violations of technology in the preparation of feed in them, up to 35-49% of nutrients are lost. The practice of the past years and the experience of advanced farms has shown that with good quality of coarse and juicy feeds it is possible to obtain high productivity of livestock with minimal costs of concentrated feed. That is why the issues of improving the quality of harvested feed should be constantly at the center of attention of managers and specialists.

Methods of research. The study of this topic was based on modern materials of domestic and foreign sources recognized by world-wide scientists in the field of economic security. The main methods of research are methods of deduction and induction, as well as a comprehensive approach and a method of scientific abstraction.

Results. Compare the breed of cows, which is now on the farm. A white-headed breed was purchased from the organization.

Table 1 - Comparative characteristics of breeds of cows

<table>
<thead>
<tr>
<th>Whiteheaded breed</th>
<th>Hereford breed</th>
</tr>
</thead>
<tbody>
<tr>
<td>A breed was created as a result of crossing local cattle of different zones of the country with animals of the Dutch (Ostfriol) breed.</td>
<td>This breed of cattle, meat direction. It is deduced in XVIII century in England (County of Herefordshire) by selecting and selecting local cattle. Animals with a barrel-shaped, squat, broad and deep body, a strongly protruding submaxis, well-muscled shoulders. The hairline is short in summer, long and curly in winter. The suit is dark red, head, withers, dewlap, belly, lower limbs and tail brush white. Live weight of bulls 850-1000, cows 550-600 kg. Cattle are well fattened and fidget, gives high-quality &quot;marble&quot; meat. Slaughter yield is 60-65%, sometimes up to 70%. Animals are early-maturing, hardy, adapted to various natural conditions, long-term maintenance on pastures, well tolerated long distances. Widely distributed hereford breed in Britain, USA, Canada, Australia, New Zealand, etc. Adopted for breeding in many southeastern regions of the European part of the Russian Federation, Siberia, the Far East and Kazakhstan.</td>
</tr>
<tr>
<td>Under favorable conditions for feeding and keeping milk, cows of white-headed breed reach 4500-5500 kg of milk per year, and in leading breeding herds - 6000-6500 kg. From the recorders for lactation, milk from 10 000 to 17 000 kg of milk and more. From the cow for 305 days of lactation, 17 517 kg of milk with a fat content of 4.2% were obtained. The fat content of milk of white-headed cows in the central regions of the country averages 3.5-3.6%. Animals of white-headed breed differ also by good meat qualities. The slaughter yield is on the average 50-55%. The quality of the skin is quite satisfactory.</td>
<td></td>
</tr>
</tbody>
</table>

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The cost of maintaining and raising livestock in both breeds is the same, but Hereford breed is larger, the yield of meat is correspondingly larger, which will positively affect the economic indicators.

We will analyze the indices of the various breeds presented in Table 4.

Table 2 - Comparative characteristics of indicators for meat output using the example of a bull

<table>
<thead>
<tr>
<th>Name</th>
<th>Hereford breed</th>
<th>Whiteheaded breed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Output of meat, %</td>
<td>70%</td>
<td>60%</td>
</tr>
<tr>
<td>Output of meat, kg</td>
<td>630</td>
<td>240</td>
</tr>
<tr>
<td>Price 1 kg at retail, kg</td>
<td>2250</td>
<td>2250</td>
</tr>
<tr>
<td>Price 1 kg in bulk, kg</td>
<td>1170</td>
<td>1170</td>
</tr>
<tr>
<td>Revenues, t</td>
<td>737 100</td>
<td>280 800</td>
</tr>
</tbody>
</table>

Therefore, it is more profitable to Hereford breed, to obtain greater benefits.

It is proposed to purchase Hereford cows in order to increase profits. In Table 3 characteristics of this breed are considered.

Table 3 - Characterization of the Hereford breed of cattle

| General characteristics | Hereford breed of cows is hardy, can easily adapt to various conditions of the natural environment, to long-term maintenance on pastures and easily endure long distances. It should be noted that the breed is well adapted to significantly hot climatic conditions than in England. In connection with the above features, the Hereford breed of cows is perhaps the most common breed of cattle meat direction. Hereford breed of cattle influenced the formation of about 30 other breeds. The Hereford breed is remarkable for its large size, the ability to adapt to the conditions of pastures of various types and strength. The cows have an average height at the withers of 125-135 cm, weight 500-600 kg. In bulls, the height at the withers is between 135-140 cm and a living weight of 800-1000 kg. |
| Spread | Hereford Cattle breed is widespread in the USA, Hungary, England, New Zealand and Canada |
| Performance indicator of Hereford | Hereford cattle is well fattened and able to gain about 1100 grams of live weight a day. This breed produces marble meat of high quality. Post slaughter yield is on the average 58 - 62%, the maximum percentage reaches 70. |
| History of breeding | Hereford cattle breed is of meat direction. The breed was bred in England in the XVIII century on the basis of local cattle. Breeding work was initially carried out with the purpose of increasing the muscle mass and improving the strength indicators, for the best use of animals as draft force and source of meat. The pedigree book of the Hereford breed of cattle was established in 1846. |

The effectiveness of these activities.
The main stages of the implementation of activities:
1. Acquisition of young cattle meat and dairy directions.
2. Growing and breeding of cattle in order to obtain a finished product in the form of milk and meat.
3. Realization of finished products (meat) to the population.

At the beginning of the project implementation the cattle stock will be purchased:
1. Cows at the age of 24 months - 20 heads, at a price of 1,250 thousand tenge
2. Young growth cattle (bull-calves) at the age of 6 months - 30 heads, 600 thousand tons

Only 50 heads. The purchase will be made at the expense of a long-term loan in the bank.

Figure 2 shows the increase in the number of livestock

![Cattle stock](image)

Figure 1- Schedule of increase in livestock numbers
The event provides for the acquisition of young cattle from outside organizations with further increase in the number of livestock in the household and the sale of meat products.

For the cultivation of cattle meat direction, calves of Hereford breed will be acquired. This breed of cattle is characterized by an increased meat production, by the 18th month the gobo is gaining weight from 850 to 1100 kg.

The ration of feeding of cattle will include:
- mixed fodder;
- Straw;
- Hay;
- haylage;
- root crops;
- beets;
- potatoes;
Sales of products will be at prices:
- Beef at retail: 2250 тг / kg;
- beef wholesale: 1700 tenge / kg;
The bulk of the feed will be harvested by the enterprise itself.
Production activities of the economy will be carried out with the involvement of 10 employees in the position of handyman.

We will analyze the constant and variable costs for the maintenance and cultivation of 1 bull of various breeds, presented in Tables 1 and 2.

For the production and maintenance of 1 head of cattle a month requires an average of 1.5 tons of feed (hay, straw, grain). In one day, adult cow eats about 50 kg of forage. The average cost of fodder rations (50 kg) per day is 450 tenge, in a month - 13,500 tenge per 1 head. To maintain 50 heads of cattle per month, an average of 675,000 tenge will be spent.

Table 4 - Fixed costs

<table>
<thead>
<tr>
<th>Name</th>
<th>Amount in a month, тг.</th>
<th>Amount in a year, тг</th>
</tr>
</thead>
<tbody>
<tr>
<td>Salary, тг</td>
<td>80000 * 5 = 400 000</td>
<td>400 000 * 12 = 4800 000</td>
</tr>
<tr>
<td>Deductions to the budget, тг</td>
<td>-480 000 * 0,3 / 12 = 120 000</td>
<td>-480 000 * 0,3 = 144 000</td>
</tr>
</tbody>
</table>

Table 5 - Variable costs

<table>
<thead>
<tr>
<th>Name</th>
<th>Amount in a month, тг.</th>
<th>Amount in a year, тг</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feed, тг</td>
<td>675 000</td>
<td>675 000 * 12 = 8100 000</td>
</tr>
</tbody>
</table>

Total cost for the year will be 8100 000 + 4800 000 + 1440000 = 14.34 million.
Let us now turn to the calculation of the monthly gross income of the economy.
Bulls bought at the age of 6 months, with proper nutrition and care for 1 year, will gain up to 900 kg of live weight, with the exit of meat 70% comes out about 630 kg from each.
Accordingly, with 30 heads, you can get up to 18,900 kg of commercial meat.
To determine the main economic indicators of the company's activities, we will calculate the planned expenditures and incomes of our economy.

Table 6 - Average annual revenue from meat sales

<table>
<thead>
<tr>
<th>Name</th>
<th>Price per kg., тг</th>
<th>Volume of sales per year, кг.</th>
<th>Revenues per year, тг</th>
</tr>
</thead>
<tbody>
<tr>
<td>Meat at retail</td>
<td>2250</td>
<td>8900</td>
<td>20 025 000</td>
</tr>
<tr>
<td>Meat wholesale</td>
<td>1700</td>
<td>10000</td>
<td>17 000 000</td>
</tr>
<tr>
<td>TOTAL</td>
<td></td>
<td></td>
<td>37 025 000</td>
</tr>
</tbody>
</table>
Total amount of annual revenue is 37025000 tenge. We will compose the forecasted indicators in Table 7. The projected indicators are taken from the Balance Sheet of the private limited company and are calculated on the basis of Table 7.

<table>
<thead>
<tr>
<th>Index</th>
<th>2016</th>
<th>Forecast</th>
<th>Absolute deviation, tg.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenues, thousand tenge</td>
<td>20 174 100</td>
<td>20 566 600</td>
<td>392 500</td>
</tr>
<tr>
<td>Cost, thousand t</td>
<td>17 209 700</td>
<td>17 431 700</td>
<td>222 000</td>
</tr>
<tr>
<td>Profit from sales, thousand tenge</td>
<td>296 4400</td>
<td>313 4900</td>
<td>170 500</td>
</tr>
<tr>
<td>Netprofit</td>
<td>15 455 00</td>
<td>17 157 00</td>
<td>170 200</td>
</tr>
</tbody>
</table>

Let's present the data of Table 7 in the figure

![Bar chart showing forecast vs 2016 for Revenues, Cost, Revenue from sales, and Net profit]

Figure 3 - Dynamics of forecast indicators in LLP

Economic efficiency is a rather complex economic category, the definition of which necessitates the use of a set of terms, concepts, definitions, criteria and indicators. Ultimately, economic efficiency shows the degree of rational use of productive resources, the possibility of implementing expanded reproduction and entrepreneurial activities.

**Discussions.** Economic efficiency determines the level of well-being, the social status of the workers of agricultural production, that is, directly related to social efficiency. Social efficiency characterizes the social status, the degree of achievement of normatively established indicators of the level of development of the rural population, and is measured by indicators of thestandard of living of the population.

In assessing the efficiency of the economic activities of a farm, a large number or a system of criteria and indicators classified according to various characteristics can be used.

**REFERENCES**

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ЕТ МАЛШАРАУШЫЛЫГЫ ОНДІРІСІНІҢ ЭКОНОМИКАЛЫҚ ТИИМДІЛІГІ

Аннотация. Ет және ет өнімдері елдің стратегиялық азык-тұлғық қауіпсіздігін күйралымының ажырамас элементтері болып табылады. Жаңа бағақа шаққандагы мал өнімерін тұтынуының қайраткерлері, шығын мәнінде, ұлттық ұл-ауықын мен негізгі көрсеткіштері болып табылады. Бұғыңғы күні, отандық ет қалыпты қамтамасыз ету мезелесі және екі мал өндірісін тиімділігін арттыру, сондықтан, мезел әрі бір өнімдары өмірсекі мәселе болмасы зерттеу ұлттық экономикалық ұлым барабар дамыған теориясы және қауындың сипаттамаларын аудару кәсіібі. Ет және ет өнімдерінің біздің өлмегінің стратегиялық және азык-тұлғық қауіпсіздігін қамтамасыз ету құрылыымында ажырамас болып табылады.

Түйінсізделі: тиімділік, мал шарапашылығы, ет өлмө және, ауылшарашылық.

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ЭКОНОМИЧЕСКАЯ ЭФФЕКТИВНОСТЬ ПРОИЗВОДСТВА ПРОДУКЦИИ МЯСНОГО СКОТОВОДСТВА

Аннотация. Мясо и мясопродукты являются неотъемлемыми элементами структуры стратегической продовольственной безопасности страны. Показатели потребления продукции животноводства на душу населения являются, по сути дела, основными показателями, характеризующими благополучие нации. На сегодняшний день проблема обеспечения населения отечественным мясом и повышения эффективности производства продукции мясного скотоводства является одной из важнейших задач для сельского хозяйства, следовательно, современное состояние рассматриваемого вопроса характеризуется отсутствием в отечественной экономической науке адекватно разработанной теории исследуемой проблемы. Скотоводство является одной из важных и сложных отраслей сельского хозяйства. Оно дает ценные продукты питания, качественное сырье, органическое удобрение. Мясо и мясопродукты являются неотъемлемыми элементами структуры стратегически-продовольственной безопасности нашей страны.

Ключевые слова: эффективность, скотоводство, мясная отрасль, сельское хозяйство

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