dependences of the general power of harvesters park in Ukraine on the sowing areas, middle yield and the grain-crops yield energy as result.

Key words: grain-crops, gross output, harvester, power, energy yield, energy capacity
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EVALUATION OF PRIMARY MILK PROCESSING UNDER cooperative individual farms

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Abstract.*The paper shows the method of determining the economic effectiveness of the implementation of mechanization initial processing of milk cooperatives in individual households. The conditions under which the mechanization of cleaning, cooling, temporary storage and quality in line with national standards of milk produced by individual manufacturers, is economically feasible. As an example, the conclusions of the specific annual profit for the first processing of milk depending on the productivity of cows, the concentration of livestock in the cooperative market conditions and product implementation.*

Keywords: milk, primary processing, cooperative, quality, efficiency

Formulation of the problem. In manual milking cows source of contamination of milk cows is udder skin, dishes for food storage, room air. In addition milking machine milking cups contaminated milk, milk hoses, taps and so on.

Of course, bactericidal phase storage of crude and non-refrigerated milk is approximately two hours. After this period the milk quickly starts to lose useful properties, increases acidity and bacterial contamination of the product. In this regard, the shelf life of milk without cooling svizhovydoyenoho limited to 2 ... 3 hours. In refrigerated at 10°With milk can be stored for 24 hours at 4°With this time increases to 36 hours.

Calculations show that the cost-effectiveness of cleaning operations, cooling and temporary storage of milk in accordance with the requirements of zootechnical parameters in a large extent depends on the amount of processed food on livestock enterprises. Economic benefit initial processing of milk

is due to the higher prices of processed milk quality in leveling the playing of the raw product. In individual farms where held one or more cows, economic efficiency of operations cleaning, cooling and temporary storage of milk quality condition is a challenge. Production costs of processing milk in accordance with sanitary requirements consist not only of the operations of cleaning, cooling and storage of milk, cooling water, but also transactions washing and disinfection equipment, heating this water in the required amount, the cost of cleaning solutions, energy, technical maintenance and repair of machines and others. Therefore there is a problem of choosing the option of milk.

Simple way - selling low-quality product with uncertain properties in the rough at low cost. In practice, this option has occasional and limited demand and there is an end to risky, not only in economic terms but also in law.

The second way - is the realization of high-quality processed products in accordance with sanitary requirements, which allows implementation of milk at much higher prices dohovorenymy of enterprises for the production of dairy products. The adoption of this way of course must meet state standards, which allows the formal drafting of contracts between producer and consumer products. Therefore, we consider technology bring to accepted standards of milk intended for implementation in terms of individual farms.

To clean the filters using batch with a metal mesh or polyester fabric through which milk passes via breast pumps. General disadvantages of such devices - a short-term operation without stopping, the need for frequent disassembly for cleaning, possibility to break the filter element. Recently gaining use of one-time action filters that replace after every certain period of continuous processing of milk. Cleansing Milk is also possible to perform using centrifugal cleaners that do not need replacement pumps and filter elements. In these devices, mechanical impurities are rejected to the drum shell by centrifugal force and purified milk rises between the plates up and out through the device removal product. Using such cleaners also needs periodic cleaning of the drum of dirt.

The easiest way cool product - when flasks of milk is placed in a cooling bath, the bottom of the grating are set to speed up the circulation of water. An improved method to use is determined by flow plate cooler where milk and cooling agent (cold water, brine, etc.). Unilaterally or moving in the opposite flow. Also used tanks for storing and cooling milk.

In connection with this problem justification opportunities to bring to the requirements of the state standards of commodity milk produced in private farms, as well as determining the favorable conditions to achieve economic benefits for both the company and products as dairy products.

Analysis of recent research. For dairy farms and complexes of operations in primary processing of milk immediately after milking is certainly a necessary event. The problem in this case can only study alternative production line, which has a complex machine provides maximum economic effect when used. Optimal composition of complex machines depends on many factors of production of milk - the number of cows on the farm and their milk yield, the amount of capital investment to purchase equipment, the amount of production costs in the operation of machines, the price of milk and others.

In terms of individual farms where the milk is produced as a commodity product for sale, there is the additional problem of determining the feasibility of all primary processing of milk, which could result in the implementation of both the positive and negative economic result.

The purpose of research. Optimizing conditions feasibility introduction of technology, determine the mode of the equipment, provided for the possibility of cooperative execution process initial processing of milk produced on individual farms achieve proper quality product under government standards and thus obtain the maximum price for the enterprises in the implementation of dairy products.

Results. The essence of economic justification initial processing of milk is determined in value - quality processed and unprocessed foods. The task is not easy and the main difficulty is determined by the general permissibility of the use of low-quality milk (high mechanical and bacterial contamination, acidity, etc.) For the manufacture of the product for consumption. If the terms of sanitary and epidemiological requirements as possible, it should be relevant national standards that allow the use of low-quality milk for food or industrial products only. It is clear that if such opportunities should apply proven technology.

Method of determining the cost-effectiveness of primary processing of milk. Cleaning and cooling of milk increases the quality and price realization, but costly to purchase and use of appropriate machinery and equipment. Therefore, the expediency of milk processing lines should be economically justified. Capital investments are necessary for the introduction of mechanization in paragraph primary processing of milk, determined by a formula UAH:

$$H = H_1 + H_2, \quad (1)$$

where: H_1 - Investments for the purchase, installation and commissioning of equipment, UAH; H_2 - Capital investments in construction of offices, UAH:

$$H_1 = \sum C_{iM} * k_{iM}, \quad (2)$$

where: C_{iM} - Price of i-line and machine cleaning, cooling and storing milk UAH; k_{iM} - Coefficient taking into account the cost of delivery and installation of machinery.

The use of machines and construction department of primary processing of milk in turn requires annual production operating costs, USD:

$$S = T * n * q + H_1 * k_1 + H_2 * k_2 , \quad (3)$$

where: T - Time during a year, hours; n - The number of service personnel, people .; q - Flat rate payment, UAH ./ (nation. × h); k_1 - Complex ratio of annual operating costs of equipment (electricity, depreciation, repairs and maintenance, detergents, loan servicing, etc.) k_2 - Complex ratio of annual operating costs of the building (depreciation, operating costs, maintenance, loan servicing, etc.).

Opening hours during a year is determined by the formula h:

$$T = z * (t_1 + t_2) , \quad (4)$$

where: z - Annual number of cycles; t_1 - During one cycle of milk processing, h; t_2 - During one cycle washing equipment, hours.

The main factors that affect the economic feasibility of implementing paragraph mechanization initial processing of milk is given by:

$$E = m * U * \Delta c - S , \quad (5)$$

where: E - An annual economic impact of implementation, USD; m - The number of cows serviced cooperative, Ch .; U - Average annual milk yield per cow, kg / head .; Δc - The difference between sales price and quality of processed raw milk, UAH / kg; S - Annual operating costs compartment initial processing of milk, UAH:

$$\Delta c = c_O - c_H , \quad (6)$$

where: c_O - Price of quality milk after initial treatment, UAH / kg; c_H - Price of raw milk, UAH / kg.

Also important to figure annual income specific processing of milk per cow is given by:

$$E_O = \frac{E}{m} , \quad (7)$$

where: E_O - The estimated annual revenue specific processing of milk, USD / Ch.

Results. For example, the results of calculation of the annual economic impact of technological line of disposable filters based on actions that are replaced after every certain period of continuous processing of milk and its cooling tanks for cooling and storage of the product (Table. 1)

1. Estimated annual revenue specific processing of milk, USD / Ch.

Number of cows, ch.	The difference in prices, USD / kg	Average annual milk yield per cow, kg / head.				
		3000	3500	4000	4500	5000
		Specific Annual revenue USD / Ch.				
	1.0	-8,190	-7,915	-7,640	-7,365	-7,090
5	1.5	-6,690	-6,365	-5,640	-5,115	-4,590
	2.0	-5,190	-4,415	-3,640	-2,865	-2,090
	1.0	-3,270	-2,995	-2,720	-2,445	-2,190
10	1.5	-1,770	-1,245	-720	-195	330
	2.0	-270	505	1280	2055	2830
	1.0	-1,630	-1,355	-1,080	-805	-530
15	1.5	-130	395	920	1445	1979
	2.0	1370	2145	2920	3695	4470
	1.0	-810	-535	-260	15	290
20	1.5	690	1215	1740	2265	2790
	2.0	2190	2965	3740	4515	5290
	1.0	-318	-43	232	+507	782
25	1.5	1182	1707	2232	2757	3282
	2.0	2682	3457	4232	5007	5782

The analysis of these indicators shows that the value of specific earnings greatest degree of influence such indicators as the number of the number of cows in the group, the average milk yield per cow, the ratio of the price of quality processed and unprocessed milk.

To create a profitable business process initial processing of milk must be certain conditions. Implementation of purification, cooling and proper storage of milk produced on individual farms may be appropriate in the case of solving technical, economic and organizational problems.

The technological problem solving determined by the need of modern maintenance, feeding and breeding high-band in individual farms .. The low-band commodity production of milk in any form is inappropriate.

The economic problem may be needed to compensate for significant production costs of cleaning operations, cooling and storage of milk by improving product quality and price under implementation.

Under the terms of the first two terms of solving organizational problems can be solved by implementing appropriate campaign events and the ability of individual milk producers to self respective cooperative to obtain high-quality product and receiving additional income.

Conclusions

Bringing the state standards of quality of milk produced in private farms is an urgent problem, whose solution requires substantial capital investment in mechanization of cleaning operations, cooling and temporary storage of milk.

Studies show that a positive economic effect process initial processing of milk produced for the implementation of such companies, requires certain conditions.

For the implementation of efficient business in agriculture should study existing conditions of milk production, analysis of relevant work opportunities, economic justification and legal registration of the company. The feasibility of such a measure can justify highly qualified specialists in the field of technology, organization and economics of dairy farming.

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Abstract.*As the work shows the method for determining эkonomycheskoy Introduction of the effectiveness mechanization pervychnoy obrabotku milk cooperatives yndyvydualnыh farms. Opredelenы terms, the kotorыh mechanization cleaning, cooling, storage and temporarily Implementation kachestvennoho hosudarstvennыmy in accordance with the standards of milk producer of proyzvodymoho yndyvydualnыmy, is the the Economic tselesoobraznoy. AS A pryvedenы Example calculation results udelnoho hodovoho income pervychnoy process in dependence obrabotku milk from cows productivity, concentrations poholovya cooperatives and Implementation rынochnыh uslovyy product.*

Keywords: milk, pervychnaya obrabotku, cooperative, Quality, Efficiency

Annotation.*The paper describes a method of determining the economic efficiency of mechanization of primary processing of milk cooperatives in individual farms. Determine the conditions under which the mechanization of cleaning, cooling, temporary storage and the implementation of quality in line with national standards of milk produced by individual manufacturers is cost-effective. As an example, the results of the calculation of the proportion of annual income of the primary processing of milk, depending on the productivity of cows, the concentration of livestock in the cooperative and market conditions for the realization of the product.*

Key words: milk, primary processing, cooperative, quality, efficiency

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BACKGROUND OF RATIONAL harvesting-transport complex USING NAPIVCHOVNYKOVOHO of the vehicle

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Abstract.*The technique of harvesting-determination of the transport sector for sugar beetusing napivchovnykovoho vehicle traffic.*

Keywords:*sugar beet harvest,transport en Executive, Car trailer, performance*

Formulation of the problem. The known method improving the efficiency of harvesting and transport technologies for the use of cereals as compensators motor vehicle (NP) trucks during the organization napivchovnykovoho vehicle traffic [1-3].

This technique becomes practical application in recent years in connection with the development and introduction of special tractor truck coupling similar in design to the car. Along with the significant advantage of this method - combines increased productivity by creating conditions for continuing their work there provided a significant increase in performance vehicles. Due to some differences of harvesting and transport technologies for cereals (for which this method is developed) and sugar beet important development methods of study options harvesting and transport complex (ZTK) with the organization napivchovnykovoho motion trailers for the transport of sugar beet harvesting today.

Analysis of recent research. As compensators for transportation of sugar beet used special trailers, cranes and various bunkers [1-4]. But specialized equipment has limited the annual use in manufacturing because its operation results in increased production costs. Also not solved the main problem - a significant increase in traffic performance ATZ sugar beet.

These shortcomings are eliminated in the organization of transport of sugar beet reversiblesemi-trailers from napivchovnykovoho use of their movement.

The purpose of research. APidvyschennya ZTK efficiency for sugar beet by grounding techniques to determine its management structure.