нансовую оценку различных вариантов развития бизнеса, включая расширение действующего или создание нового производства, выход на новые рынки, развитие сбытовой деятельности, реструктуризацию.

Механизм принятия решений по обеспечению уровня финансовой устойчивости сельскохозяйственного предприятия представляет собой формирование адекватного стадии и фазе жизненного цикла сельскохозяйственного предприятия комплекса решений, направленных на поддержку финансово устойчивого развития предприятия, локализацию негативных тенденций развития.

Моделирование денежных потоков наглядно показывает, окупят ли планируемые поступления от деятельности предприятия сделанные инвестиции, потребуется ли привлечь дополнительные средства и в каком объеме, на какие сроки и из каких источников. В процессе финансового моделирования можно с достаточной точностью оценивать финансовую устойчивость сельскохозяйственного предприятия, создавать и анализировать альтернативные сценарии.

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SMART AND AUTOMATIC MILKING SYSTEMS: ADVANTAGES AND DISADVANTAGES

Ключевые слова: автоматизация, молочный скот, доильный робот.
Key words: automation, dairy cattle, milking robot.

Аннотация: В статье представлена информация о системах автоматического доения, показаны их преимущества и недостатки. Особое внимание уделено важности регулярного технического обслуживания систем автоматического доения.

Summary: The article presents information on automatic milking systems, showing their advantages and disadvantages. Emphasis is laid to the importance of regular maintenance of automatic milking systems.

An Intelligent Milking System (IMS) is a combination of different machines and technologies that help dairy farmers to milk and monitor the progress of their animals using sophisticated techniques. The system has replaced human workers with machines that are efficient and effective and thus assure farmers that they will get quality products and at the same time monitor the health and progress of their dairy animals [1].

Automatic Milking Systems (AMS), also known as robotic milking, are internationally accepted as a valid alternative to conventional milking parlor, and also as an advanced mean for dairy farm management. The continuous growth of labor and production costs are leading to the development of new improved AMS machines, especially for heaviest milking operations. AMS reduces heavy workload and allows milking frequency monitoring of each cow, based on its production level or lactation stage, without any additional labor cost. In particular, data relative to milk yield, daily milking sessions per cow, effective milking time, rejected milking time, cleaning time and machine downtime have been collected and used to evaluate the operative performance of each farm [1].

Smart and automatic milking systems have the following advantages:

- Increase in milk yield. AMS is fully feasible to increase average milk production per cow on a farm. But it strongly depends on a farmer's ability to raise the number of total visits to the robot, mainly for cows at the beginning of lactation. Indeed, AMS and herd management system have to be properly parameterized.

- Labor cost reduction. Rodenburg noted that robotic milking reduces labor demands of all size dairy farms and offers a more flexible lifestyle for farm families with up to 250 cows [2]. Farms using AMS had an average of 74 cows per full-time employee, while those using conventional milking systems had an average of 59 per employee.

- Milk quality improvement. AMS provides a higher average number of milking events, can significantly reduce somatic cell counts in milk. Compared to a traditional tandem milking parlor, the use of AMS results in higher protein and casein contents and lower somatic and total bacterial counts, whereas fat, freezing point and pH are not affected by the systems [2].

- Information management and decision making. The main differences between AMS and conventional milking are computerized monitoring, individual analysis and control of animals, transparently to the users, allowing online acquisition and processing of individual cows with unprecedented details.

In spite of the advantages AMS have some disadvantages such as the content of free fatty acids in milk, changes in fat and protein contents and increase in subclinical ketosis. Though AMS has some disadvantages the benifits it gives for famers allow the system to be widely used in farming.

For AMS to work properly regular servicing is required. Even though, these machines have guarantees farmers must ensure they do not misuse or expose them to break down just because they will be given new ones. The need to en-

sure these machines work well will enable farmers to have a seamless milking process and this will not affect the quality and quantity of milk produced.

It is generally recommended that farmers should constantly check their machinery and carry out regular repairs if necessary. All machinery, no matter how advanced, requires regular maintenance. Maintenance includes lubrication and lubrication of moving parts to ensure reduced friction. This reduces the wear effect and makes the machine more durable.

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АНАЛИЗ И ПЕРСПЕКТИВЫ РАЗВИТИЯ СЕЛЬСКОХОЗЯЙСТВЕННОГО ПРОИЗВОДСТВА РЕСПУБЛИКИ БЕЛАРУСЬ

Ключевые слова: Сельское хозяйство, АПК, финансовые показатели, развитие АПК.
Key words: Agriculture, agro-industrial complex, financial indicators, agro-industrial complex development.

Аннотация: В последние годы, несмотря на реализацию ряда государственных программ, эффективность аграрного сектора Беларуси является недостаточной, сильно зависимой от экономических, природных факторов и пока не позволяет товаропроизводителям сформировать необходимые финансовые средства для расширенного воспроизводства. Наблюдается устойчивая тенденция накопления долгов, низкая эффективность сельскохозяйственных товаропроизводителей, дефицит квалифицированных кадров на селе.
Annotation: In recent years, despite the implementation of a number of state programs, the efficiency of the agricultural sector of Belarus is insufficient, highly dependent on economic and natural factors, and so far does not allow producers to generate the necessary financial resources for expanded re-