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Farm producers are being focused on precision agriculture these days, since it has been accepted as the only efficient and sustainable farming system. To realize the approach in precision crop farming it is needed to provide machinery for site-specific treatment. That is why the concept of small self-propelled scouts is a pressing issue for engineers all over the world.

The aim of the current research was to study farming cycle features and needs in order to find field scouts' market niche.

According to recent research, new agricultural technology is expected to be high efficient in such areas [2, 3]:

- production of healthy food and feed as well as renewable resources
- reduction of human workload in all farming processes
- sustainable handling of natural resources
- maintenance of the landscape and biodiversity.

Nowadays precision crop farming is an approach which mixes conservation tillage and no-till systems. The idea of precision management requires constant data gathering to form a clear 'field picture' which then will be the base for making decisions about necessary treatment. The study of real production needs showed that the data might include application maps as well as information about soil, water, crop growth and infestation state. To provide on-the-go operational information updating farmers need a self-propelled machine equipped with online sensors. They could scan and measure all the parameters and / or perform weed, pests and diseases control as well as harvesting and post-harvest management, including dehumidification of crops with high moisture contents.

Analysis of test models [1, 2] enabled the key conclusion. It touches the design concept. Currently all listed farming operations are going to be performed by different machines. The idea of a universal one is attractive but is not acceptable at the moment. So the designs will depend on the crop, the production task and field conditions. We are considering 'an army' of tiny machines which cooperate with a stationary field power station.

In horticulture scouts are also in demand as they could take over most of the hand work. The development of a design concept for orchards benefits the fact that the positions of all the plants are well organized. It enables to design more unified modules which could be equipped with different operational units according to the production task.

All the technological operations of the scouter are going to be automatic. So there are many different aspects for considering:

- the power source and a drive type
- the way of movement and the type of a running system
- sensors used
- field navigation and self-location
- possibility and / or necessity of manual control
- automation details (types of controllers, programming etc.)
- the way of data storing and / or transporting to the main information center
- software.

Environment impact is one more relevant question. It is expected that scouts application can save 40-50% of energy consumption [3]. To provide that, the use of solar energy (smart storage, optimal use and supply), wind energy and biofuels has to be considered as well. According to [3] the

application of scouts in greenhouse might enable optimal energy control (zero energy use), air dehumidification as well as CO₂ emission reduction.

To sum up it is necessary to mention that the problem is being studied intensively in both theoretical and practical aspects. Growing interest from the farmers' side shows marketing potential of the idea and provides the stimulus for further research. The designs which have been developed and are being tested have their advantages and disadvantages. Next step in the current research could include choosing the optimal design of the scout and detailed analysis of possible ways for its improvement according to the farmers' needs.

References

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TIME MANAGEMENT

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Time is an important source for person and company. The success of the individual and the organization as a whole depends on the effectiveness of its use [1; 134].

Nowadays, the development and activity of the economy induce successful people to manage their own time properly to be able to formulate their purposes and goals clearly. Such features are especially useful for people today when the thesis "Time is money" has gained a special significance. Time is comparable to other resources, but in opposite to them, it is irreversible - it cannot be accumulated, transmitted or stored, so it is important to learn how to use it with maximum benefit.

The purpose of the article is to consider time management as a way to effectively allocate time, to reveal the main means to increase the efficiency of activities, as well as to identify ways to manage time [2; 203].

The announcement about time management as a separate scientific direction initially appeared in Holland in the 70's of the twentieth century. Specialized courses of planning time for employees and businessmen were established there. Then the problem of time management attracted the attention of specialists in the USA, Germany, Finland and a number of other countries. Time management is associated with other sciences, including physics, biology, sociology, philosophy, psychology since these and some other fields of knowledge contain information about time [3; 8-9].

A crazy flow of information in present provokes a feeling of total time pressure. Twenty-four hours a day are not enough, and life passes by. The inability to structure time properly in the sense of one's own existence leads to dissatisfaction with one's own effectiveness.

Mad rhythm changes the settings of the internal timers. Disagreement in course of time throws out us from the orbit of own life under a playful motto "However nothing I will have", taking the small role of observers to us. It blocks our productivity and sometimes dives into the state of unpleasant frustration. The category of time affects the quality of a person's life. The statement "I