

## Current Achievements and Development of Agricultural Machinery

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### ANNATATION

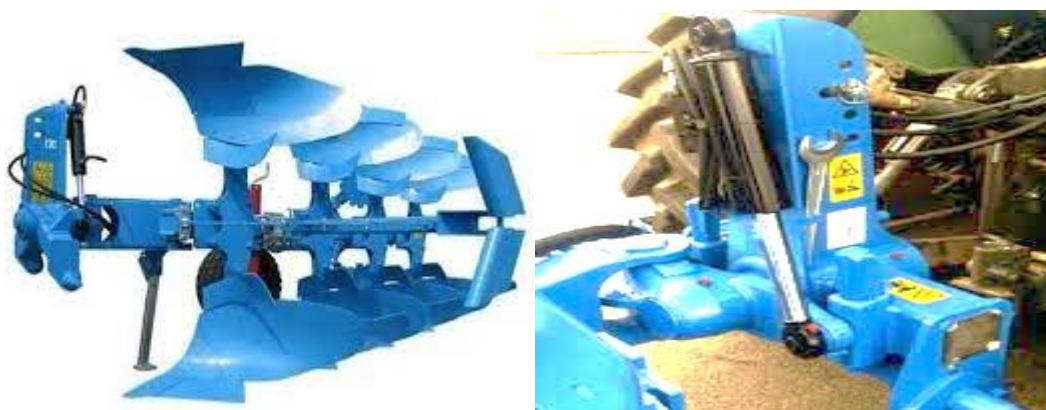
*The article describes the ongoing research on the creation of a new construction of the rotating mechanism of the floating plough and preliminary information on the results of their analysis.*

**KEYWORDS:** *worm mechanism, floating plough, solved problems, determine of research, new construction of floating plough, field cultivation, parametres of mechanism.*

Nowadays, there have been found some problems in processing current floating ploughs. One of them is that wheeling mechanism of these floating ploughs consists of three or more sub-mechanisms, that's why we can face some defects in applying and repairing for technical servicing such kinds of mechanisms. In order to deal with these problems we can focused on creating new construction of wheeling mechanism. We proposed is a worm mechanism.



**Fig.1. Overview of "Kverneland "ploughs**



**Fig.1. It is usual wheeling mechanism of floating ploughs – hydraulic mechanism**

For to carry out the following tasks:

- keep during the processing of physical and mechanical properties of the soil in the crop area;
- working plowshares with account the forces that influence the introduction of new advanced mechanism;

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- for plowshares mechanisms to determine the effect of the size of the structural parameters of the design characteristics and indicators;
- To determine the economic efficiency of the improved aggregate.

The results of many years of scientific and practical research show that the main field cultivation, that is, plowing, is important in achieving high yields of agricultural crops. Timely and qualitative implementation of this agrotechnical activity creates favorable conditions for the accumulation of moisture in the soil, reduction of weeds in the field, qualitative sowing of seeds of agricultural crops, their cultivation and good germination.

It is known that two-tier PYA-3-35 aggregate with chain tractors such as T-4A, DT-75, PN-4-35, PLN-4-35 and PLN for driving cotton and other crops -3-35 machines were used. During the years of independence, modern wheeled tractors, such as Magnum, Case, MX-135, and many 165, LD-100, and others were brought to our country.

However, tests show that these humps do not fully meet the basic agrotechnical requirements for us plowing. Rotary humps are particularly complex and require a lot of energy.

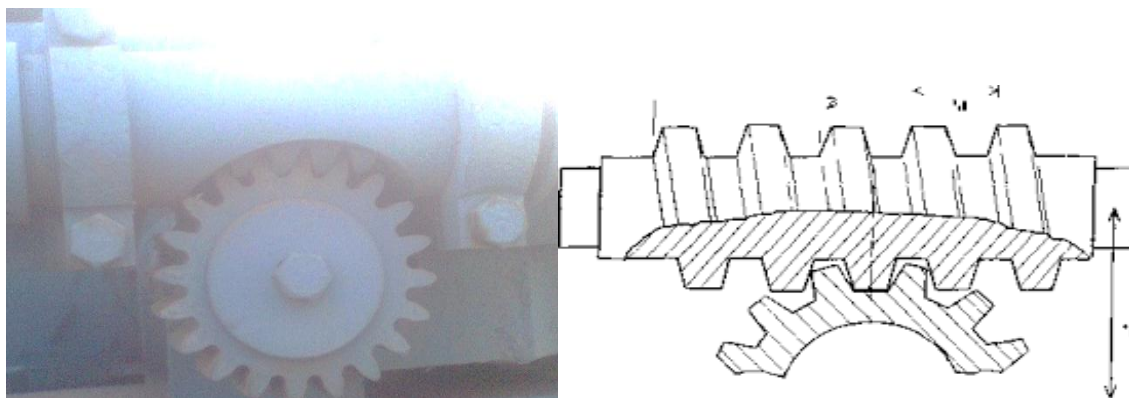
Some disadvantages have been identified in the operation of the currently used rotary humps, including the three or more mechanisms of rotating humps. Various problems and shortcomings arise during the operation, repair and maintenance of such mechanisms. In order to address these drawbacks, we have developed and tested an experimental version of a new major structural part of a rotating mechanism that replaces one mechanism instead of three.



**Fig.3. Overview of "Kverneland "ploughs**

The details of the new engine are the same as the details of the improved rotary mechanism. Accordingly, the use of one mechanism instead of multiple mechanisms to improve the rotating mechanism in the circulating humps is a simple and easy way to increase the resource. The repair of engine parts, both during and after the reconstruction, is simple and easy, with the possibility of significant economic effect.

Simple and easy operation of the rotary mechanism will increase the performance of the rotary hinge attached to it. An improved mechanism and a sketch of the rotary hull and its rotating mechanism are shown below (Fig. 4).



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#### **Fig.4. Overview of improving constructive parts of floating plough**

##### **Conclusion**

- Enhanced working with the plow down the main processing with a simple hammer and treatment much less here mechanical and even plowing. As a result, each hectare of land for the processing of less than 3.57 kg of spent fuel.
- New improved working hammer is used to carry out the main processing works the soil in the fields of processes operating expenses decreased by 6.8%.
- Improved working with the plow the ground to the annual economic impact 6971601,632 sum.

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