

ANALYSIS OF UTILISATION COST OF OLDER MACHINES IN SMALL AND MIDDLE SIZED FARMS

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Despite the great volume of machine investments that is nowadays typical in the agriculture, we can find overaged, out-of-date power machines and implements in many farms. In most of the cases the cause is the lack of capital that is against the improvement, but in some cases, mostly in small or medium sized farms, the annual intensity of the machines is so low that it does not lead to the change at the end of the administrative amortisation period (7-10 years), but with proper maintenance and caring supervision it is not rare that a machine can „live” up to its 15-20 years or more.

But on the other hand we experience that some of the small sized farms that are deficient in funds can purchase an overaged machine on the used agricultural machine market and that means the basis of the farm's machine system. In this case the configuration of the machine use happens basically without any investment economical and cost efficiency thoughts, because this type of machine purchasing is caused by constrain and considering the low purchase price.

We have examined that how the above mentioned phenomenon comes out in the machine use costs of different sized farms. How huge cost-sacrifice it is if a cheaply purchased machine does not match the size of the plant, and how huge machine using and machine investment cost load it causes when these machines – that's constant costs are insignificant and in case of low exploitation, the supplemental costs are not clearly sensible by the farmer – that are used in small and middle sized farms.

Our examinations prove that the planned machine purchasing means cost saving. The using of machines with higher output than the reasonable causes capacity redundancy and additional costs. Because of this it is a necessity to improve the exploitation of the machines by changing the seeding-plan or with servicing wagework, and by this to raise the efficiency of the fixed assets.

According to our model calculations it can be stated that in case of overaged machines – where they do not care anything about cost efficiency, because „all is the same” – it is still not suggested to use bigger output power machines in smaller farmsizes.

Working with an older machine can also have the reason for existence in small size farms, but in this case a serious technical monitoring is needed, because the machine has to do all of the operations to reach the optimal utilization and there is no other machine instead in case of a breakdown. If the division of labour is between more overaged machines that are specialized to one operation each, their usage is not favourable from the side of the costs too.

Keywords: mechanisation of small and medium sized farms, machine fleet planning, machine utilisation, low cost machine fleet, overaged machines