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“Filling gaps and removing traps  
for sustainable resource management”

## Adaptation of KTBL’s Databases for Planning and Benchmarking the Sustainable Use of Farm Machinery in Developing Countries

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### Abstract

Machinery costs (fuels & oils, maintenance costs, depreciation and others) comprise a significant part of total farm costs. Dispersed among the different costs items, they reach on average more than 16 % of total production costs at Ukrainian enterprises. This justifies the need to control and manage them in an efficient way based on a strict theory and exact data.

The study examines the experience of Germany related to the development of databases that satisfy the farmer’s needs for machinery use planning and looks at the ways those databases could be utilised by users from less developed countries of Eastern Europe, in particular Ukraine. Germany’s KTBL, a government-funded industry association, provides all with free, comprehensive, practice-based information (prices, fixed and variable costs of machinery use, labour needs, etc.) needed for planning agricultural production operations, whereas in Ukraine, as of today, only either suppliers and manufacturer’s data, or official retrospective statistical data can be used for these purposes.

Our central premise is that for the purposes of agricultural activities planning KTBL’s data can be used in Ukraine provided adjustment of certain variables is done. Our analysis is facilitated by classification of all KTBL indicators to three categories: 1) strict (unchangeable) / customized, 2) economic and physical in nature, and 3) those that need adaptation and those that need not.

Our results show that the development of appropriate correction coefficients for these indicators that need adaption will make it possible to use KTBL’s for the needs of farmers in developing countries and in particular in Ukraine, in order to establish reserves for improving outputs and reducing costs, and increasing competitiveness. Our results, i.e. development of correction coefficients for those indicators that need adaption, have important implications, as they enable the full use of KTBL’s databases for the needs of Ukraine and other developing countries.

**Keywords:** Costs management, database, decision-making, farm planning, informational support, KTBL, machinery cost