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Application of computer method for recording and analysis in investigations on animal response to stress-creating stimuli

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Abstract: Application of computer method for recording and analysis in investigations on animal response to stress-creating stimuli. *The paper presents methodology of investigations enabling to select in animal “acoustic” environment the hitherto unnoticeable stimuli causing animal response. The control investigations and the worked out methodology aimed at checking their usability in observing and recording the visual and sound symptoms of animal response. At the same time, usability of equipment sets in realization of methodological assumptions was checked. With respect to practical utilization of carried out investigations, the main task was evaluation of usability of selected acoustic signals in rodent repelling from places, where the chemical deratization is not recommended and animal pest population can be reduced by the methods more “friendly” for environment.*

Key words: animal acoustic environment, audio-video monitoring

Simulation of selected parameters of the cluster work

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Abstract: Simulation of selected parameters of the cluster work. *Mathematical model enabling to calculate the return airflow velocity in a short milk tube of the cluster is presented in the paper. With respect to the milk and air flow structure, similar to a ring structure not fully developed at the short milk tube diameter greater than $d_w \geq 0.012$ m, the flow was analyzed in one-dimension system, assuming that flow parameters at cross-section of the short milk tube were constant. A Turbo Pascal computer program was worked out for mathematical model, enabling to carry out numerical calculations of airflow velocity for the given milking conditions.*

Key words: mathematical model, return flows, short milk tube

Exploitation efficiency of technical mean utilization in milk transport

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Abstract: Exploitation efficiency of technical mean utilization in milk transport. *Basing on observations carried out at the dairy plant in Ryki there was evaluated an exploitation efficiency of utilization of the two technical means for milk collecting and transport from the suppliers: special auto-cistern and traditional cistern equipped with additional trailer with devices for collecting milk from the suppliers. Two organizational forms of raw milk collecting from the producers were analyzed: direct collecting from the farms equipped with stationary coolers and from the “by-the-road” supply points. Results of analysis were used for development of indices describing efficiency of milk purchasing system.*

Key words: milk, auto-cistern, transport, labour consumption, rate of work

Analysis of efficiency indices of self-propelled fodder wagon utilization

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Abstract: Analysis of efficiency indices of self-propelled fodder wagon utilization. *Basing on a set of technical data describing tens of models of self-propelled fodder wagons, the selected indices of working rate and quality were analyzed. There were determined changes in: loading rate, working reach of loading units, engine power, specific power requirement and wagon kerb weight along with an increase in wagon tank capacity. Importance of criteria for machine selection for investigations, with respect to precise evaluation of analyzed changes, was pointed out.*

Key words: self-propelled fodder wagon, utilization efficiency, rate of work, engine power, machine weight

Method for evaluation of the effect of working unit reliability in milking pipeline machine on its work efficiency

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Abstract: Method for evaluation of the effect of working unit reliability in milking pipeline machine on its work efficiency. *The effect of particular working unit reliability in milking pipeline machine on its work efficiency is presented in the paper. The investigated milking machines were divided into functional units, and then the effect of particular working units on total working efficiency of the investigated milking machine was determined according to analytical-expert method.*

Key words: milking machine, exploitation efficiency

Analysis of agricultural tractor utilization level in the selected farm

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Abstract: Analysis of agricultural tractor utilization level in the selected farm. *Annual tractor utilization was analyzed together with possibility of these tractors substitution with the tractors of other types. The presented method enables to determine the power requirement for tractors essential in the farm with simultaneous analysis of their annual duties.*

Key words: agricultural tractor, tractor annual utilization (duty), degree of engine loading

Selection of agricultural tractor for the farm

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Abstract: Selection of agricultural tractor for the farm. *Possibilities of selection and purchase of agricultural tractors for the farm are analyzed in the paper. The presented method enables to select a tractor from the group of comparable technical parameters and to undertake decision on its purchasing basing on the tractor technical-economical parameters.*

Key words: agricultural tractor, selection, purchase

Application of multiparametric equations to evaluation of quality indices of the extrudates with addition of amaranth

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Abstract: Application of multiparametric equations to evaluation of quality indices of the extrudates with addition of amaranth. *A statistical analysis of the results of quality indices measurements of maize grit extrudate with addition of amaranth is presented. The regression equations connecting the investigated quality indices with parameters of extrusion process were developed.*

Key words: extrusion, extrudate quality, amaranth, multiparametric equations

Evaluation of nutritive value of the extrudates with addition of amaranth

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Abstract: Evaluation of nutritive value of the extrudates with addition of amaranth. *Results of nutritional experiment carried out with the use of laboratory rats to evaluate nutritive value of the extrudates with addition of amaranth are presented. It was found, that feeding of diets containing the raw amaranth grain caused a statistically significant decrease in daily gains of rat body mass and in feed utilization by the animals.*

Key words: extrudate, amaranth, nutritive value