

Investigations on the effect of wheat extrudate break-up on its colour

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Abstract: *Investigations on the effect of wheat extrudate break-up on its colour.* An attempt at determination of the effect of break-up of extrudate obtained of the wheat grain flakes on its colour was undertaken. The colour was determined basing on measurements of colour indices L^* , a^* and b^* . The measured values were subjected to variance analysis; the mean values, standard deviation and variability coefficient were presented depending on the extrudate break-up degree.

Key words: extrudate, break-up degree, photocolourimeter

Effect of dimensions of selected elements of the single-screw extruder on the wheat extrudate density

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Abstract: *Effect of dimensions of selected elements of the single-screw extruder on the wheat extrudate density.* There are presented results of investigations on the effect of height of the wedges on internal surface of extruder's barrel, clearance between the screw head and the barrel, and intensity of material flow on the density of obtained extrudate. The results were analyzed statistically with the use of the module for designing three-factor experiments of StatisticaTM program. The most favourable range of changes in investigated elements was determined.

Key words: extruder, dimensions of elements, extrudate quality

Changes in physical properties of soil compacted by tractor wheels

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Abstract: Changes in physical properties of soil compacted by tractor wheels. The paper presents results of investigations on the changes in bulk density and compaction of soil under tractor wheels. The field investigations were carried out on the clayish sand.

Key words: soil density, soil compaction, specific pressures, tractor

Analysis of variability of technical and exploitation parameters of auto-cisterns for milk collecting and transport

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Abstract: *Analysis of variability of technical and exploitation parameters of auto-cisterns for milk collecting and transport.* The work aimed at determination of the effect of milk volume supplied by particular farms in a given production region on technical equipment and exploitation indices of auto-cisterns used for collecting and transport of milk in the milking farms. There were compared the auto-cisterns used in Poland, of capacity 6500 and 11000 litres, and the vehicles transporting up to 40000 litres, applied in British Columbia. It was found that an increase in working capacity of auto-cisterns is accompanied by simplification in their design, and a dynamic increase in the output of milk collecting and transport.

Key words: auto-cistern, milk, capacity, transport, output

Assumptions for development of a cybernetic milking machine

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Abstract: *Assumptions for development of a cybernetic milking machine.* There is presented a modified idea for development of cybernetic milking machine of parameters controlled by the signals coming from: the animal neuro-hormonal system, observations on teats and udder (e.g. with the use of a video camera), the data base on the cow being milked (including the cow herd management system), the animal breed, and the general knowledge on milking

process. The further works give a chance for development and implementation of a new generation milking equipment, which can be adjusted to the current and individual needs of animals during mechanical milking.

Key words: cybernetic milking machine, cow, milk, control

Evaluation of nozzle reconditioning process quality

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Abstract: *Evaluation of nozzle reconditioning process quality.* The problems of reconditioning of nozzles in self-ignition engines are presented. The degree of smokiness of exhaust gases in the engines equipped with new nozzles and reconditioned ones was compared. The results of investigations were evaluated statistically.

Key words: smoking, reconditioning, nozzles

Assessment of milking systems including microbiological and technological aspects

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Abstract: *Assessment of milking systems including microbiological and technological aspects.* Criteria to evaluate milking systems used on dairy farms were discussed. As the evaluating criterion a microbiological quality of milk expressed by TBC (total bacteria count) and SCC (somatic cell count) and bacterial contamination of teats' skin were considered in connection with some activities and materials (i.e. analysed type of disinfectant), which support process realised in milking parlour, especially pre-milking stage. Moreover, basing on the carried out observations some suggestions were given to develop investigations showing technological aspects, i.e. the effect of housing system on effectiveness of pre-milking activities in milking parlour.

Key words: bacterial contamination, cow, disinfection, improvement, milking, technology

Evaluation of agricultural tractors on the ground of parameter-price analysis and exploitation costs

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Abstract: *Evaluation of agricultural tractors on the ground of parameter-price analysis and exploitation costs.* Basing on the exploitation costs and the selection function there were compared the tractors of power 140 HP offered by various producers; the tractors were included in a ranking organized by German association DLG and the editors of journals: “Top Agrar”, “Farmers Weekly” and “Boerderij”. The carried out evaluations considering the economic aspects differ substantially from the grades assigned to particular tractors in the ranking.

Key words: smoking, reconditioning, nozzles