Index evaluation of pigs and determination of selection limits

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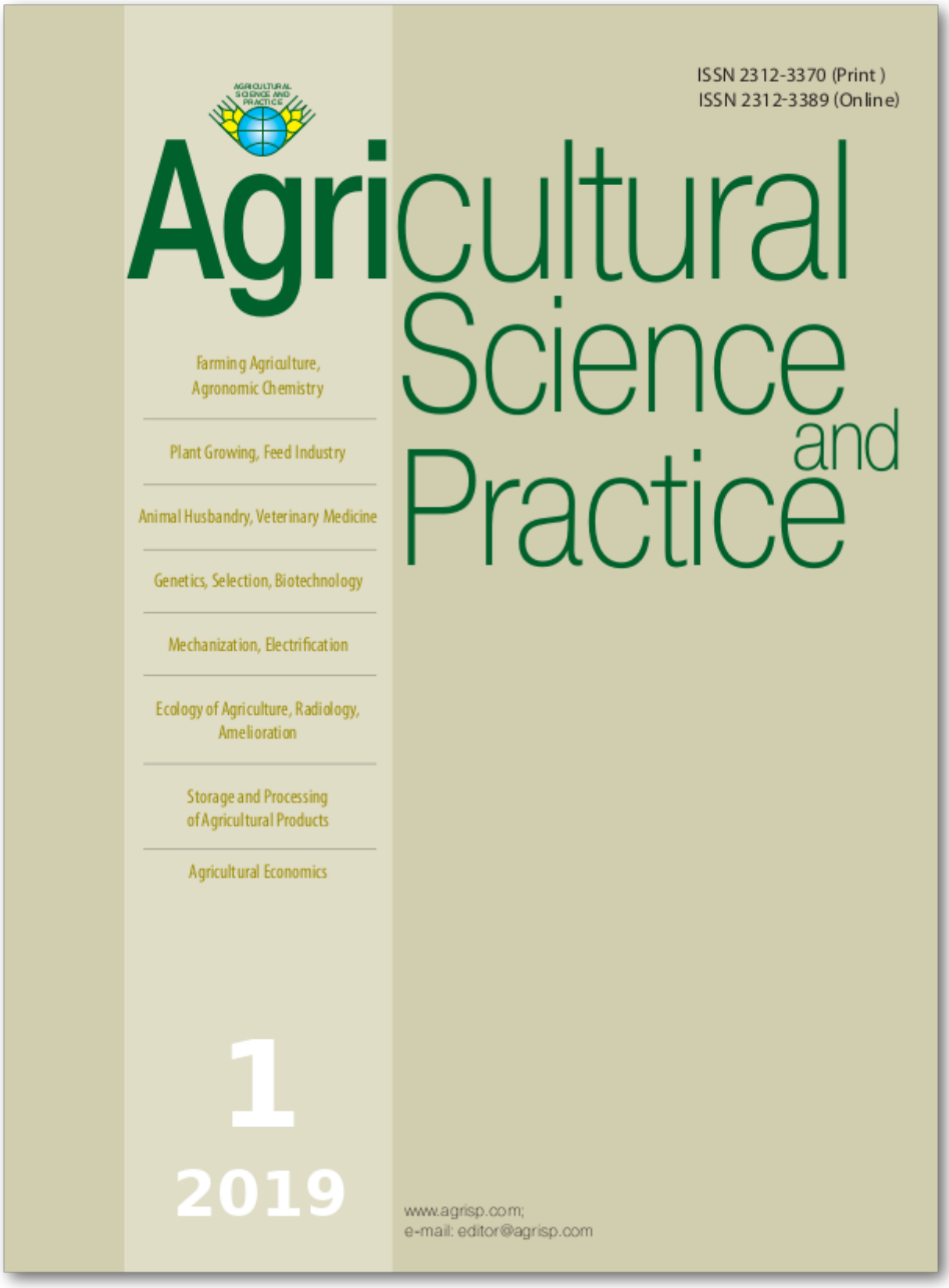
Abstract

Aim. To determine genetically and mathematically grounded target standards of selecting pigs for future gen- erations. To determine minimal selection limits for pigs to obtain high productivity traits. Methods. Common methods of evaluating the reproductive ability of sows, fattening and meat-fat qualities of progeny. Selection indexes were built by the method of standardized deviations according to M.V. Mykhailov. The target selec- tion limits for animals were determined using the table of Le Roy. Results. Selective-genetic parameters were determined by the main traits of reproductive ability, fattening and meat productivity of pigs. Selection indexes were estimated using the weighting coeffi cients of the traits for each group of pigs, used as a basis for minimal limits at different intensities of selection. The estimation of local progeny by selection indexes allowed ranging them depending on the level of productivity with the consideration of genotype. At 20 % selection, the minimal value of the reproductive ability index for the control group was 238.7 points. The minimal target threshold while selecting sires by the fattening traits of progeny within the 20 % selection was from 50.57 to 255.65 points for different groups. The minimal value of the index of fattening and meat traits was in the range from 270.05 to 606.94 points. Conclusions. The

index estimation of pigs during the crossing allowed ranging them by the values of indexes. Minimal limits of selecting animals were determined and the selection of parental pairs with estimated productivity was optimized: in case of 20 % selection by multiple pregnancy with at least 11 animals, the area of “loin eye” – 30.5 – 44.5 sq.cm. It would be reasonable to select the animals, the pro- ductivity of progeny of which is above the determined limit, for further breeding from 238.70 to 606.94 points.



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