

EVALUATION OF POTATO VARIETIES AND CLONES OF BREEDING MATERIAL IN THE INTEGRATED MANAGEMENT SYSTEM IN THE NORTH KURZEME REGION OF LATVIA



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Rationale.

In Latvia, the potato market has a very wide range of varieties from abroad, and with aim to introduce and offer created in Latvia potato varieties to farmers, a research trial was set up according project founded by the Latvian Ministry of Agriculture: "Support for the Evaluation of Breeding Material to Implement Integrated and Organic Agriculture Crop management"

Key words: potato variety, tuber yield, yield structure.

Objective. To assess the suitability of potato varieties and clones of breeding material to an integrated farming system.

To achieve the goal, a field trial was set up with 9 potato varieties: Monta, Rigonda, Lenora, Prelma, Brasla, Imanta, Magdalena, Jogla, Gundega and 10 breeding clones: S 07169-35, 2002-3317, 07131 -15, S10063 -178, S 10063 -48, S 09035-22, 19694.5, S 07156-22, 19922.29, 2008 -6.5.



Methods.

The study was carried out over several years (2015-2020). Evaluated traits: potato tuber yield, yield structure, phenological phase, resistance of varieties and clones to diseases during the growing season and post-harvest tuber infection.

Results. The analysis of the data shows that the potato tuber yield, using all agrotechnical measures, achieved very good results in average of three (2018 -2020) years. Yields varied significantly between varieties (Ffact> F crit), but the average yield varied from 42.19 t ha⁻¹ (variety 'Brasla') to 63.89 t ha⁻¹ (variety 'Jogla'). When evaluating the yield level of clones of breeding material, the most highyielding were: S 07131-15 (63.92 t ha⁻¹); S 10063-128 (58.33 t ha⁻¹); 19922.29 (61.93 t ha⁻¹). When evaluating the yield structure, varieties and breeding clones with the highest commercial yield and larger tubers of food fraction (> 50 mm) were noted (S09035 - 22; S07169-35; S07156 -22; 19922.29; 'Jogla', 'Rigonda', 'Monta').

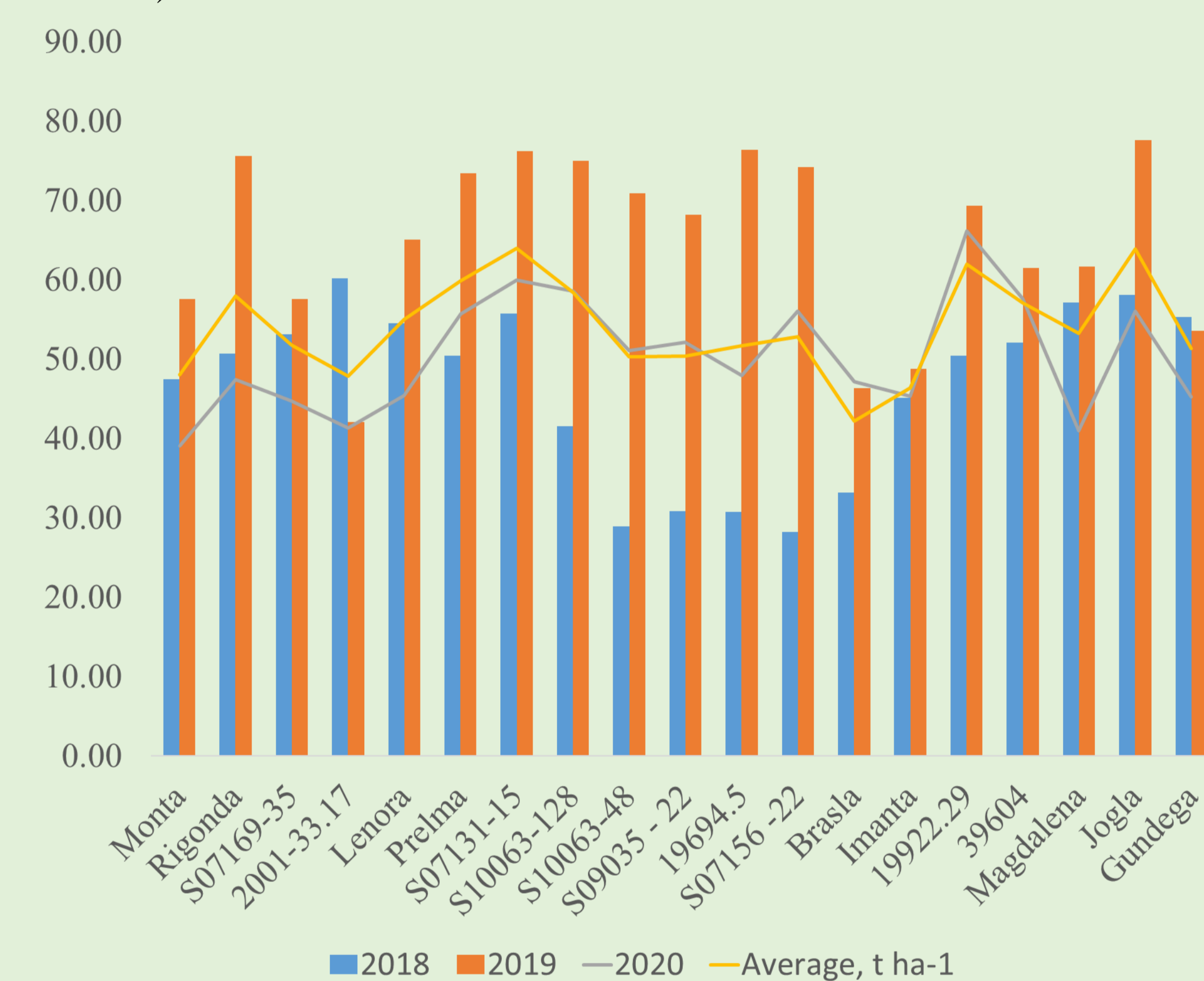


Figure 1. Yield of tuber in integrated growing systems in Stende RC, 2018-2020.

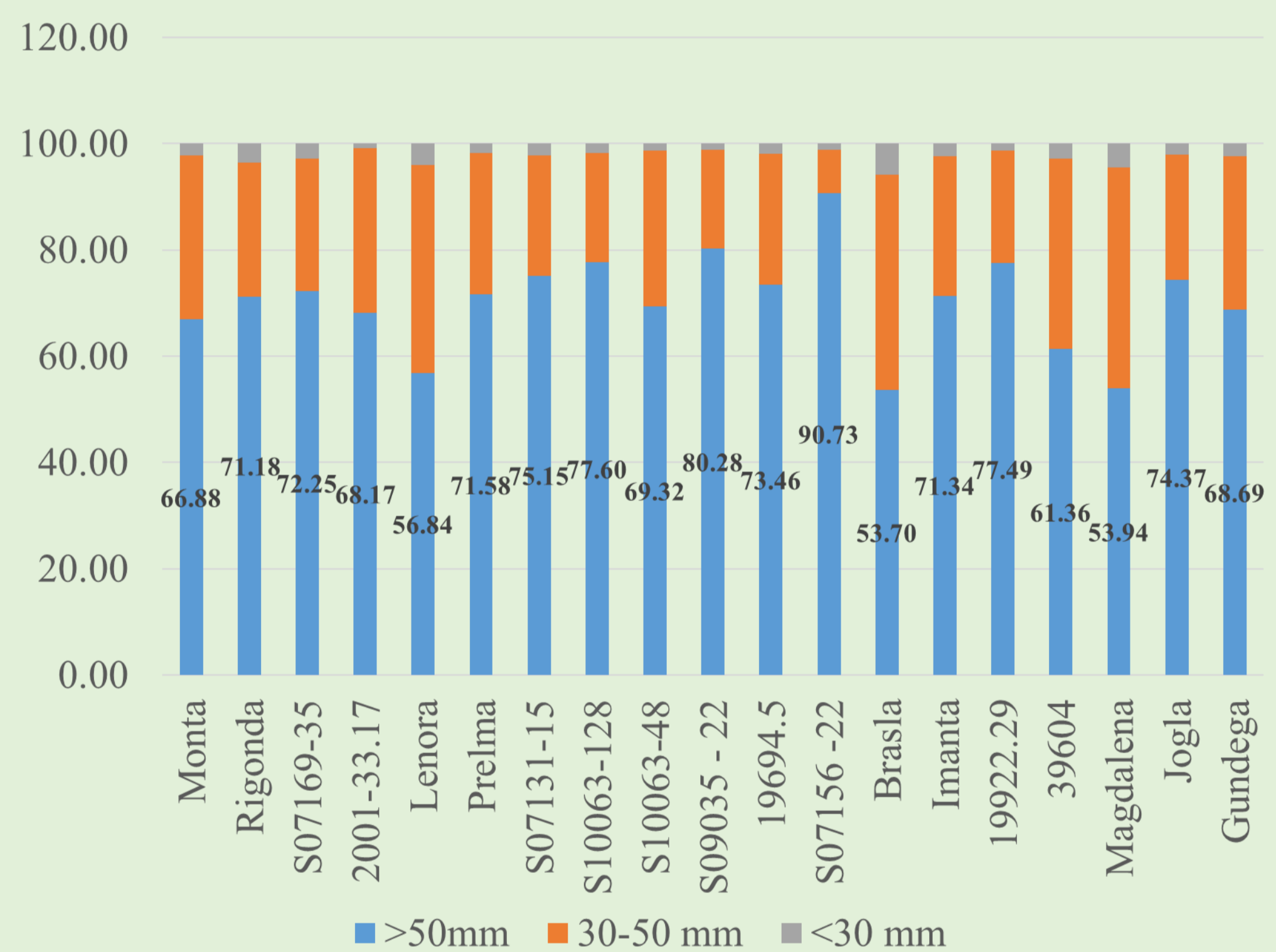


Figure 2. Potato variety and clones yield structure %, on average in 3rds 2018-2020.

Conclusion

Breeding clones and varieties will be selected from the evaluated material, the traits of which are best suited to the integrated management system in Latvia.

