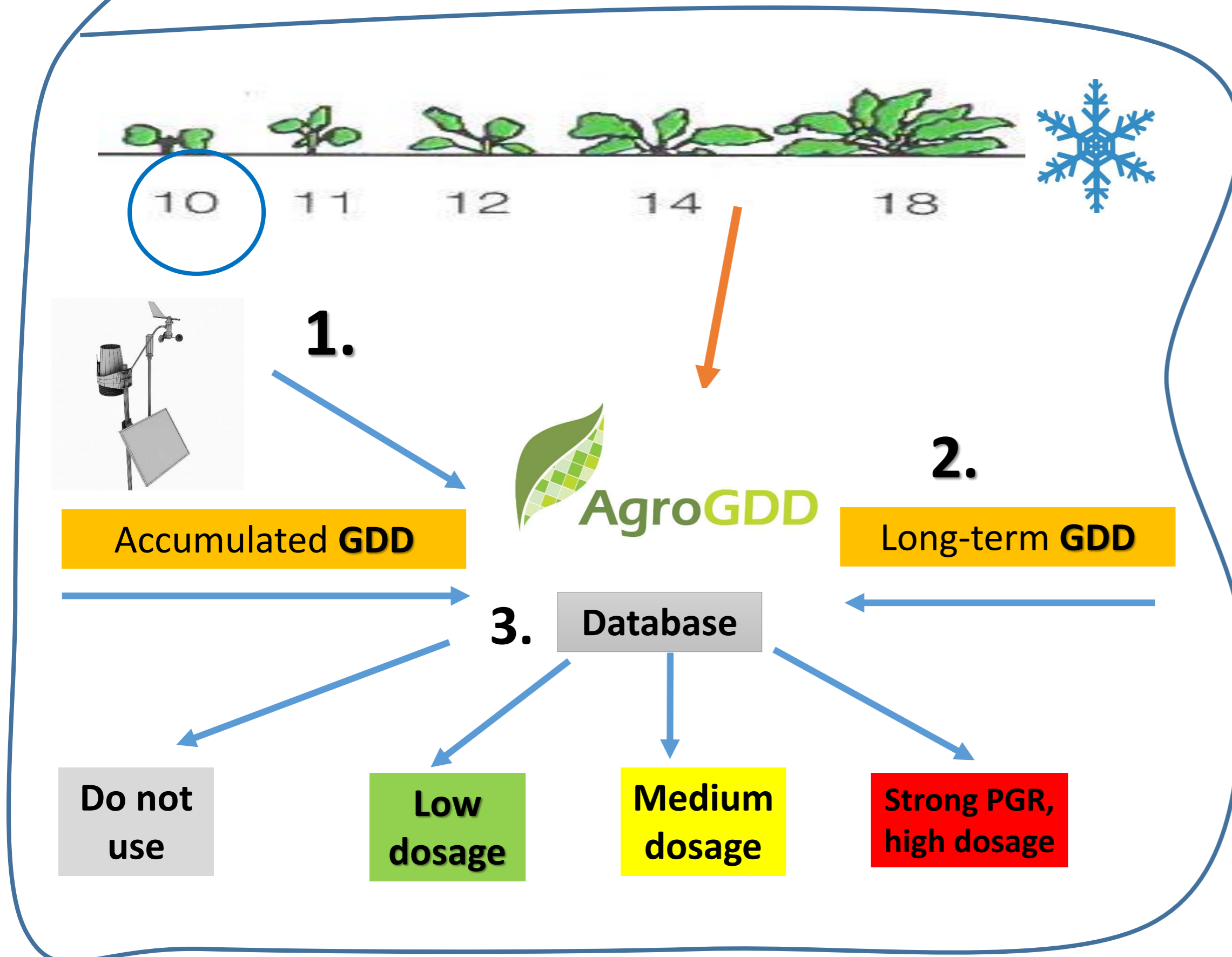


Decision support system for usage of WOSR PGR's in Latvia

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Annual question: When exactly, what product, what dosage of PGR need to use in our fields?

Idea:



Methodology to fulfill our idea

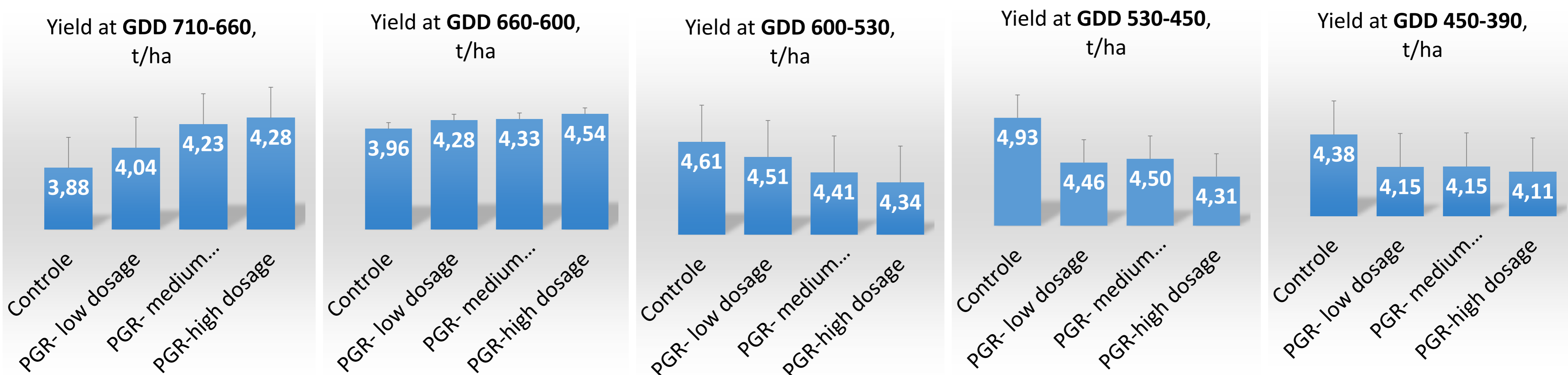
Accumulated GDD are being analysed for one meteorological station located near the farms for at least fifteen years – 2004 to 2018 (from 1st of august up to vegetation ends).

To achieve the goal in year 2017 field trials were established and will be continued up to autumn in year 2020. In our trial variety DK 'Extract' was used.

Data from field trials were used to analyse WOSR biometrical parameters depending on accumulated GDD in six sowing dates with five day intervals and according to PGR application in the same six sowing dates.

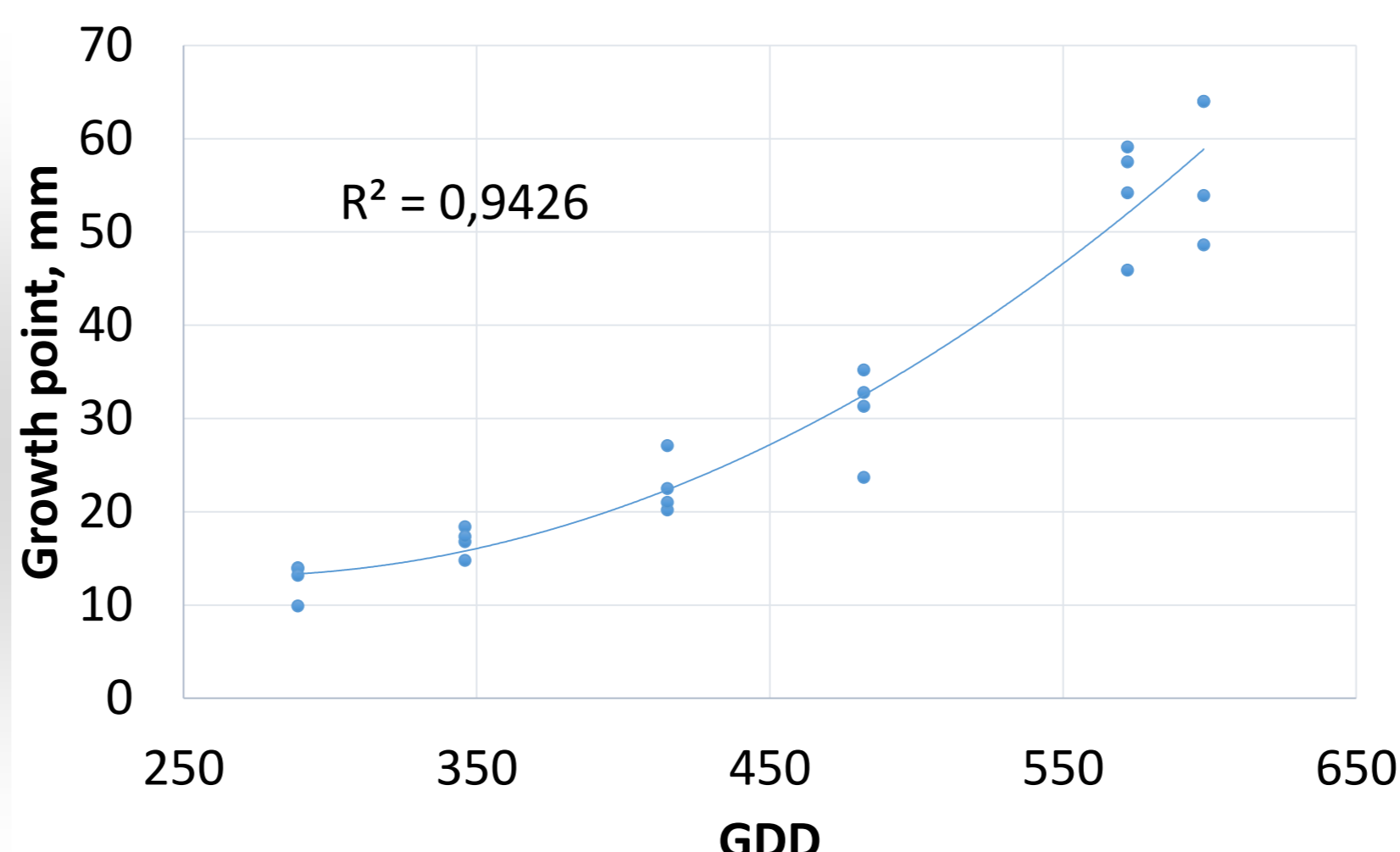
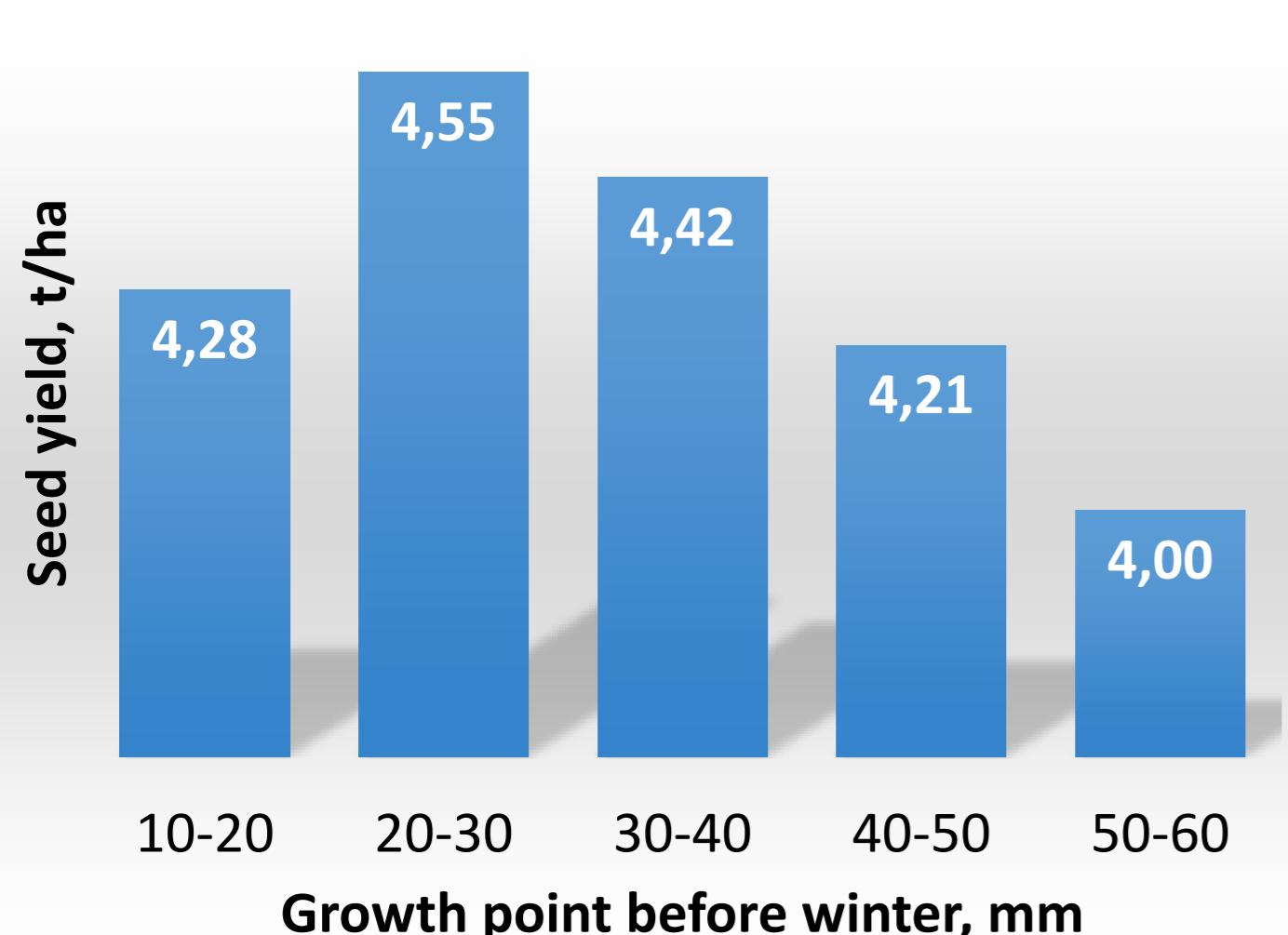
Three dosages of plant growth regulator (PGR) (Caryx – metconazol 30 g L⁻¹, mepiquat-cloride 210 g L⁻¹; dose: 0.5., 0.75., 1.0 L ha⁻¹) were used.

First results (first project year 2017)



Calculations of accumulated GDD in autumn (from 1st of august up to vegetative ends) were very different according to year (in year 2009 GDD 595; in 2017 GDD 713; in 2018 GDD 854), it was obvious as well because WOSR development in those years were significantly diverse.

Trial results showed that WOSR plant biometric parameters (plant mass, number of leaves, root neck diameter, growth point, taproot mass and length) were significantly ($p < 0.05$) affected by accumulated GDD in both trial years. Application of PGR and its different dosages were analysed based on plant biometrical analyses before winter and accumulated GDD. Size of growth point was found as crucial (correlation between growth point and accumulated GDD was $R^2 = 0,946$). Formulas for DSS are being prepared.



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