

Is early sowing still possible?

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Introduction

- ban on neonicotinoid seed treatment of rapeseed in the European Union increases insect pest problems
- the ban lead to stronger infestations with *Delia radicum* and others
- Farmers avoid early sowing more and more because of the stronger infestation compared to later sowing date
- high N-intake of early seeded winter oilseed rape is important for groundwater quality

Material and Methods

Elevation	10 m
Soil type	Sl-sL
Average yearly temperature	9,1 °C
Average yearly precipitation	557 mm

Tab.1 Sites description of trial field in Gülzow (Mecklenburg-Vorpommern)

Sowing date	N-fertilisation	seed rate
Early 01.08.-15.08	1) 100 kg N/ha ASS+100 kg N/ha KAS	1) 55 seeds/m ²
	2) 100 kg N/ha ASS+ biomass-derived	2) 35 seeds/m ²
Normal 16.08.-25.08.	100 kg N/ha ASS+100 kgN/ha KAS	60 seeds/m ²
Late 26.08-15.09	1) 100 kg N/ha ASS+100 kg N/ha KAS	1) 65 seeds/m ²
	2) 100 kg N/ha ASS+ biomass-derived	2) 45 seeds/m ²

Tab. 2 Trial design separated into sowing dates as fully randomised blocks (A/B/C),

Biomass-derived:

N-fertilisation adapted to nitrogen intake in autumn

Subtraction from 100 kg N/ha: N-intake > 50 kg N/ha x 0,7
Addition to 100 kg N/ha: N-intake < 50 kg N/ha x 0,7



Fig.1 Manual measuring of nitrogen intake, biomass in kg/m² x 45 = kg N/ha

Results

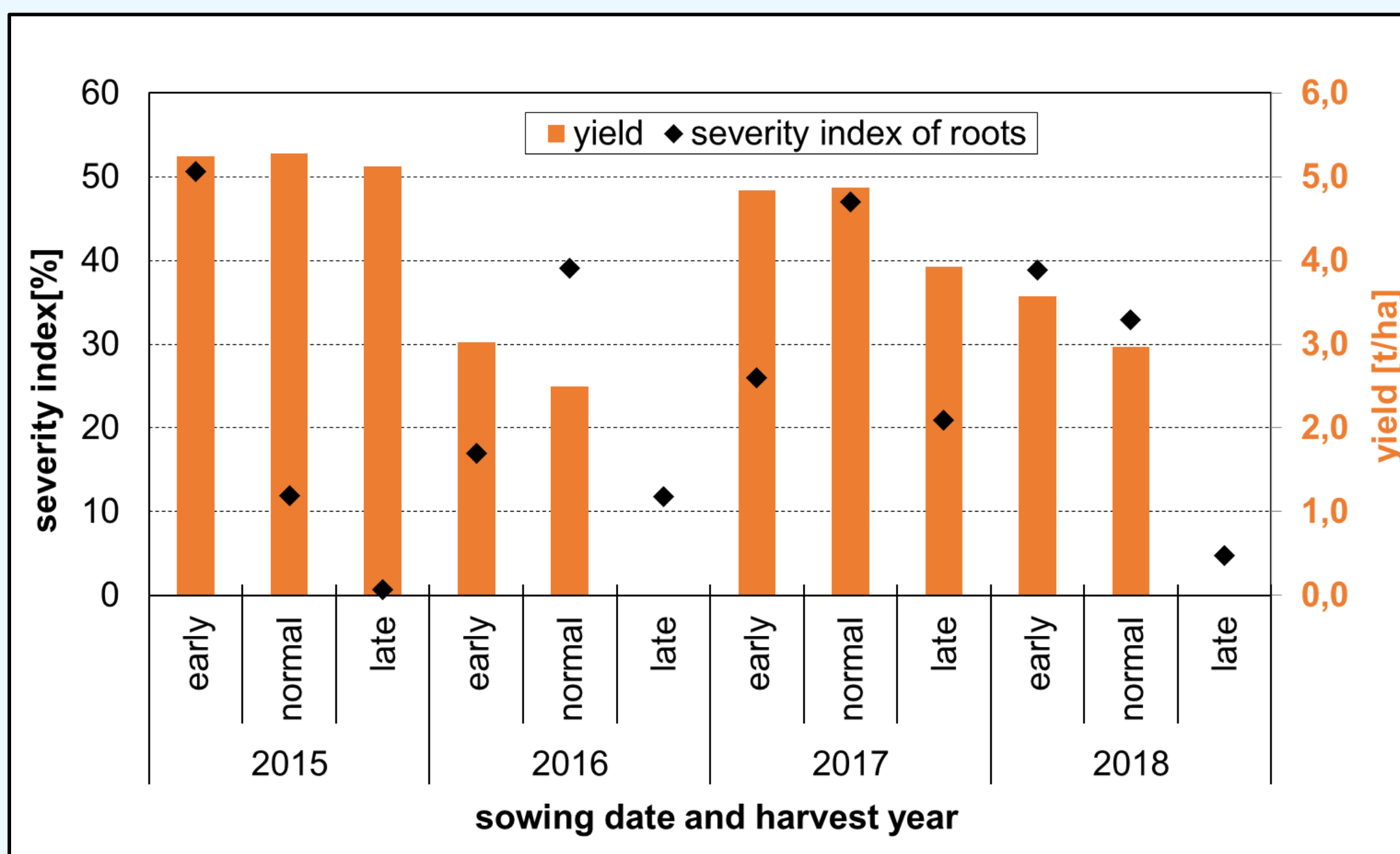


Fig. 2 Root damage of cabbage root fly larvae (severity index) in autumn and rapeseed yield in Gülzow

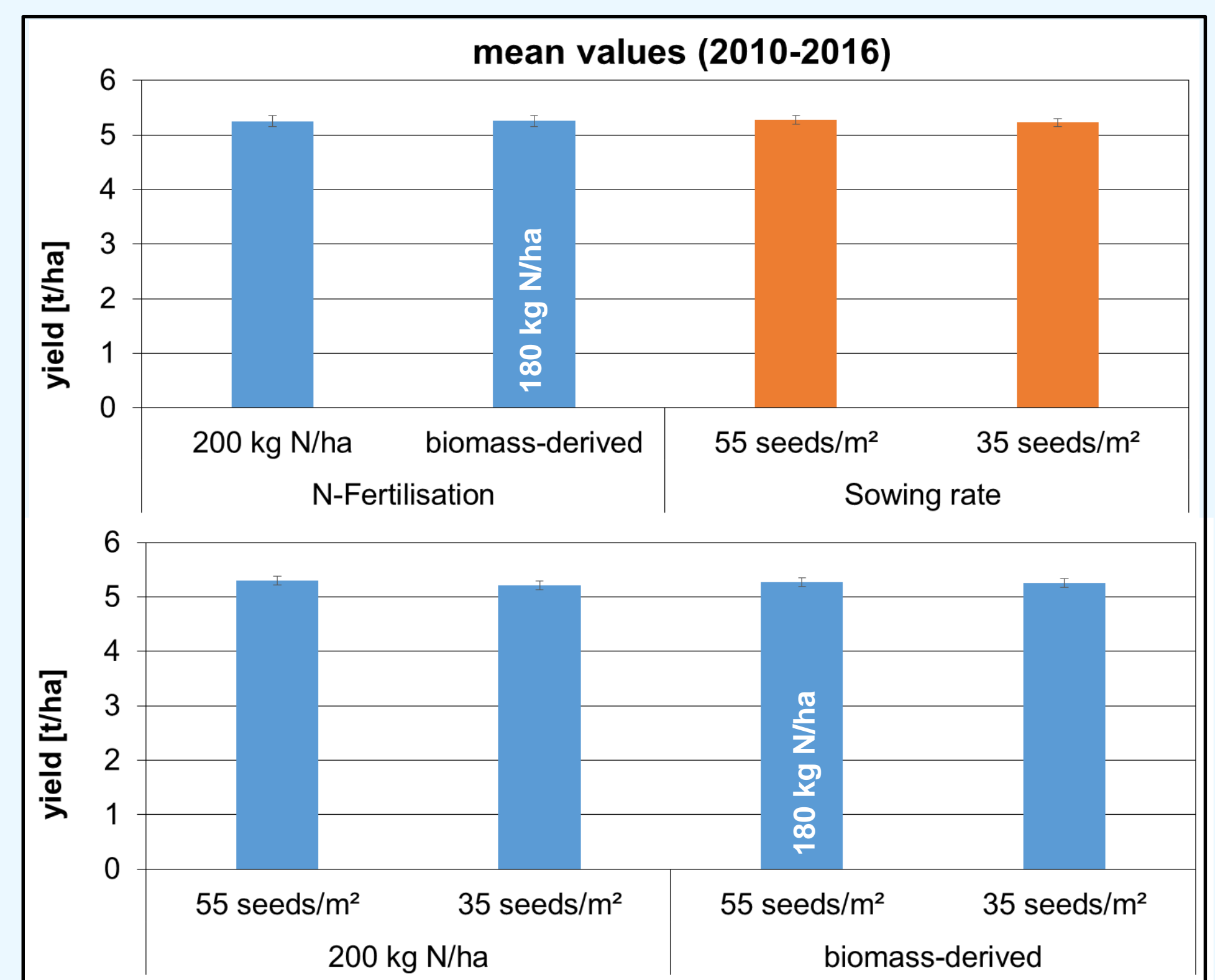


Fig. 3 and Fig. 4 Yield of early seeded winter oilseed rape with several intensity

Conclusions

- early sowing date can still be an option
- lush growth of early seeded winter oilseed rape compensate often the strong infestation and root damage of cabbage root fly larvae
- late seeded winter oilseed rape has higher risks to get damaged by frost because of its delayed development
- our trials with early seeded winter oilseed rape showed:
 - slightly reduced fertilisation had no yield influence
 - reduced sowing rate lead to small negativ yield effects
- Attention of clubroot in early seeded winter oilseed rape !!