



**Estonian  
Crop Research  
Institute**



# **SOYBEAN IN ESTONIA**

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The first trials in 1936-1938 in Tartu University – with 8 variety (yield 1063 – 1510 kg/ha, raw fat content 14.13 – 18.37%, raw protein content 35.40 – 42.37%).

The first trials in Jõgeva – 1937-1941 (varieties, fertilizers, growing systems ...)

1940 and 1941 seeds not matured and work with soybean was finished.



2004 was restart in Jõgeva Plant Breeding Institute with variety 'Saaremaa'.

Start of soybean collection – 6 varieties from VIR



2011 – 2013 project **‘Development of soya cultivation for production of high-quality protein in Estonia’**

2016 – 2018 project **‘Cropping and development of high-protein seed cultivation of soybean varieties suitable for Estonian condition’**

Partners ECRI and Estonian Soybean Union (Eesti Sojaliit)

Biggest result – variety **‘Laulema’**

**! Owner of the variety ‘RIMMEL ARENDUS OÜ’**

Information about ‘Laulema’ seed – [www.eestisoja.ee](http://www.eestisoja.ee)

**2004-2021**

– in soybean collection we have tested 121 varieties

➤ **Earliness**

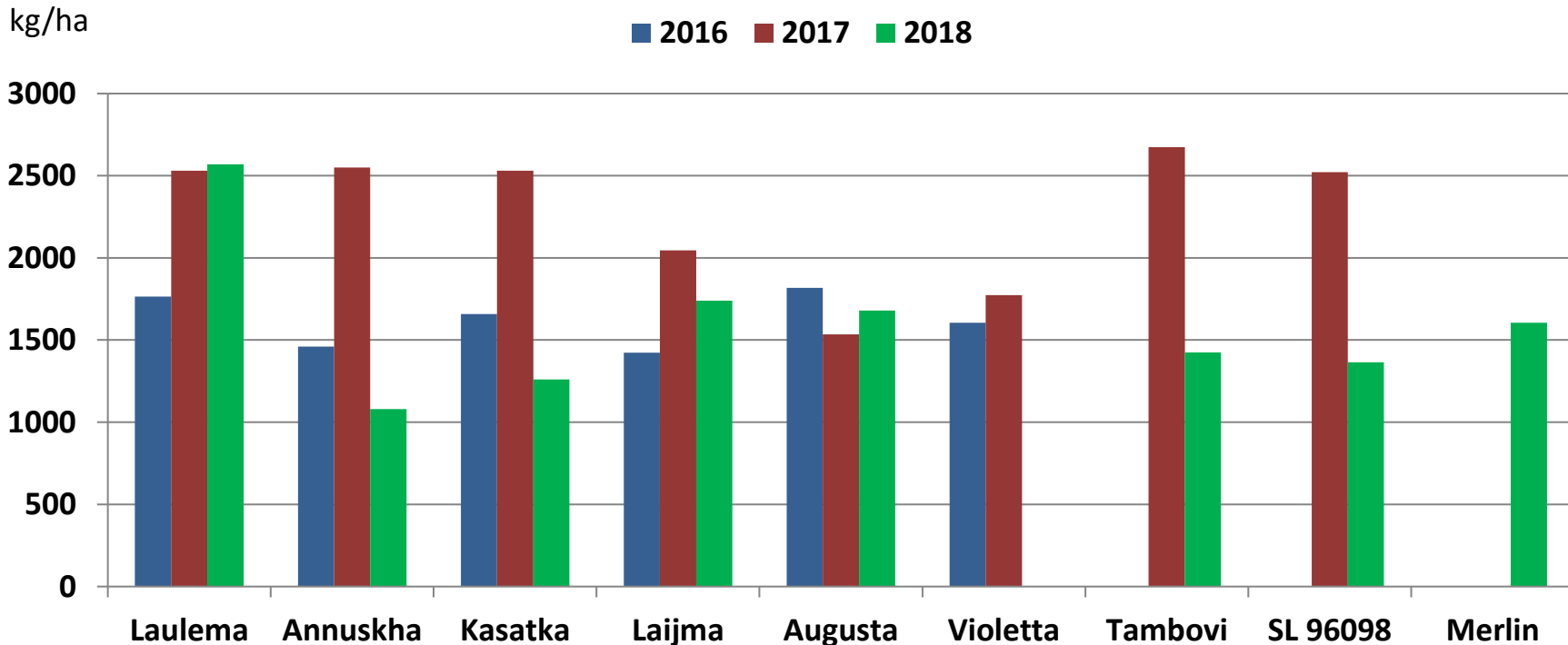
➤ Seed yield

➤ Protein content



**National program “Plant breeding program 2020-2030” includes soybean breeding**

# Seed yield on different soybean varieties

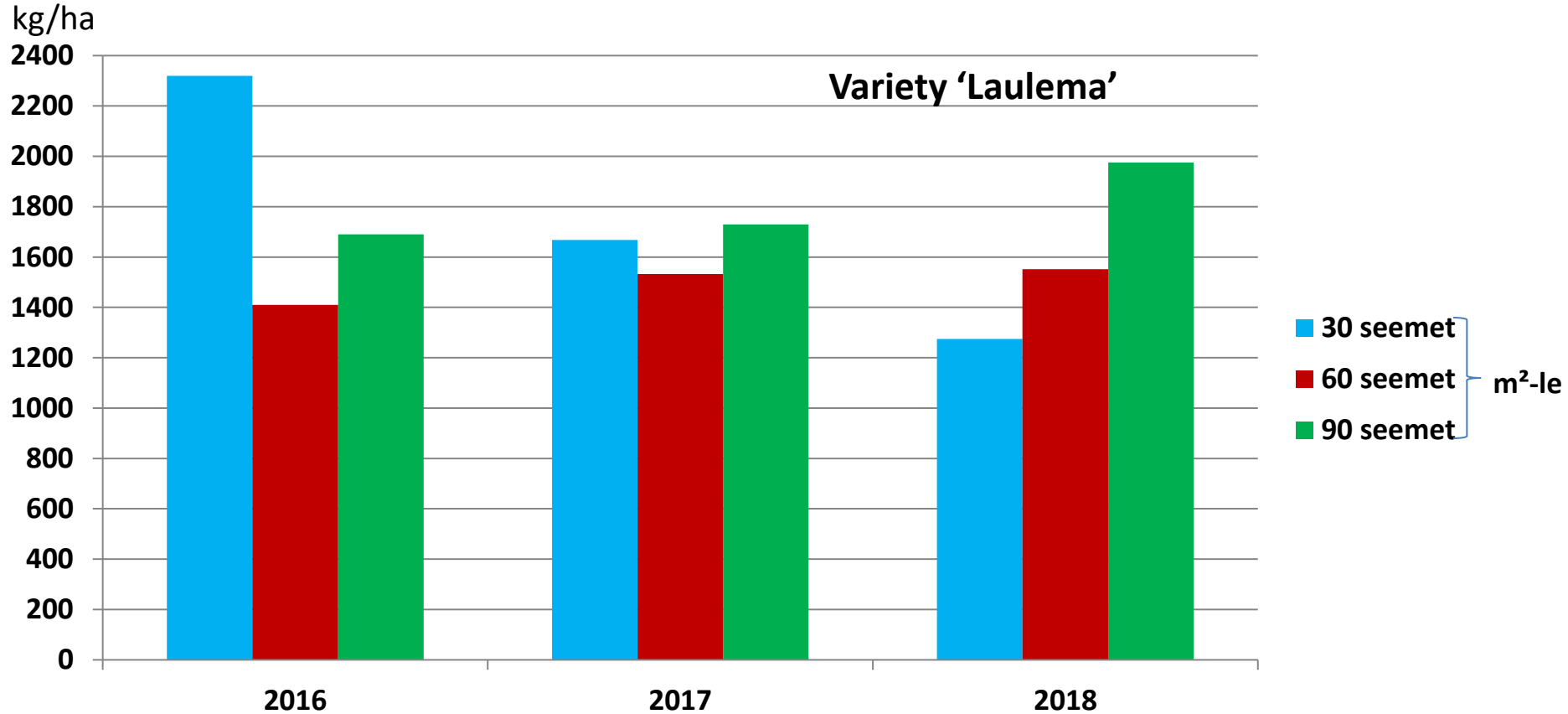


# *Rhizobium japonicum*

Variety 'Laulema'

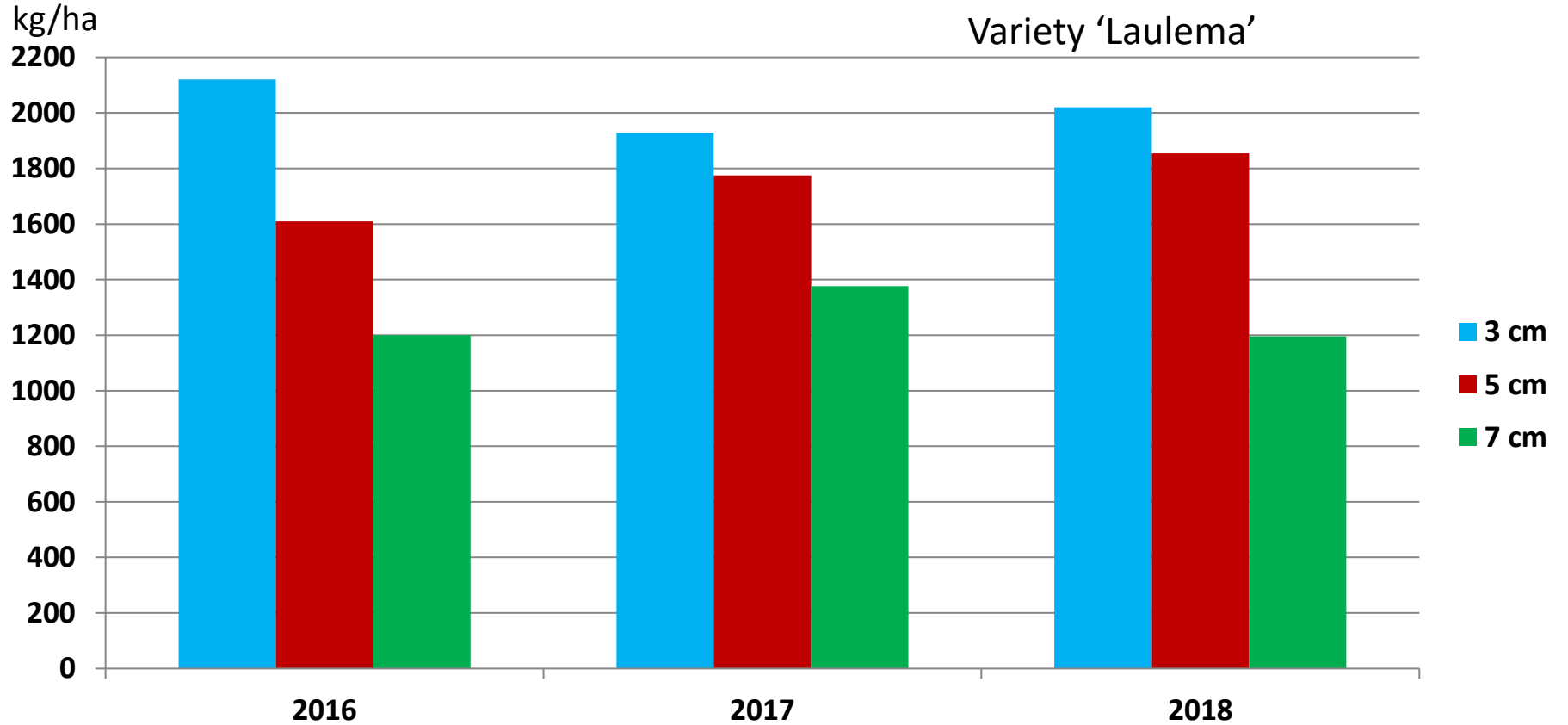
Variant	yield kg/ha	raw protein %	raw fat %
Control	1322	31,29	19,57
Inoculated	1674	31,28	19,88
Bacteria in soil	2240	35,88	18,45

# Sowing density

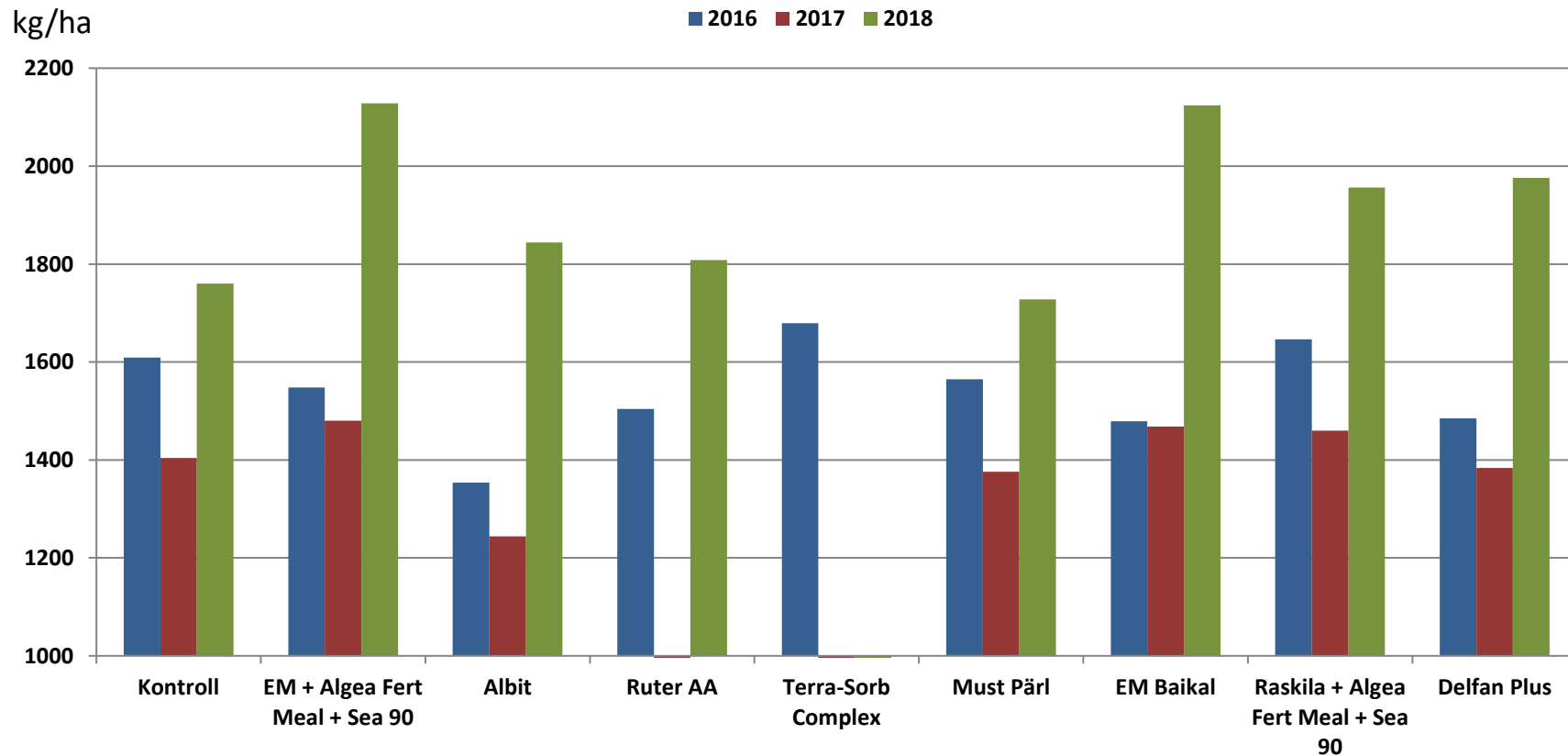




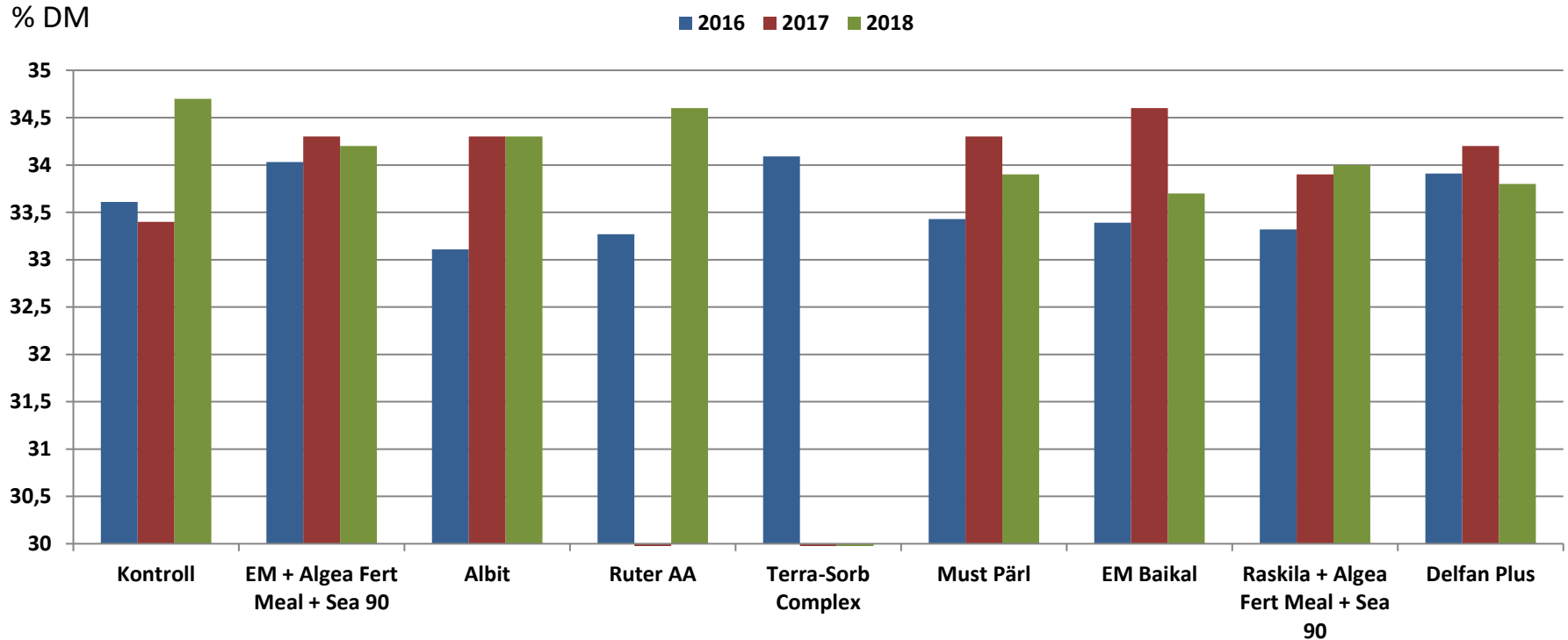
# Sowing depth



# Influence of different fertilizers to seed yield of 'Laulema'



# Influence of different fertilizers to raw protein content of 'Laulema' seeds



## Content of essential amino acids in seeds of 'Laulema' in case of different fertilizers (average of 2017-2018)

	Control	EM+ Algea+ Sea90	Albit	Ruter	Black pearl	EM Baikal	Raskila	Delfan plus
<b>His</b>	8,46	8,08	7,8	8,44	8,41	8,92	8,83	7,76
<b>Thr</b>	13,91	13,06	12,91	12,39	12,39	13	12,54	13,15
<b>Lys</b>	22,77	21,14	21,07	19,84	20,55	21,57	20,68	21,49
<b>Met</b>	4,52	4,32	4,79	4,14	4,32	4,77	4,46	4,29
<b>Val</b>	16,41	15,57	15,43	14,52	14,74	15,56	14,73	15,38
<b>Ile</b>	15,29	14,57	14,44	13,7	13,82	14,58	13,8	14,34
<b>Leu</b>	25,53	24,08	24,76	22,5	24,16	25,25	23,79	23,92
<b>Phe</b>	16,05	14,6	15,27	13,9	14,41	15,08	14,65	15,43
<b>Trp</b>	4,05	4,05	3,87	3,81	3,88	4,12	3,75	3,75



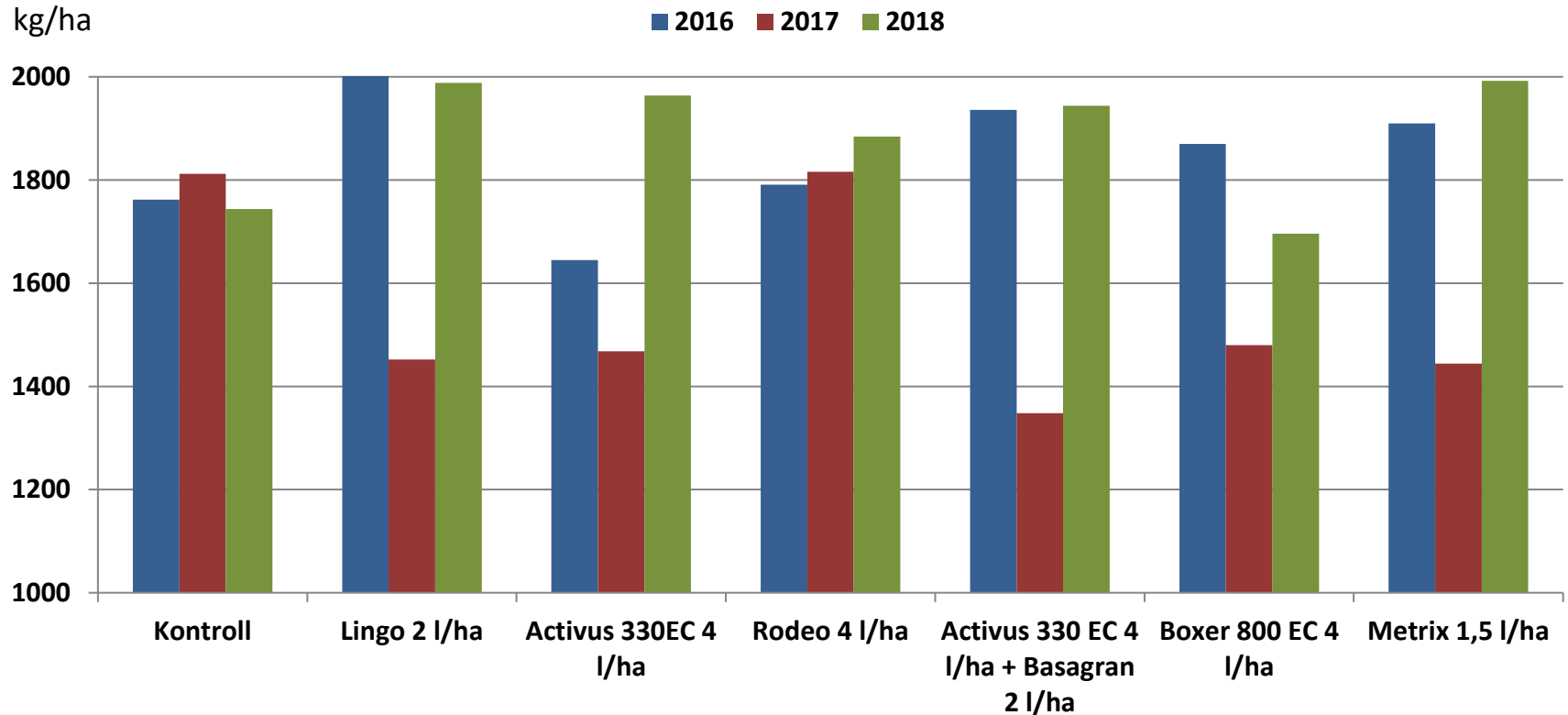
**Fenix 1,5 l/ha (aklonifen)**



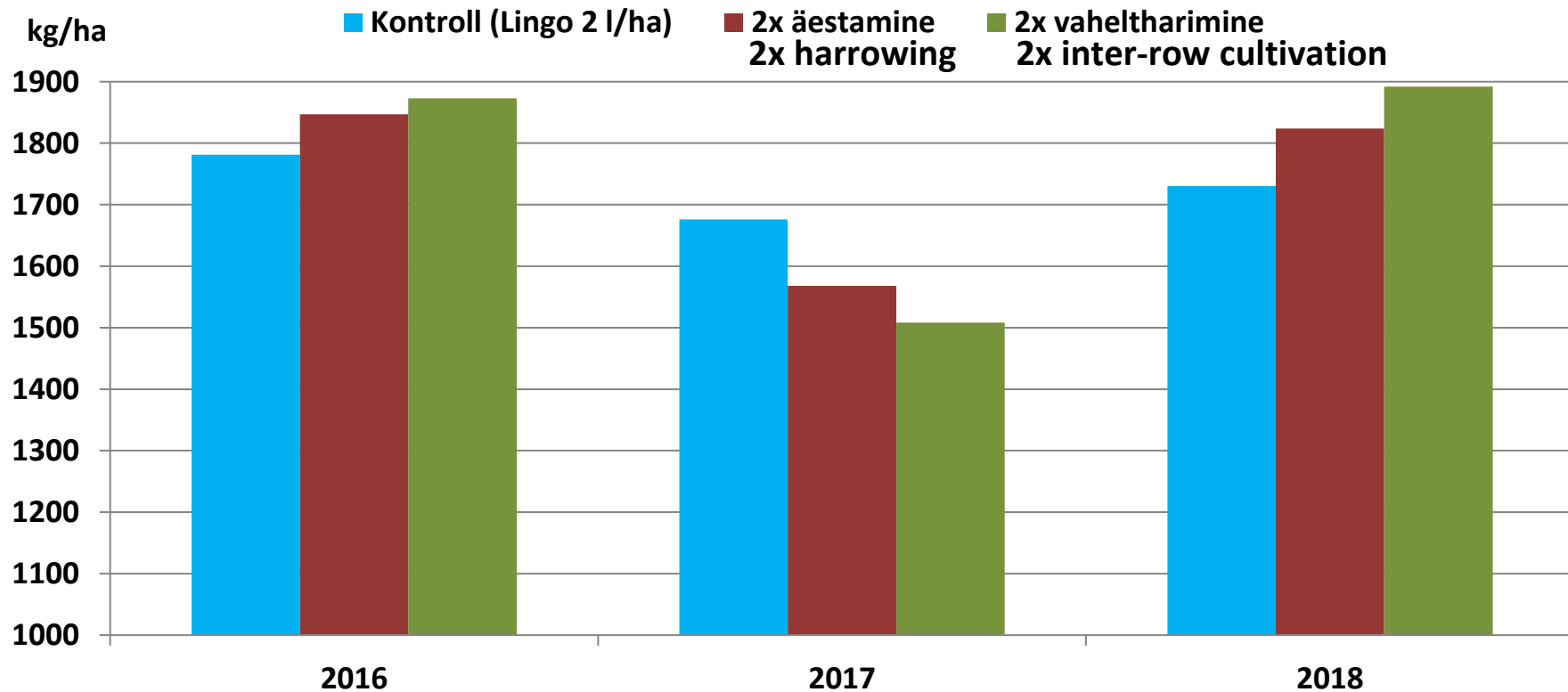


**Basagran 1,5 l/ha (bentason)**

# Influence of different herbicides to seed yield of 'Laulema'



# Influence of different mechanical weed controls to seed yield of 'Laulema'







***Ceramica pisi***



# Future?

## 1-Dairy cattle feed





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**THANK YOU!**

