

CHARACTERIZATION OF ESTONIAN FIELD PEA GENETIC RESOURCES

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Field pea breeding has been conducted in Estonia for more than 90 years. During this period 12 varieties have been released at Jõgeva Plant Breeding Institute (PBI). Besides these varieties, four landraces and 105 breeding lines of Estonian origin and 73 foreign accessions of field pea are maintained at the Genebank of Jõgeva PBI.

During the years 2010–2012, field trials were carried out at Jõgeva PBI on characterization and evaluation of 14 field pea varieties and landraces.

Morphology of foliage and inflorescences were characterized and disease (*Ascochyta pisi*, *Erysiphe pisi*, *Peronospora pisi*, *Uromyces ssp.*) resistance was estimated during the growing period; characteristics of pods and seeds were determined at full ripening stage.

According to the results, disease resistant landraces with high nutritional value are suitable for further breeding for fresh forage.

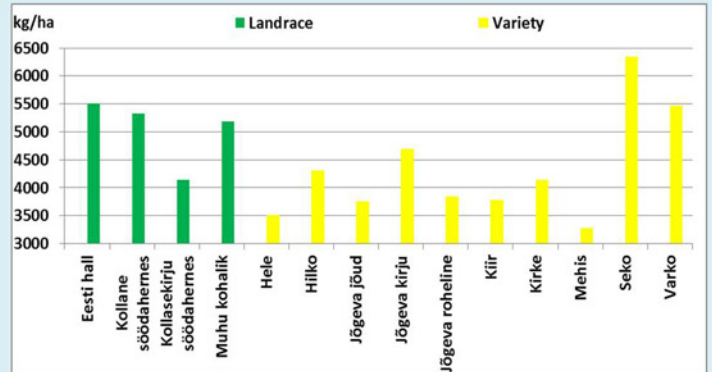
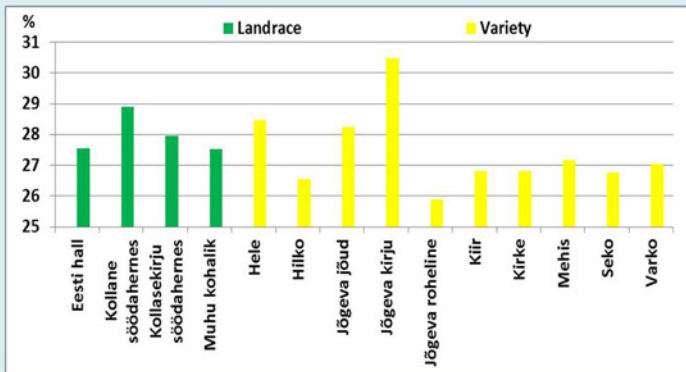


Figure 1. Protein content of different Estonians field pea landraces and varieties

Figure 2. Seed yield of different Estonians field pea landraces and varieties

Table 1. Susceptibility to various plant diseases of Estonian field pea landraces and varieties

Disease	Eesti hall	Kollane söödahernes	Kollasekirju söödahernes	Muhu kohalik	Hele	Hilko	Jõgeva jõud	Jõgeva kirju	Jõgeva roheline	Kiir	Kirke	Mehis	Seko	Varko
<i>Ascochyta pisi</i>	3	3	3	3	4	4	3	3	4	3	3	4	5	4
<i>Erysiphe pisi</i>	1	1	1	1	1	1	1	1	1	1	1	1	1	1
<i>Peronospora pisi</i>	1	1	1	1	1	1	1	1	1	1	3	1	1	1
<i>Uromyces ssp.</i>	1	1	1	1	1	1	1	1	1	1	1	1	3	1

(9–1 points; 9–maximum damage, 1–no damage)



Kiir



Jõgeva kirju



Hilko



Hele



Jõgeva roheline



Muhu kohalik



Varko



Kirke



Kollasekirju söödahernes



Jõgeva kirju

