

# EVALUATION OF FIFTH FUNCTIONAL TRAITS OF NEW DUAL PURPOSE FLAX GENOTYPES IN COMPARISON TO STANDARD VARIETIES

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**A** comparative experiment of two dual purpose flax breeding lines with selected standard varieties were conducted. The aim of the study was to assess the economic value of genotypes obtained as a result of breeding conducted at the Institute of Natural Fibres and Medicinal Plants in Poznań, Poland.

Dual purpose varieties, which combine the traits of fiber flax and linseed in a single genotype, make it possible to increase the economic viability of flax cultivation. The initial variety in these cultivars, depending on the main purpose, may be either oily forms in which the straw and fiber yield is increased, or fibrous forms in which the seed yields are to be significantly increased.

In the presented experiment, two breeding lines of dual purpose flax (R-3/59/10 and R-26/62/10), as well as linseed varieties: Bukoz, Szafir, Jantarol and Amon were evaluated in terms of plant height, total yield, straw yield, seed yield, thousand seeds weight and *fusarium* resistance. The assessment of resistance was carried out in a field where 5 species of fungi of the genus *fusarium* were introduced to the ground before sowing. These were the most common species causing plant infestation (*fusarium* wilt).

The obtained results showed a high value of the R-3/59/10 line in terms of all tested functional traits, in the context of its use as a dual purpose form. Further breeding work will therefore refer to the registration of line R-3/59/10 as a new variety of cultivated flax.

## Biography

Dr Katarzyna Wielgusz. Master of Biological Sciences, doctor of agricultural sciences, field: gardening, specialty: phytopathology. The PhD thesis on: Effect of Biopreparations and Substances on Decrease in Occurrence of Flax Fusarium wilt (*Fusarium oxysporum* Schlecht.f. sp. lini Bolley). Deputy head at the Department of Breeding and Agriculture Technology for Fibrous and Energy Plants. She leads the work on non-chemical methods of plant protection. Among others she has been involved in several projects on organic crop growing, technologies of non-food crops growing and processing for sustainable development. She has been working on EU Framework Projects: COST Action 628, 4FCrops, Crops2Industry, FIBR, Norwegian Grant SiliSol and several national projects. Author and co-author of 40 publications, 1 patent.

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