Agronomic characteristics of winter oil rape hybrids depending of nitrogen top dressing

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Abstract

Oilseed rape is one of the most important sources of vegetable oil in the world. The nutrient demand of oilseed rape is considerably higher than that of cereals. Compare to cereals, winter oilseed rape requires more available nitrogen and this element is an important component with strong effect on seed yield and quality, but from other side has affects on the reduction of oil content. Winter oilseed rape hybrids with high yield potential might have high nitrogen requirements. On the other hand the vigor of those plants might also be expressed as improved nitrogen uptake by a vigorous rooting system. In many cases N fertilization requirement do not take into account varietal types for B. napus and it’s based on fertilizer norm, with corrections according to environmental conditions. The objective of this study is to evaluate preliminary results of the influence of nitrogen top dressing to the yield and yield components of 8 winter oil rape hybrids and 2 winter oil rape cultivars. Field trial was carried out in village Gluvo (near Skopje), in 2010/2011. Experimental design was a split-plot with 3 replications and 3 nitrogen regimes as main factor. Fertilizer treatments were: N, N+120 kg N/ha, N + 120 + 70 kg N/ha. Treatment N as a base fertilizer corresponded to 70 kg N/ha. Two ammonium nitrate dressing were broadcast, first on 25 of February and second on 15 of March. From the results which we obtain it can be concluded that two times top dressing have statistical significant differences (P=0.05) on the yield of the hybrids/varieties and number of seed/pod (compared with one times and witout top dressing), but did not express any significants on the length of the pod, height of the plant and number of primary branches/plant. On a hybrids/variety level, Hybrirock (KWS), Artoga (Limagrin) and Rohan (NPZ-Lembke) may be considered as most promissing for the skopje region.

Key words: winter oilseed rape, nitrogen, top dressing, yield, yield components

sa2012_a0516