Fertilizarea suplimentară cu azot şi sulf a plantelor de rapiţă

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Many Romanian farmers share the wrong opinion that in oilseed rape crops it is possible to obtain high yields even when small amount of fertilizers are used. This opinion is based on their experience from the last few years, when satisfactory yields were obtained using only small doses of fertilizers [2]. The aim of this experiment was to study the influence of added nitrogen and sulphur over a dose of 125 kg N/ha on plants unaffected by the frost. The experiment was conducted under field conditions in Baneasa, Giurgiu County. 200 kg/ha complex fertilizers 28:28:0 and 200 kg/ha ammonium nitrate were applied during the winter season. Spring treatment in March included foliar sprays Top Crop 0.5 l/ha + Nutrilieaf 3 kg/ha, the herbicides Galant 0.8 l/ha + Galera 0.3 l/ha, the fungicide Folicur – 1 l/ha and the insecticide Vantex 0.1 l/ha. Plant density in late autumn was 110 plants/ m2 and has diminished to 56 plants/ m2 on 29th April when supplementary fertilizer was applied. We used 3 replications for each treatment which were set up in 3 randomised blocks. We used the following treatments: V1, control (126 N kg N/ha and 56 kg/ha P 2O5), V2 – supplementary fertilisation with 30 kg N/ha as ammonium nitrate and V3 – supplementary fertilisation with 30 kg N/ha and 34 kg S/ha as ammonium sulphate. On 29th April when the treatments were applied, the plant biomass was 1706 g/ m2. Until on 30th June plant biomass increased with 668 g/ m2 (39% increase) in control, with 376 g/m2 (22% increase) in ammonium nitrate fertilisation and with 1138 g/ m2 (67% increase) in ammonium sulphate application. We have noticed that plant biomass was smaller in ammonium nitrate treatment comparing to control, but the results are not statistical significant. Pod number/ m2 increased by 45%, up to 5004 in ammonium sulphate treatment comparing to control (3440). In ammonium nitrate fertilisation, pod number/m2 was only 3422. The seed yield in control was 2331 kg/ha. Supplementary fertilization using only 30 kg N/ha as ammonium nitrate did not increase seed yield, but 30 kg N/ha together with 34 kg S/ha as ammonium sulphate did up to 2756 kg/ha. Due to the climatic conditions, supplementary fertilization above 125 kg N/ha increased yield only when sulphur was also applied.