

Zh.A. Moldovan

The formation of the productivity of forage crops of late-terms sowing and their compatible sowings with soya depending on the ways of the basic cultivation of soil and fertilization

It is obviously that the recommendations, worked out once for this or that crop, must be corrected from time to time. In particular, the actual problem in the region is the magnification of the production of full crops through the introduction of plants which are valuable for the certain conditions of growing. For Podillya such crops are Sudan grass, sorghum for the silage and others which exceed traditional crops in drought resistance, sugar content, promiscuity to soil fertility. Long-term studies proved that the quality of green and juicy crops is significantly improved due to wider using of soya.

That is why the purpose of our researches was studing the productivity of one-year forage crops of single-crop sowing and compatible sowing with soya depending on the ways of the basis cultivation of soil and fertilization in the conditions of sufficient moisture of Right-Bank Forest-Steppe.

Counts, observation and tests were conducted by generally accepted methods from scientific researches in fodder.

Summing up the research results it was established that among studied forage crops in single-crop sowing and compatible sowing with soya the highest crop capacity of green weight (33,4 – 83,4 t/ha) and the output of nutrients: 11,02 – 26,52 t/ha of dry substance, 8,35 – 20,39 t/ha of crop units, 0,53 – 1,35 t/ha of digestible protein, 9,54 – 23,21GJ/ha of exchange energy depending on the way of the basic cultivation and fertilization provided the sowing of sugar sorghum. The least productive were single-crop sowing of Sudan grass and its compatible sowing with soya which provided from the: 26,6 – 56,2 t of green weight, 8,06 – 16,10 t of dry substance, 5,91 – 12,16 t of crop units, 0,53 – 1,11t of digestible protein and 6,82 – 14,05 GJ of exchange energy. Naturally, the highest productivity of crops among studied variants of fertilization was received for making $N_{60}P_{60}K_{60}$: green weight – 39,0 – 83,8 t/ha, dry substance – 11,82 – 26,52 t/ha, crop units -8,67 – 20,39 t/ha, digestible protein -0,77 – 1,35 t/ha, exchange energy – 10,00 – 23,21GJ/ha. The compatible sowing of crops with soya provided the growth of green weight yield on 5,1 – 13,7 t/ha, the output of dry substance – on 1,08 – 2,89 t/ha, crop units – on 1,02 – 2,68 t/ha, digestible protein – on 0,09 – 0,25 t/ha, exchange energy – of 1,12 – 2,75 GJ/ha comparatively with single-crop sowings.

Keywords: *corn, Sudan grass, sugar sorghum, soya, fertilization, soil cultivation, productivity.*