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CORRELATIVE DEPENDENCES BETWEEN FORAGE CHEMICAL COMPOSITION AND CRUDE PROTEIN PRODUCTIVITY OF GRASS–LEGUME MIXTURE UNDER VARIABLE MINERAL FERTILIZING

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Abstract. During the 2001–2003 period in RIMSA, Troyan the correlative relationships between forage chemical composition and crude protein productivity of grass mixture containing perennial ryegrass and birdsfoot trefoil under variable mineral fertilizing was investigated. The following variants in the experiment were included:

1. Unfertilized variant (standard);
2. Annual soil mineral fertilizing with $P_{80}K_{80}$;
3. Annual soil fertilizing with $N_{80}P_{80}K_{80}$;
4. 1st year–fertilizing with $P_{80}K_{80}$, 2nd year–fertilizing with $N_{80}P_{80}K_{80}$, 3rd year–fertilizing with $P_{80}K_{80}$;
5. 1st year and 2nd year–fertilizing with $P_{80}K_{80}$, 3rd year–fertilizing with $N_{80}P_{80}K_{80}$.

There were positive correlations during annual mineral fertilizing (var. 2 and var. 3) with crude protein productivity for only two of the chemical composition components–for var. 2 with regard to crude ash content (r=0.7695–strong) and calcium (0.8974–very strong), and for var. 3–weak correlation between crude ash (r=0.4179) and crude fibre (r=0.4731). There were positive correlations for var. 4 of variable mineral fertilizing regarding to crude ash content (r=0.2506–weak) and crude fibre (r=0.7178–middle). There were positive correlations for var. 5 with four of the indicators–calcium (r=0.4184–weak), crude ash (r=0.5319–middle), crude protein (r=0.2340–weak) and crude fat (r=0.0992–very weak correlation).

Key words*:* grass–legume mixture, variable mineral fertilizing, forage chemical composition, crude protein yields, correlative dependences.

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