Abstract

This study was conducted in North East part of Romania at Vegetable Research and Development Station Bacau. The aim of research was to establish the proper technology and the most suitable genopypes of mung bean for cultivation in agro climatic condition of Moldova region.The biological material was represented by a small collection of five genotypes of *Phaseolus aureus* (PA1, PA2, PA3, PA4 and PA5). The weight of 1000 seeds varied from 23.80 g to 55.5 g. Also the color, shape and aspects of seeds ranged from dark green, green, yellow – green, to mustard yellow; round to oval, dull to shiny. We organized our experimental field using three different densities and three different periods for sowing the seeds. We registered differences like number of pods per plant, number of seeds in pods and MMB. Density influenced: plant heights, number of branches of plant, port plant, the percentage of binding mode and productivity. Age influenced the duration to plant emergence, plant heights, number of branches to plant, port plant, precocity and productivity. Genotype influenced springing duration, plant heights, number of branches to plant, port plant, precocity and productivity. The average pod yield per hectare was 5.78 tons and the average seed yield per hectare was 1.62 tons. The results of our experiments allowed us to make recommendations regarding the best technology for cultivation in order to obtain the proper yield and high level of seeds quality. The paper presents also aspects regarding the protein, fats, water content of mungo seeds. Protein intake of *Phaseolus aureus* species is supported by higher protein content, 27.5% versus 21.3% for *Phaseolus vulgaris* (used as control variant). Lipids were present in rate of 1.3% - 1.6% in *Phaseolus aureus*. Starch content which ranged from 54.35% to 55.85% in mungbean seeds depending on cultivar. Water content varied inversely with total dry matter and minerals content of seeds. The recorded values of water content of mungbean seeds varied from 8.24% to 9.75%. *Phaseolus aureus* culture can play an important role in crop rotation, having a key role in organic farming system.

Key words: suitability, mungbean, seeds