ABSTRACT
The researches on the subject of this paper were conducted in Jora de Mijloc, Republic of Moldova, where 7 apple genotypes were studied, namely: Idared, Golden Delicious, Golden Rezistent, Jonica, Florina, Renet Simirenc and Champion. Observations, measurements and determinations regarding growth vigour of the trees, productivity and quality of the fruits were investigated. Productivity analysis through the tree fruit production, number of fruits, fruit diameter and fruit volume revealed that the most favourable apple varieties are: Idared, Champion, Golden Delicious, Renet Simirenc and Jonica, being highly productive, the reason why these varieties may be proposed to be used in high density plantations. Taking into consideration the quality of fruits remarkable is Idared, which is very valuable in terms of quality, obtaining the highest average values at structuro-textural firmness measurement (43 kgf/cm²), and the sugar content (16,75 °Brix), followed by Golden Delicious with a structuro-textural firmness of (39,7 kgf/cm²), and the sugar content (15,7 °Brix), these can be recommended for further breeding programs.

KEY WORDS
Apple, vigour, productivity, quality, production

BIBLIOGRAPHY