Effect of Plant Growth Promoting Rhizobacteria (PGPR) Applications on Branching and Growing of Some Apple Cultivars Grafted on M9 Rootstock

Nazmi COŞKUN1), Lütfi PIRLAK2)

1) Provincial Directorate of Food, Agriculture and Animal, Karaman, Turkey; nazmicoskun@gmail.com
2) Selçuk University, Faculty of Agriculture, Department of Horticulture, 42079 Selçuklu, Konya, Turkey; pirlak@selcuk.edu.tr

SUMMARY

There are great interests about establishing new fruit orchards in Turkey so requirements of qualified fruit plants have increased in recent years (Gençtan et al., 2005). Producers in general have preferred dwarf and semi-dwarf trees to get apple fruits in short term as well as obtaining rapid income so that such trees are more required. In world as well as in Turkey, apple trees are the most important fruit specie due to the having very strong clonal rootstocks. Nowadays, most apple producers are used dwarf and semi-dwarf plant materials. In general, plants are one year old without branches and after planting those plants, branch formation and giving apple fruits take few years. On the other hand, use of plant materials with branches may result fruit yields the year after planting. The companies produced plant materials with limited branches have the possibilities of selling them with higher prices comparison to without branches plants. Production of plant materials with brunches is difficult due to the apical dormancy in most apple cultivars. Thus, mechanical and chemical methods are used. Mechanical method is both time consuming and expensive. Chemical technique also has not resulted well success for all cultivars with harmful effects on environment. Those materials are not allowed in organic plant material production. In stead of these, finding alternative materials containing organic sources are very important. This study, therefore, aimed to investigate effects of bacteria as growth contributors on branch formation and plant material characteristic in apple cultivars. To obtain clear effects, it will be more beneficial to research bacteria applications in different cultivars, different bacteria use, application type and frequency.

Keywords: apple sapling, rhizobacteria, perlan, branching

Acknowledgments. This work was supported by Center of Scientific Research Project of Selcuk University.

REFERENCES