

Polischuk V.V., Polischuk O.V., Karpuk L.M.

SELECTION OF NUTRIENT MEDIUM FOR SUGAR BEET CMS COMPONENT INTRODUCTION AND PROLIFERATION

In most published material concerning the sugar beet microclonal breeding were described the experiments with the use of Murasihe and Skoog medium, much less publications concerning on sugar beet micropropagation and environment Hamborha Eveleha using, and various basic environments in successive stages of microclonal reproduction, including Murasihe and Skoog (at entry), and Hamborha Eveleha and others. There are reports of successful regeneration of sugar beet in vitro after cultivation in a medium containing CMS, inorganic salts, vitamins supplemented by prescription of Hamborha and Eveleha. The medium was named by the MSB authors. Looks like environment in which macro- and microelements CMS medium were supplemented by vitamins and prescription of Hamborha Eveleha, used to enter the seedlings from seed of sugar beet several varieties and hybrids components of Y. Myshutkyna with colleagues from Moscow Centre "Bioengineering" RAS.

Careful selection of the relative concentration of auxin and cytokinin in our experiments, it was found the opportunities to regulate the process of sugar beet in vitro growth and development for undifferentiated growth or organogenesis (hemo- and rhizogeny), ie the formation of roots or shoots. View of the importance the auxin and cytokinin content ratio in nutrient media for morphogenesis regulated we studied the 12 variants of balance of these compounds.

Each of these variants is studied in different value content of macro- and micronutrients in the various environments, resulting in preliminary experiments included about 500 variants modification basic environments.

It is shown that the success of in vitro introduction large extent predetermined of timing performance. It is recommended to carry introduction to the culture in vitro during the active growing season intact plants. For most cultivated plants and in particular for sugar beet successful introduction to the culture in vitro occurred from May (beginning of active growth of aerial parts) to September. At the same time in May – July are the best terms of sugar beet explants in vitro introduction. Introduction to culture in vitro of vegetative organs from September to November is often demonstrated high infection initial explants by different pathogens within one – two weeks leads to the manifestation of hidden fungal infection in about 80% of explants entered. However, for some species may be other terms.

Before us was tasked of accelerated reproduction of maternal heterosis hybrids components with freshly seed in poor to enter the off-season. In our experiments, it was modified culture media of Hamborha and Eveleha – V5 – 1, V5 – 36, V5 – 59, V5 – 70, V5 – 126, V5 – 136, V5 – 154, V5 – 174 and Murasihe and Skoog – MS- 1, MC-76, MC-80.

As a result of studies was found that the seed of all studied variants is better to planting after sterilization on hormoneless culture medium. For pasazhuvannya obtained as a result of cultivation in vitro seedlings that rozkuschylsya the best of the studied environments is found the breeding ground V5 – 174, which under

conditions of high sterilization sugar beet micro klony is best accustomed.

Key words: raw selection materials, lines of O-type, sugar beet, culture in vitro, micropropagation, medium Hamborha and Eveleha, Murasihe and Skoog, auxin, cytokinins.