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CURRENT SITUATION AND FUTURE OF THE SECTOR OF PRODUCTION AND RECOVERY OF PLANTING MATERIAL TO INCDBH ŞTEFĂNEŞTI

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Abstract
Production of planting material has become a concern intensive only after disaster emergence of phylloxera (1885), which destroyed almost all European vineyards, which led to the establishment of future plantations only grafted plants that provide greater vigor and potential higher production. In our country, they have created important links and improved production technology, new technologies and methods being developed. Production of seedlings in SCDVV Ştefăneşti is well known. Before 1989 the production of planting material had a pretty good development, achieving over 100 thousand grafts annually of which 50 000 were obtained STAS vines. After 1989, it has entered a period of transition, areas planted remaining relatively constant.

Keywords*: rootstock, density, biological category, density*

1. INTRODUCTION

Production of planting material viticulture is an important step, each country having a national strategy in this area. Development strategy of wine industry nationwide, developed by MARD has provided increased vineyards to 220,000 ha in 2014 and 240,000 ha in 2025, with an annual rate of replacement of vineyards least 5% (9,500 ha / year). Considering wine-growing national strategy for future expansion in culture for the variety and top quality table grapes created at INCDBH Ştefăneşti, constitute a priority objective. This will track multiplication and supply of propagating material of superior biological categories of varieties of grape-vines for grapes and beyond. Thus, the grafted vines will be quality and reach into private households and private winegrowers to promote healthy biological material.

2. MATERIALS AND METHODS

New varieties and clones valuable as rootstock cuttings used in experiments performed were from greenhouse insulator core, which is the national germplasm collection consists of material healthy wine by thermotherapy and in vitro culture. Category biological material used in grafting was originally propagating material. SO4-4 rootstock choice was imposed primarily due to higher behavior on a variety of soil types and, secondly, for high growth vigor that it offers varieties by grafting. The technologies used were the classical billon with a single row and intensive in protected sand or pots. The variety was studied Augusta, sort of table wine producers in high

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demand due to higher requirements for grapes that are looking domestically. This variety, although it has a fairly large old has been little studied, has officially registered clones and propagation is hindered because of this. It is a variety with early ripening, attractive grape, high grain. These qualities make it increasingly attractive to consumers.

Preparation of material for grafting was performed using classic technology. Grafting was performed mechanically, DPA 5, which performs the cuttings shaped Ω reversed and stratification was done in sawdust and resin, baskets of tampering with the ass metal and walls of plastic film.

3. RESULTS AND DISCUSSIONS

Figure 1. Grafting, the main method of production of planting material

Preparation of material for grafting

Preparation of material for grafting operation is pre-plant grafting surgery with yields increasing importance in ordinary vines and includes the following works: reception grafted material; storage of received; ensuring hygiene measures grafting. Strings graft harvesting is carried out on varieties and their shaping consists of removing tendrils, the baby appear on the strings of possible graft and the graft shorten the shoots start at 2-3 cm then binding the labeled packages. The treatment is mandatory and after drying disinfectant solution (Chinosol Benlate 0.5% or 0.2%) are replaced packages and stored in cold rooms or laminated sand until spring. Rootstock control consists of checking its health and humidity of physiological and not unimportant is the degree of maturation and control of timber. Checking moisture physiological biological material judged by the degree of turgidity, or by pressing the knife blade marrow. If a drop of sap, are corresponds humidity: 53-55%. In the case of rootstock cuttings length is sufficient just freshening cut and the chords 2 or 3 lengths they be segmented into portions of a length: 40 ± 2 cm in conception old and 30 ± 2 cm in conception later.

Parafining grafted vines

Since the 60s, SCHENK (1967) show that without making paraffin grafts, it is inconceivable modernization of enterprises producing grafts. In paraffin, using commercial wax (beeswax) 94%, 3% asphalt, 3% rosin (colophony), and 0.15% of substances fungicides, Fundazol, Benomyl, Chinosol). Bitumen and rosin are designed to enhance flexibility and to avoid cracking of paraffin them later if the temperature drops below 10 ° C. Today modern paraffin are on the market, containing including incentives for rooting.

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Figure 2. The stratification grafted cuttings for forcing

As a material for coercion was used softwood sawdust. It can be used in rare cases peat and sand. Each of these substrates forcing have their advantages and disadvantages, here refers to the weight of boxes with cuttings, the ease with which they share in temperature between the inside of the casing and the environment, the ease with which it retains moisture inside crates and last all the qualities of each one.

Figure 3. Baskets with cuttings grafted forced various stages

Camps in rooting greenhouse grafted vines in the sand

Rooting vine grafted vines in the school practiced for over a century. In recent decades it has been improved and modernized systems technology through this new culture and mechanization in a largely works. The complex works rooted applied in school include: choice of the land, crop rotation, land preparation, planting material preparation, proper planting, maintenance work, harvesting vines, filing and sorting, storing and delivering them.

At rooting grafted vines in the field have used two methods of planting, the land and land no billon (ditches). The choice of method of planting is done depending on the eco-pedological and irrigation methods. In order to produce rooted grafts in intensification ridges, researches have shown that our adventure in the country without significantly reduces yield STAS vines, planting system can be practiced in double rows of grafted cuttings. By applying this method of cultivation is achieved vines STAS increase in production per unit area approx. 50%.

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Figure 4. Grafted cuttings before planting and planted in sand

Figure 5. The vines ready for planting

Currently, the most common method of planting grafted vines in the field is the field billon coverage with polyethylene film. The use of polythene in the production of planting material dates back to the years 60, with multiple applications in horticulture.

Table 1. Comparison between classical and rapid multiplication of the vine

The technology	Year I		Year II		Year III		Total		Increases %
	Nr. Vine	Nr. grapevines obtained	Nr. Vine	Nr. grapevines obtained	Nr. vine	Nr. grapevines obtained	Nr. vine	Nr. grapevines obtained	
Classical	field 30	300	field 30	300	field 30	300	field 30	900	100
Rapidly	Greenhouse 1	-	Greenhouse 40	400	Greenhouse 40	2100	40	2500	277.7

The data presented in Table 1 show that intensive technology for rapid multiplication of new varieties and clones valuable is that with increases of 277.7% compared to conventional technology.

Ranking grafted vines to be taken into account several criteria, such as: quality I have at least two main roots at the base arranged radial cuttings, with a minimum diameter of 2 mm, a length of 15-20 cm, welding to be perfect with callus travel, chord wood baked with at least 15 cm, minimum thickness of 4 mm in the second merit, free from attack by diseases, pests, climate accidents (Order 1297/2005).

Table 2. Technical and economic parameters of material production sector planting vine

Specification	U.M.	Intensive version	Classic version	Differences ±
The density of cuttings	thousands buc/ha	416	119	+297
Total expenses	thousands lei/ha	970,5	375,5	+598,4
Production of vines STAS	thousands vines STAS	137,28	39,27	+98,01
Yield / ha	%	33	33	-
Unit cost	lei/vine	7,06	9,56	+2,5
Selling price: - legal person including VAT - individuals - by own businesses	lei/vine	 14,8 12,8 7,06	 14,8 12,8 9,56	 +2,5
Income per unit area: - Sales from own farms	thousands lei/ha	1473	470,3	+1002,7

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Specification	U.M.	Intensive version	Classic version	Differences ±
(50%) - The sale contracts (40%) - From sales to individuals		484,6 812,7 175,7	187,7 232,4 50,2	+296,9 +580,3 +125,5
Profit per unit area	thousands lei/ha	502,5	94,80	+404,7
Profit per unit of product	lei/vine	10,7	2,5	+8,2
Profit rate	**%**	46,96	37,92	+9,04

Completion of research in this experiment to propose an intensive technologies for rapid multiplication of propagating material vineyard that provides the best results INCDBH Ştefăneşti The data presented clearly show that since the unit cost, to the profit per unit area, the higher technology intensive than the classical (Table 2).

4. CONCLUSIONS

1. Improvement of technological links in the specific conditions of INCDBH Ştefăneşti result of investigations to solve a number of problems both in terms of technology, and economic-financial.
2. Rational use of material and technical base available to institute that in the period under review had no funds for investment in the maintenance and development institutions.
3. Making a biological material requirements of European standards endorsed by harmonizing national legislation with the EU which could be exploited both for their own needs and for marketing.
4. Obtain superior yields of 5-6% of traditional technologies has allowed, on one hand exploitation of larger quantities of biological material, and on the other hand reducing the cost price;
5. By producing vines at high densities in protected areas, climate accidents are avoided and continuous vines made by capitalizing costs incurred are recovered in a shorter period of 5-6 months compared with conventional technology;

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