

VIEWS ON SOME OF THE MORE IMPORTANT WEEDS FROM THE CORCOVA VITICULTURE PLANTATIONS

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ABSTRACT

This paper presents an analysis of the seedlings found in the Corcova viticultural center, the degree of spreading, as well as some aspects related to their biology and ecology. Weeds are harmful to agriculture, fruit growing, vegetables and viticulture. The term weed is attributed to spontaneous, herbaceous plants that grow in cultivated or uncultivated places, their presence inducing harmful effects on useful plants. According to the place where they grow, two categories of weeds are distinguished: segetal weeds, they grow in cultivated places; ruderal weeds, grow in uncultivated places.

INTRODUCTION

The floral and vegetation study is a theoretical analysis in order to know the main seedlings of the central viticulture Corcova. Research on vineyards and wine centers in Oltenia, Corcova, are presented in the work Oltenia, small viticultural Romania (Popa A., Giugea N., Genoiu T.C., 2015). From the mentioned work it results that "the Corcova vineyard became famous through viticulture and its wines being attested from the Dacian

times, being located in an area not far from the capital Sarmisegetuza." (Popa A., Giugea N., Genoiu T.C., 2015). From a biological point of view, they are characterized by high reproductive capacity and adaptation to various environmental conditions. They use the vegetation factors (water, air, absorption surface, CO₂) of cultivated plants, thus influencing their normal growth and development.

MATERIAL AND METHOD

To write the content of the paper I used the bibliographic material on the Oltenia area, systematic botanical and geobotanical works with zonal character, determinants and botanical atlases to which I added field observations and data taken from meteorological stations in Bacles.

The determinations were made according to volumes I-XIII of the Romanian Flora, volumes I-II of the Romanian Flora, Illustrated determinant of vascular plants (Beldie Al., 1979).

As research objectives we chose to study the natural environment and the physical-geographical conditions of the area, the floristic composition in different ecosystems of the researched area, the correlation between flora and living conditions, the influence of segetal flora on the studied ecosystems.

RESULTS AND DISCUSSIONS

The peculiarities of the weed species from the vineyards have been mentioned in numerous specialized works. Research on crop species in agricultural crops shows that "they are characterized by a great ability to adapt to different environmental conditions and by a rapid rate of acclimatization to new soil and climatic conditions." (Gh. Anghel, C. Chirilă, V. Ciocârlan, A. Ulinici, 1972). The identified species are characteristic of several vineyards being described by C. Sîrbu in Cotnari, Iași and Huși Vineyards, 2003. I will present some weeds encountered in the Corcova vineyard that affect the normal development of the vine.

Cirsium arvense (figure 1), fam. Asteraceae. It is a species with a great capacity for generative multiplication but also with a very active vegetative

multiplication, through dragons, it is spread in all vineyards (Sîrbu C., 2003).



Figure 1. *Cirsium arvense*

In the Corcova vineyard it is found on the rows of vines but it can also be located on the intervals between rows. This species influences the growth of the vine due to the competition for climatic factors (water, light) and nutrients in the soil. In a vineyard planted with *Cirsium arvense*, it is difficult to harvest the grapes and carry out the works.

Convolvulus arvensis (figure 2), fam. Convolvulaceae.



Figure 2. *Convolvulus arvensis*

The plant has epigenous cotyledons, long petiolate, with a pointed tip, slightly longer than wide. The hypocotyl is dirty-reddish. The mature plant has a highly developed

root system. From this, radicular buds can form many suckers. The stem is volubilous when it has support, or creeping when it has no support. The leaves are hatched or sagitt. One plant produces 500-600 piriform seeds. It is frequently met and often abundant on all soil types and in all cultures. It is frequently multiplied and vegetative by stolons (Crăciun I., 1989).

The vulture is installed both at intervals and on the rows of vines and sometimes, climbing on the stumps, it wraps around the vine shoots, preventing their good lighting and aeration. Due to the very extensive roots, which explore a large volume of soil, its presence in vineyards leads to a qualitative and quantitative decrease in grape production. (Sîrbu C., 2003).

Cynodon dactylon, fam. Poaceae. It was identified by Sîrbu C., 2003, in the Cotnari, Iasi, Husi vineyards. It is a helio-thermophilic, xero-mesophilic, moderately nitrophilous plant with very fast vegetative multiplication, through above-ground or underground rhizomes; it also multiplies generatively (over 2000 fruits / plant, being a common weed in vineyards throughout the country (Sîrbu C., 2003). Flowering takes place from June-September, and fruiting from July-September.

Cynodon dactylon is present on the rows of vines but also appears on the intervals between rows with a high capacity to invade neighboring territories. Its presence is influenced by the maintenance works

This weed hinders the growth and fruiting of the vine, competing with the stems for food, weakening them by secreting toxic substances into the soil for the vine, inhibiting the microbiological activity of the soil, slowing down the biogeochemical cycles of nutrients.

Sonchus arvensis (figure 3), fam. Asteraceae. Mesophilic species, little resistant to drought because the root system is not as deep as that of the palamid or volbura. It has a higher frequency in spring crops, being confined

especially on the rows of vines. (Sîrbu, 2003).



Figure 3. *Sonchus arvensis*

Cardaria draba (figure 4), fam Cruciferae. Perennial plant, with thick, woody, oblique or vertical root, with lateral branches bearing adventitious buds. The roots can reach up to 118 cm deep. The stem is erect, simple or branched, 20-40 (60) cm high, short hairy, densely foliate. (Manoliu A, N. Stefan, V. Zanoschi, T. Sesan, 1996). Propagation is by seeds and vegetatively. The seeds usually germinate in April and the resulting plants overwinter and bloom in the second year.

The strong weeding of vine plantations, together with other damaging factors lead to a weak qualitative and quantitative production.

CONCLUSIONS

The strong weeding of the vine plantations determines its weak production. It was found that, in the properly worked vineyard plots, the weeding is weak, while in the unworked plots the weeding is much higher (figure 4 and figure 5). In the vineyards the annual summer weeds predominate, and among the perennials the ones with rhizomes predominate.

Among the annual species, a major problem is the grasses such as: *Setaria pumila*, *Setaria viridis*, *Eragrostis minor*; among the perennials are the following: *Cynodon dactylon*, *Elymus repens*, *Sorghum halepense*. Along with these, other vine species are also found in the vineyards: *Solanum nigrum*, *Portulaca oleracea*, *Chenopodium album*.



Figure 4. *Cardaria draba*

Research resulting from the literature shows that the weeding of the vine is the result of a large number of factors: soil seed reserve, climatic conditions, soil characteristics, the effect of diseases and pests. Weeding has qualitative aspects (species present) and quantitative (number of individuals or their weight). Both aspects are important for making decisions on weed control in the short term (in the current year) or in the medium term. (Chirilă, 2001)

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