DATA ABOUT THE SEGETAL FLORA FROM CALAFAT-BECHET AREA

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Abstract. *In this paper there are presented the results of the research made in a period of 4 years. As compared to the years 1970-1990 when the agricultural crops from the researched area covered large surfaces and the species of weeds were hard to control, presently these surfaces reduced but the weed encroachment grade is still high due to the poor treatment of the crops and of the fallow lands near them.*

Keywords: *segetal flora, weeds.*

Rezumat. Date despre flora segetală dintre Calafat şi Bechet. *În această lucrare se prezintă rezultatele cercetărilor efectuate în decursul a 4 ani de zile. Spre deosebire de anii 1970-1990 când culturile agricole din teritoriul cercetat ocupau suprafeţe mari iar speciile de buruieni erau greu de combătut, în prezent suprafeţele s-au redus însă gradul de îmburuienare se menţine ridicat datorită slabei tratări a culturilor şi prezenţei locurilor pârlogite în apropierea acestora.*

Cuvinte cheie: *flora segetală, buruieni.*

INTRODUCTION

On the agricultural fields, there also grow spontaneous plants together with the cultivated plants (CIOCÂRLAN & CHIRILĂ, 1982). Their extension has always generated problems the complexity grade of which has been influenced by anthropogenous, climatic, geographical and technological factors.

Although the technology in agriculture has reached high levels, still, weeds are a menace for the agricultural crops (PĂUN, 1966).

The floristic structure of the weeds from the cultivated lands, as well as the number of the individuals and of the seeds from the soil reflect the level of the agriculture from a certain area and especially the efficiency of man's intervention upon the weed encroachment.

According to the general aspect of the relief, with altitudes of 60-70 m, the researched territory belongs to the Oltenia Plain. Chernozems represent the zonal soils and they cover the first three terraces of the Danube.

Although studies upon the weeds from Oltenia are found in several papers ((BUJOREAN 1956, 1960), (PĂUN & POP, 1970), (PĂUN et al., 1975), (CHIRILĂ, 2001), (CIOCÂRLAN, 2004)), we still consider this paper useful, since it brings information upon the current state of the cultures' weed encroachment.

There have been studied the weeds from the following groups of crops: haulms (wheat, barley, oat), plants that are hoed up (corn, sunflower), grape vine and vegetable gardens.

MATERIAL AND METHOD

The work method consisted of observations and comparisons in the field. Among the methods used for weeds study, I used the general visual evaluation method on the field.

At the species chorology it have been put down the localities only at those taxa that have a more restricted area, the ones present almost on the entire area are called frequency.

It is a method based on the principles of Zürich-Montpellier school and offers the advantage that it is fast, but its data have a relative value, hard to use in fighting the weeds through agro-technical or chemical means.

With all their subjectiveness, the results obtained through this method offer a relatively exact image of the weed encroachment situation.

RESULTS AND DISCUSSIONS

From the research made in the above mentioned period, there have been identified a number of species. In order to find easier the taxon, the species presentation is being made alphabetically: *Abutilon theophrasti* MEDIK. – T., Euras. (frequent), *Adonis aestivalis* L. – T., Euras. Cont. (Ciupercenii Noi, Tunari), *Agrostemma githago* L. – T., Cosm. (Desa, Rast), *Ajuga chamaepytis* (L.) SCHEBER subsp. *ciliata* (BRIQ.) SMEJKAL. – T., Pont. Medit. (Rast), *Amaranthus albus* L. – T., Adv. (Am. de N.) (frequent), *A. retroflexus* L. – T., Adv. (Am. de N.) (frequent), *Ambrosia artemisiifolia* L. – T., Adv. (Am. de N.) (frequent), *Anagallis arvensis* L. – T-HT., Circ. (frequent), *Anthemis arvensis* L. – T., Eur. (frequent), *A. austriaca* JACQ. – T., Centr. Eur. Pont. (frequent), *Apera spica venti* (L.) BEAUV. – T., Euras. (frequent), *Arenaria serpyllifolia* L. – T., Circ. (Rast, Bistreţ), *Aristolochia clematitis* L. – G., Medit. (Tunari, Rast, Negoi), *Atriplex patula* L. – T., Circ. (frequent), *Avena fatua* L. – T., HT., Euras. (frequent), *Bifora radins* L. – T., Medit. (Rast), *Calamagrostis epigeios* (L.) ROTH. – G., Euras. (frequent), *Capsella bursa-pastoris* (L.) MEDIK. – T-HT., Cosm. (frequent), *Cardaria draba* L. – H., Euras. Medit. (frequent), *Caucalis platycarpos* L. – T., Pont. Pan. (Calafat,

Piscu Vechi, Ghidici), *Centaurea apiculata* LEDEB., subsp. *spinulosa* (ROCHEL) DOSTÁL – H., Centr. and SE Eur. (frequent), *C. cyanus* L. – T.-HT., Cosm. (frequent), *Cephalaria transylvanica* (L.) ROEMER & SCHULTES – HT., Pont. Medit. (frequent), *Chenopodium album* L. – T., Cosm. (frequent), *Chondrilla juncea* L. – HT.-H., Cont. Euras. (frequent), *Chorispora tenella* (PALLAS) DC. – T., HT., Euras. Cont. (Rast), *Cichorium intybus* L. – H., Euras. (frequent), *Cirsium arvense* (L.) SCOP. – G., Euras. (frequent), *Conium maculatum* L. – Ht., Euras. (frequent), *Consolida regalis* S. F. GRAY – T., Eur. (frequent), *Convolvulus arvensis* L. – (G) H., Cosm. (frequent), *Conyza canadensis* (L.) CRONQ. - T., Adv. (Am. de N.) (frequent), *Cuscuta campestris* YUNCKER - T., Adv. (Am. de N.) (frequent), *Cynodon dactylon* (L.) PERS. – G., Cosm. (frequent), *Datura stramonium* L. – T., Cosm. (frequent), *Daucus carota* L. subsp. *carota* – HT., Euras. (frequent), *Descurainia sophia* (L.) WEBB ex PRANTL – T.-HT., Euras. (frequent), *Digitaria sanguinalis* (L.) SCOP. – T., Cosm. (frequent), *Diplotaxis muralis* (L.) DC. – T.-HT., Centr. Eur. Medit. (frequent), *Echinochloa crus-galli* (L.) BEAUV. – T., Cosm. (frequent), *Eragrostis minor* HOST. – T., Centr. Eur. Medit. (frequent), *Erodium cicutarium* (L.) L'Hérit. – T., Cosm. (frequent), *Euphorbia helioscopia* L. – T., Euras. (frequent), *E. virgata* WALDST. & KIT. – H., Euras. Cont. (frequent), *Falcaria vulgaris* BERNH. – HT. (T., H.), Euras. (Submedit.) (Rast, Negoi, Catane, Bechet), *Fallopia convolvulus* (L.) A. Löve T., Circ. (frequent), *Fumaria schleicheri* SOY.-WILLEM – T., Euras. (frequent), *Galium aparine* L. – T., Circ. (frequent), *Galinsoga quadriradiata* RUIZ & PAVON - T., Adv. (Am. de S) (Rast), *Geranium dissectum* L. – T., Euras. (frequent), *Gypsophila muralis* L. – T., Euras. (frequent), *Heliotropium europaeum* L. – T., Submedit. (Rast), *Hibiscus trionum* L. – T., Euras. (frequent), *Holosteum umbellatum* L. – T., Euras. (Calafat, Piscu Vechi, Catane, Negoi), *Hyoscyamus niger* L. – HT., Euras. (Rast, Ciupercenii Noi, Desa), *Kickxia elatine* (L.) DUMORT. – T., Centr. Eur. Medit. (frequent), *Lactuca serriola* L. – Ht., Euras. (frequent), *Lamium amplexicaule* L. – T., Euras. (frequent), *L. purpureum* L. – T., Euras. (frequent), *Lapsana communis* L. – T.-H., Euras. (frequent), *Lathyrus aphaca* L. – T., Medit. (frequent), *L. tuberosus* L. – H., Euras. (frequent), *Linaria vulgaris* MILL. – H., Euras. (frequent), *Lithospermum arvense* L. – T., Euras. (frequent), *Matricaria perforata* MÉRAT – T.-HT., Euras. (frequent), *Neslia paniculata* (L.) DESV. – T., Eur. Centr. and SE (Calafat, Rast, Bechet), *Nigella arvensis* L. – T., Pont. Medit. (Tunari), *Panicum miliaceum* L. – T., China, As. Centr. (frequent), *Papaver dubium* L. subsp. *dubium* T., Eur. and subsp. *albiflorum* (BESS.) DOSTÁL – T., Pont. Medit. (frequent), *P. rhoeas* L. – T., Cosm. (frequent) , *Phragmites australis* (CAV.) STEUDEL – G. (HH.), Cosm. (frequency), *Portulaca oleracea* L. – T., Cosm. (frequency), *Ranunculus arvensis* L. – T., Euras. (frequency), *R. sardous* CR. – T., Eur. (frequency), *Raphanus raphanistrum* L. – T., Medit. (Cosm.) (Rast, Catane, Dunăreni), *Rorippa austriaca* (CR.) BESS. – H., Pont. (frequency), *Rubus caesius* L. var. *arvalis* RCHB. – Ph., Eur. (Rast, Negoi), *Rumex crispus* L. – H., Euras. (frequent), *Salsola kali* L. subsp. *ruthenica* (ILJIN) SOÓ – T., Euras. (Calafat, Bechet), *Sambucus ebulus* L. – H., Euras. (frequent), *Senecio vernalis* WALDST. & KIT. – T., Euras. Cont. (frequent), *S. vulgaris* L. – T., Euras. (frequent), *Setaria pumila* (POIRET) ROEM & SCHULT. – T., Cosm. (frequency), *Setaria viridis* (L.) BEAUV. – T., Cosm. (frequent), *Sinapis arvensis* L. – T., Euras. (frequent), *Sisymbrium orientale* L. – T., Pont. Medit. (frequent), *Solanum nigrum* L. – T., Cosm. (frequency), *Sonchus arvensis* L. G., Euras. (frequent), *Sorghum halepense* (L.) PERS. – G., Medit. (frequent), *Stachys annua* L. – T., Eur. (submedit) (frequent), *Stellaria media* (L.) VILL. – T.-HT. Cosm. (frequent), *Taraxacum officinalis* WEBER ex WIGGERS – H., Euras. (frequent), *Thlaspi arvense* L. – T.-Ht., Euras. (frequent), *Torilis arvensis* (HUDS.) LINK – T., Eur. Centr. (frequent), *Tribulus terestris* L. – T., Centr. Eur. Medit. (frequent), *Trifolium arvense* L. – T., Euras. (frequency), *Vaccaria hispanica* (MILL.) RAUSCHERT – T., Euras. (Ciupercenii Noi, Desa, Rast), *Veronica arvensis* L. – T., Euras. (frequency), *V. hederifolia* L. – T., Euras. (frequency), *V. persica* POIRET – T., Adv. (As. de SV) (frequent), *V. polita* FRIES – T., Euras. (frequent), *V. triphyllos* L. – T., Eur. (frequent), *Vicia tetrasperma* (L.) SCHREB. – T., Euras. (frequent), *V. villosa* ROTH – T.-HT., Eur. (frequent), *Viola arvensis* MURRAY – T., Cosm. (frequent), *Xanthium italicum* MORETTI – T., Eur. de S. (frequent), *X. spinosum* L. – T., Cosm. (frequent).

From the presented species there has been noticed that one of them has a better representation in the cultivated crops (*Sorghum halepense*, *Sonchus arvensis*, *Hibiscus trionum* ş.a.) and others in the cereal crops (*Setaria pumila*, *Sorghum halepense*, *Vaccaria hispanica*, *Centaurea cyanus*, *Cirsium arvense*, *Papaver rhoeas* and so on). In the vineyards, it has been observed that the hardest species to fight were *Cynodon dactylon* and *Convolvulus arvensis*. To the luxuriant development of these species contributed the very well developed rhizome system (to *Cynodon dactylon*) or the buds from the races (*Convolvulus arvenis*).

Analysing the bioforms spectrum (Fig. 1), it has been found that the terophytes possess the pre-eminence with 66%, followed at big distance by annual-biannual, hemicriptophytes, geophytes and the biennial species. The rest have an insignificant weight.

Of the geoelements, the biggest weight is registered by Eurasian species with 41%, which are followed, at some distance, by the cosmopolites. The other geoelements categories are present in a much smaller percent (Fig. 2).

From the floristic list presented above it can be noticed that on the researched territory the southern elements are relatively well represented. Some of these have a large number of individuals and form even associations with large area: ex. *Cardaria draba* L., *Sisymbrium orientale* L. and other.

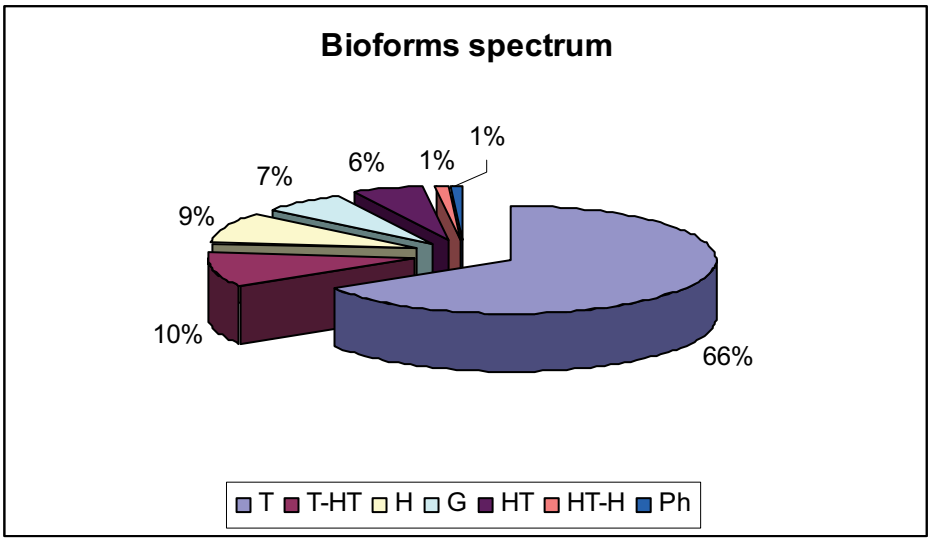

Figura 1. Spectrul bioformelor.

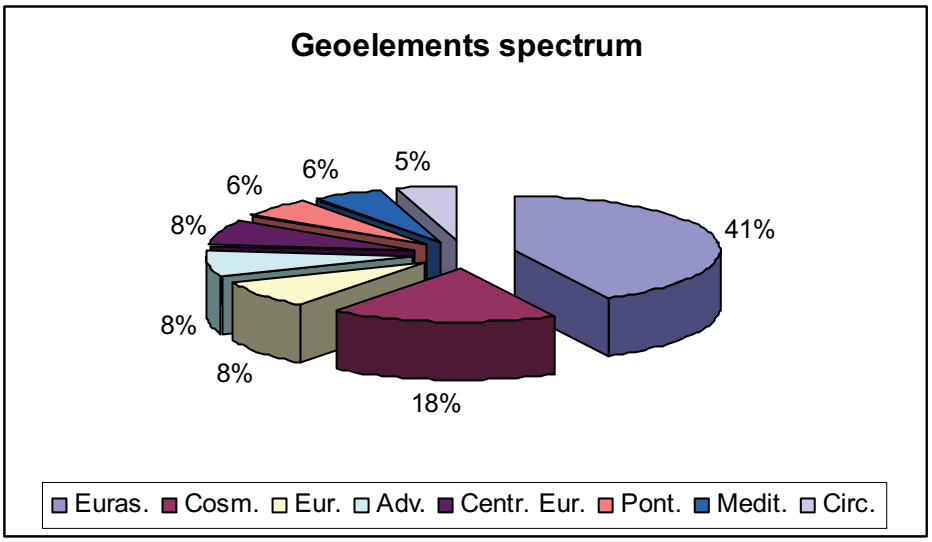

Figura 2. Spectrul geoelementelor.

CONCLUSIONS

The present study has lead to the conclusion that, the corn crops have more weeds than the haulms ones, especially annual and perennial liliates, as well as magnoliates, which are more numerous as species, but with a lower density than of the previous ones.

The sun-flower crops are well weed encroached in the incipient stage, after which the plant inhibits weeds growing.

The destruction of the irrigation systems from the researched area increased the development of the weeds from the crops, due to the fact that they have a high resistance and an ecological plasticity.

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