RESEARCH ON TECHNOLOGY OF CULTIVATION OF MEDICINAL SPECIES IN TERMS OF BANAT PEDOCLIMATICE

CERCETARI PRIVIND TEHNOLOGIA DE CULTIVARE A UNOR SPECII MEDICINALE IN CONDITIILE PEDOCLIMATICE DIN BANAT

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Abstract: *Medicinal and aromatic plants in our country is a great natural wealth and an important factor that can contribute to the restructuring of rural space by creating opportunities for jobs in the new non-farm rural economy and increase competitiveness of the sector. Capitalization as a complement to the natural resources as an added value involves making greater research on the field for each of medicinal and aromatic plants from local flora. The paper presents the results of Calendula sp. and Tagetes sp. During 2006-2008, plants that have been object of study in a research type CEEX*

Rezumat: *Plantele medicinale si aromatice din tara noastra constituie o bogatie naturala deosebita si un factor important care poate contribui la restructurarea spatiului rural prin crearea de oportunitati de locuri de munca in cadrul noii economii rurale neagricole precum si la cresterea competitivitatii acestui sector. Valorificarea cat mai completa a acestei resurse naturale cu o valoare adaugata cat mai mare presupune efectuarea de cercetari pe teren pentru fiecare din plantele medicinale si aromatice din flora autohtona.In lucrare se prezinta rezultatele obtinute la cultura de galbenele si craite in perioada 2006-2008, plante care au fost obiect de studiu in cadrul unui contract de cercetare de tip CEEX.*

Key words**:** *common marygold, French marigold active principles*
Cuvinte cheie: *galbenele, crăițe, principii active*

INTRODUCTION

"Green Pharmacy", offer the means of natural therapy is very extensive. This opportunity is still insufficiently capitalized, although the health of people is far from being satisfactory. Therefore, believe that a deeper approach to this area is welcome both for developing a sustainable agriculture, environmental, and consumer for the population.

The study traced the development of technology improvements for growing species of medicinal plants are taken.

MATERIAL AND METHOD

Research objective was to make a contribution to establish the main aspects relating to technology for growing the following species of medicinal plants: *Calendula officinalis*, *Tagetes* sp. In the species *Calendula officinalis* were tested following varieties (populations): Petrana (Timisoara), Someşeni, Bacau, Craiova, Birtan (foto 1).

In the *Tagetes* species has experienced: *Tagetes erecta*, flame, Delia, GTh - 78, Plesa (Novi Sad), Marigold, and the company Agrosel (*Tagetes erecta* and *Tagetes patula* - nana) (foto 2).

Experience has been organized into three rehearsals for the species *Calendula officinalis* and *Tagetes* sp. Sowing was carried out in the first half of April at 50 cm distance between rows, running continuously, with a density of 50-60 plante/m2 and a depth of 1-2 cm.

Harvesting was performed with flower receptacle, when it was fully open.

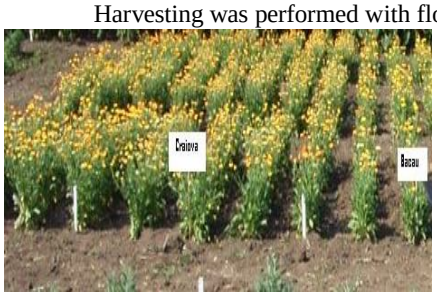


Foto 1

Foto 2

RESULTS AND DISSCUSION

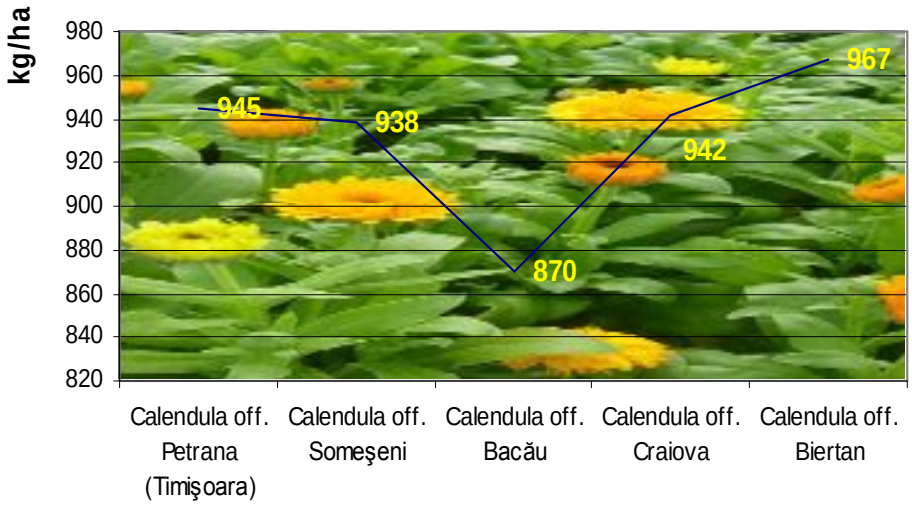
Table 1 and picture 1 presented results obtained at harvest *Calendula officinalis*

Table 1

Inflorescence harvest dry air (*Flores Calendulae cum receptaculis)*

Variety	Crop kg/ha	%	Difference	Significance
Calendula off. Petrana (Timişoara)	945	100		
Calendula off. Someşeni	938	99	-7	
Calendula off. Bacău	870	92	-75	
Calendula off. Craiova	942	100	-3	
Calendula off. Biertan	967	102	22	

DL 0,05% = 41 kg/ha; DL 0,01% = 62 kg/ha; DL 0,001% = 103 kg/ha



Picture 1. Inflorescence harvest dry air

The results were very much influenced by deviations from the climate research, particularly drought, which was recorded during the period of vegetation. However, there were large differences recorded between varieties (populations) tested which shows a very good adaptation of it.

Tagetes sp.

Each year during the experiment were obtained three harvests. After the harvest has been posting ligulae flowers, only interested in the pharmaceutical industry. Total harvest of fresh flowers ligulae resulting from the three collections is presented in table 2.

Table 2

Total harvest of fresh flowers ligula

Forms	Crop kg/ha	%	Difference	Significance
Tagetes erecta	9710	100		
Flacăra	7810	80	-1900	000
Delia	8746	90	-964	000
GTH - 78	6894	70	-2816	000
Plesna	7257	74	-2454	000
Marigold	7102	73	-2608	000
T.erecta (Agrosel)	9231	95	-479	000
T. patula-nana (Agrosel)	7585	78	-2125	000

DL 5 % = 102 kg/ha; DL 1 % = 189 kg/ha: DL 0,1 % = 403 kg/ha

With reference to variety taken the study results show that most crop species was obtained from *Tagetes erects*. Species *Tagetes patula* is the most valuable being the only species from which the purchase flowers today. The three types be experienced, and with yellow flowers, flowers orange or nana, the crop was close. Flowers ligulae obtained, after weighing, were placed to dry until constant weight. Drying efficiency was 5,8:1. Based on the drying efficiency were calculated ligulae production of dried flowers, the results is presented in table 3.

Table 3

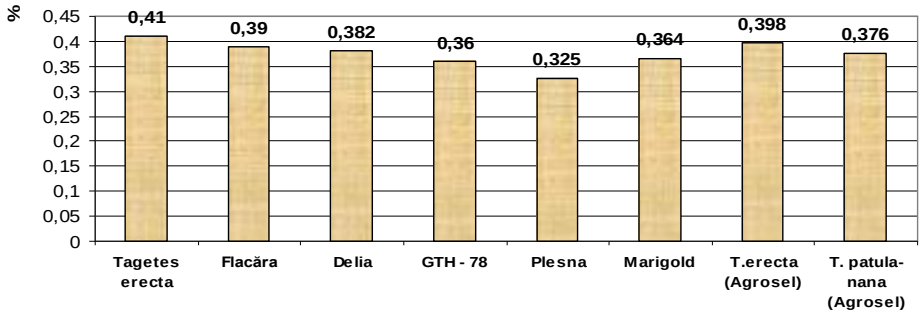
Total harvest of dry flowers

Forms	Crop kg/ha	%	Difference	Significance
Tagetes erecta	1674	100		
Flacăra	1001	59	-673	
Delia	1507	90	-167	000
GTH - 78	1188	70	-486	000
Plesna	1251	74	-423	00
Marigold	1224	73	-449	00
T.erecta (Agrosel)	1591	95	-83	00
T. patula-nana (Agrosel)	1307	78	-367	000

DL 5 % = 39 kg/ha; DL 1 % = 72 kg/ha; DL 0,1 % = 160 kg/ha

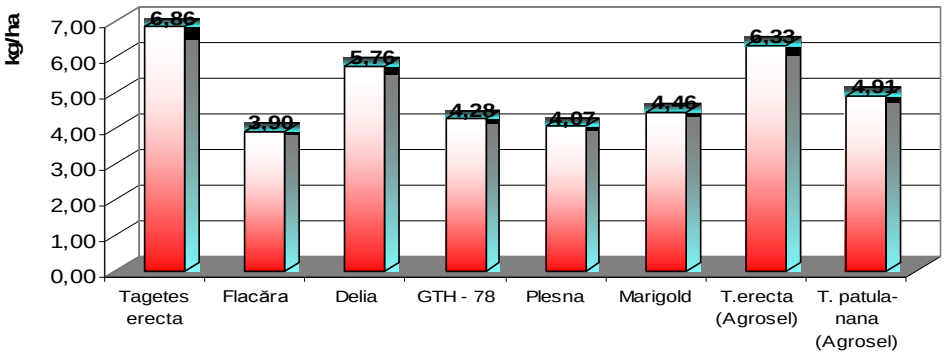
Among the species experienced the greatest harvest of 1674 kg / ha ligulae dried flowers was the *Tagetes erects*. *Tagetes patula*, depending on crop type (yellow-orange-nana) recorded harvests between 1001 - 1307 kg / ha dry flowers ligulae.

Changes in content helenien were between 0,325% and 0,410%.



Picture 2. Variation of helenien content (%)

Based on the content and helenien resulted in production of flowers without calyx ligulae air-dried until constant weight, was calculated helenien production in each of the three experimental years.



Picture 3 Helenien production (kg/ha)

CONCLUSIONS

Analyzed results from the two cultures can be considered in the area looked like they may be grown with good results.

LITERATURE

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