

COUNTRY REPORT on Medicinal and Aromatic Plants

(After: *Second Country Report Concerning The State Of Plant Genetic Resources For Food And Agriculture, Ministry of Agriculture and Rural Development, Budapest, 2008*)

Strategy of the Hungarian Medicinal Plant Sector 2014.

(http://www.gyogynovenyszovetseg.hu/wtDocument/browse/root/Gyogynoveny_Strategia_2014.pdf)

1. Geographical data:

The territory of the country is 93 030 square kilometres (about 1 % of the European continent). Located in South-east-Central Europe, in the Carpathian Basin surrounded by the Carpathians, the Alps and the Dinaric Mountains, between northern latitudes of 45°44' and 48°35' and eastern longitudes of 16°07' and 22°54'.. Common borders with Slovakia, Ukraine, Romania, Croatia, Slovenia, Serbia and Austria.

Almost three quarters of the territory of the country are lowland, one fifth is hilly with a maximum altitude of 400 metres, and approximately 5% of the total territory of the country is mountainous, with altitudes varying between 400 and 1 000 metres. The Great Plain (Alföld) and the Small Plain (Kisalföld) are flat, the Zala, Somogy and Tolna counties in Transdanubia are hilly areas, while the mountains are represented by the Sopron, Kőszeg and Mecsek mountains in the Transdanubia and by the Northern mountainous region. 12.3% of the total territory of Hungary consists of meadows and pastures and a further 18.7% is covered by forests (primarily deciduous forests). Approximately 2 200 plant and 45 000 animal species live in the territory of the country, the majority of which are native Central European species, but some Northern, eastern and South European flora and fauna elements are also observed.

535 plant and 855 animal species are protected. Among the protected flowering plants, the most unique species are the Mediterranean-type fragrant hellebore (*Helleborus odorus*) in the Mecsek Mountains; the wild peony (*Paeonia officinalis* var. *banatica*); the pheasant's eye (*Adonis vernalis*) and the nodding sage (*Salvia nutans*) on the Great Plain; the meadow anemone (*Pulsatilla pratensis* ssp. *hungarica*) in the Nyírség, and the dolomite flax (*Linum dolomiticum*) endemic to the Pilis Mountain.

Nine national parks, 38 national landscape conservation districts, 142 national conservation areas, 1 natural monument (Aggtelek-Rudabánya-Szendrő core sections) and 1 125 regional conservation districts protected by local governments have been established to safeguard the original habitat of the flora and fauna on a total area of 816 008 hectares.

2. Climatic data:

Hungary is situated in the temperate zone, on the borderline of, and affected by three large climatic zones: the Atlantic, continental and Mediterranean. Due to the isolation by the surrounding mountains (Carpathian Basin), it is relatively protected from sudden changes.

The climate has a tendency for droughts, especially in the Great Plain, where the annual mean precipitation is below 500 mm. The country's annual average mean temperature is 9.7°C. The mean temperature in the hottest month, July, is 20.0°C, and in the coldest month, January, -2.1°C. Summer day temperatures may reach 33-38°C, while in cold winters temperature may drop to -25.0°C. In the central part of the Great Plain the annual average rainfall varies between 470-550 mm, in the mountains between 700-800 mm.

The number of hours of sunshine varies between 1 700-2 200 hrs/year, the area between the rivers Danube and Tisza being the sunniest, while the regions with the least amount of sunshine are the

Alpokalja (Lower Alps, Western Hungary) and the Northern Mountains. The annual average wind speed is 2.4 m/sec.

3. Socio-economic data:

4. **Current forms of production:** total number of wild-crafters ca. 5000. There are 25 enterprises engaged in MAP production with some 1500 – 2000 employees.

Participants in the agricultural economy Hungarian agriculture is considered to be the most varied sector in the whole national economy (Figure 1). A special feature is the bi-polar economic structure, with both large farms and firms and smaller units. One third of Hungarian households have ties to agriculture or gardening. According to their functions and production aims, there are farms that

- produce only for their own consumption (363 000 farms, 51.3%)
- trade with their surpluses (234 000 farms, 33.1%)
- produce mainly for the market (109 000 farms, 15.5%)
- provide agricultural services (707 farms, 0.1%)

According to the 2005 Farm Structure Register, almost three quarters of the enterprises grow plants. 47 % of the private farms only grow plants, while barely 20% deals with animal breeding and 25% deals with both types of activities. Twenty-six percent of the farms keeps animals, mainly cattle and pig. Up to the beginning of 2005, one hundred co-operatives had been established, specialising in production and sales (TÉSZ). Their total sales revenue was about HUF 28 billion in 2006. The number of producers integrated into these organisations amounts to 21 000. To increase their competitiveness small-sized organisations have tended to expand in the past few years. Their activities account for 15% of sales of domestic fruit and vegetable production. Organisations of this type, specializing in both production and sales, have been formed in almost all the main fruit and vegetable growing areas of Hungary. The state-owned forest area covers to 1 054 000 hectares, and there are 300 000 hectares of privately owned forest, managed by 27 000 persons.

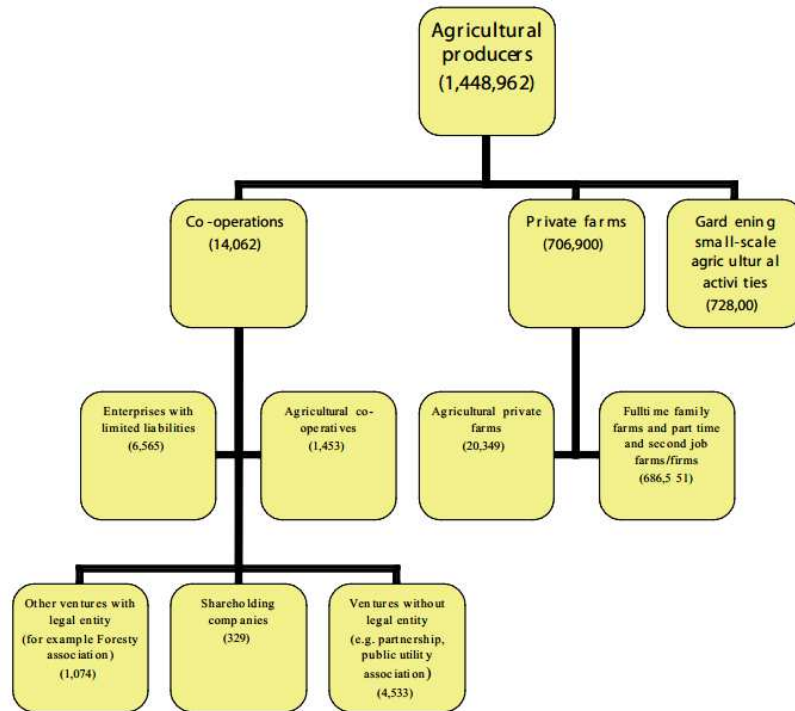
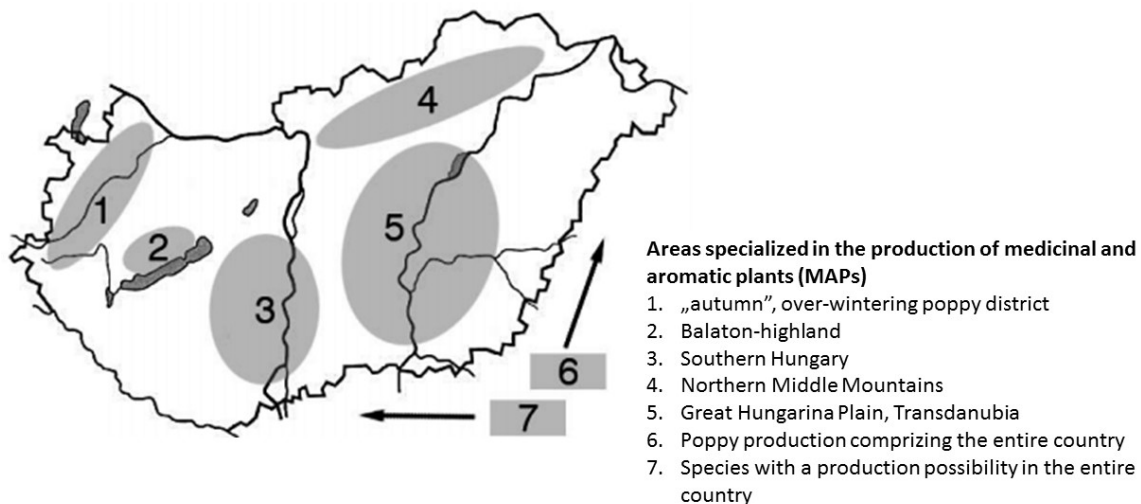


Figure 1 - Participants in the agricultural sector of Hungary (2005)

The Hungarian Agriculture and food industry in figures; Földművelésügyi és Vidékfejlesztési Minisztérium, 2007

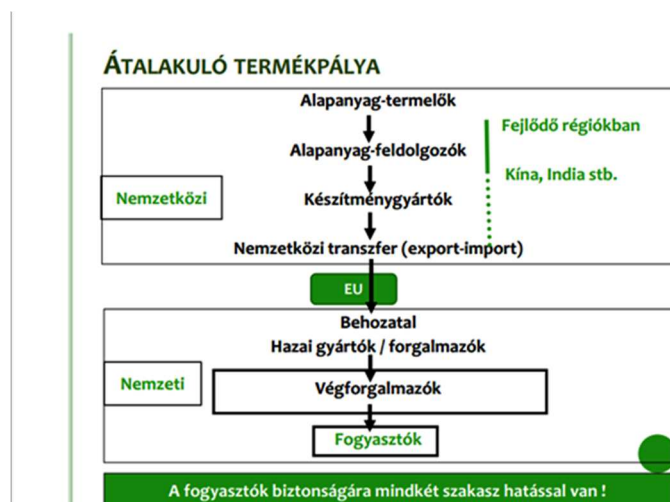
Annual production of MAPs is approx. 20 thousand tons of dried crude drugs.

- 4.1 **Wildcrafted:** In Hungary the wild-crafting of MAPs can be practiced without permissions. The purchase of MAPs is however subject to licencing. ca. 70 % of the crude drug production is of wild-crafted origin. The estimated number of collected species varies between 110 - 120, with Fructus Hippocastanii, Nettle, rose hips, solidago and chamomile. Collectors are mainly members of the roma communities, or members of less educated members of the society, frequently in areas with high unemployment. Collection in National parks or other nature protection areas is also limited by special permissions. Since 2007, the revues of wild-crafting have lost their privileged status of being tax-exempt. Licencing, as "primary producers" is required in order to engage in wild-crafting activities and at the same time, social security tax is to be paid.
- 4.2 **Cultivated:** MAPs are cultivated on an average 18 – 21 000 hectares/annum, from which the production area of so called classical MAPs amounts to 2000-4000 hectares. Main crops are : mustard, fennel, poppy, lemon balm, peppermint, thyme and calendula. The area of MAP production is very much a precondition of the production and profitability of major cereals and industrial crops. A proportion of crops can be cultivated by using the machinery and well established methods of major arable crops, whereas small scale or semi-large scale production of some other crops (like Mentha ssp., Satureja sp, Levisticum sp., and Valerian asp.) is also going on. The lack of high yielding cultivars is frequently a limiting factor. The production of a large proportion of species is manual labor demanding, since both production, plant protection and harvesting in these crops is special, therefore partially available.



After: Hungarian Medicinal Plant Strategy 2014. Hung. Association of Medicinal Plants.

5. Stakeholders of production and processing:



From: From the crude drug to the preparation. Problems of quality assurance. Csupor, D., Hohmann J. and Szendrei, K., 2010. <http://www.gyogynovenyszovetseg.hu/wtDocument/browse/root/DrogtolAkeszitmenyigBudapest.pdf>

6. Stakeholders of Processing

7. Marketing/Trade data

8. Legislation issues (list of important government regulations relevant to MAPs):

[4/1997. \(I. 22.\) Korm. rendelet az üzletek működéséről és a belkereskedelmi tevékenység folytatásának feltételeiről](#)

[10/1987. \(VIII. 19.\) EüM rendelet a gyógyszernek nem minősülő gyógyhatású anyagok és készítmények nyilvántartásáról és forgalomba hozataláról](#)

[37/1976. \(X. 29.\) MT rendelet a gyógynövények és illóolajok vizsgálatáról, minősítéséről, forgalomba hozataláról és ellenőrzéséről, egységes szerkezetben a végrehajtásáról szóló 2/1978. \(III. 16.\) NIM rendelettel](#)

[2000/131. APEH iránymutatás* a 1211 90 95 vámtarifaszám alá sorolt növények és növényrészek általános forgalmi adója](#)

[2001/30. APEH iránymutatás* a teák, ezen belül gyógyszerként közvetlenül felhasználható teafélék általános forgalmi adó tételének meghatározásához](#)

[AZ EURÓPAI PARLAMENT ÉS A TANÁCS 2004/24/EK IRÁNYELVE\(2004. március 31.\)az emberi felhasználásra szánt gyógyszerek közösségi kódexéről szóló 2001/83/EK irányelvnek a hagyományos növényi gyógyszerek tekintetében történő módosításáról](#)
[383/2007. \(XII. 23.\) Korm. rendelet az 1989. október 23-át megelőzően alkotott rendeleti szintű jogszabályok rendezéséről](#)
[307/2008. \(XII. 20.\) Korm. rendelet az üzletek működésének rendjéről, valamint az egyes üzlet nélkül folytatható kereskedelmi tevékenységek végzésének feltételeiről szóló 133/2007. \(VI. 13.\) Korm. rendelet módosításáról](#)

9. Research institutions:

- **Department for Medicinal and Aromatic Plants, Corvinus University, Budapest**

[*http://www.nki.hu/en/*](http://www.nki.hu/en/)

- **Hungarian Academy of Sciences Centre for Agricultural Research**

[*http://www.agrar.mta.hu/start.php?lang=en*](http://www.agrar.mta.hu/start.php?lang=en)

- **Agricultural Institute of Hungarian Academy of Sciences**

[*http://www.mgki.hu/start.php?lang=en*](http://www.mgki.hu/start.php?lang=en)

- **Hungarian Academy of Sciences Institute for Soil Science and Agricultural Chemistry**

[*http://mta.hu/articles/research-institute-for-soil-sciences-and-agricultural-chemistry-of-the-hungarian-academy-of-sciences-126421*](http://mta.hu/articles/research-institute-for-soil-sciences-and-agricultural-chemistry-of-the-hungarian-academy-of-sciences-126421)

- **Hungarian Academy of Sciences Plant Protection Institute**

[*http://www.nki.hu/en/*](http://www.nki.hu/en/)

- **Hungarian Academy of Sciences Institute for Veterinary Medical Research**

[*http://www.vmri.hu/index_eng.htm*](http://www.vmri.hu/index_eng.htm)

- **University of Szeged Department of Pharmacognosy**

[*http://www2.pharm.u-szeged.hu/phcogweb/index.php/hu/intezet/munkatarsak*](http://www2.pharm.u-szeged.hu/phcogweb/index.php/hu/intezet/munkatarsak)

- **Hungarian Academy of Sciences Centre for Ecological Research Laboratory for Botany and Phytochemistry**

[*http://www.obki.hu/nyito/index_BN.shtml*](http://www.obki.hu/nyito/index_BN.shtml)

- **Research Institute for Medicinal Plants**

[*http://gynki.hu/ocPortal/index.php?page=start&keep_lang=EN*](http://gynki.hu/ocPortal/index.php?page=start&keep_lang=EN)

- **Semmelweis University Faculty of Pharmacy Institute of Pharmacognosy**

[*http://semmelweis.hu/farmakognozia/munkatarsaink/*](http://semmelweis.hu/farmakognozia/munkatarsaink/)

- **University of Pécs, Medical School, Department of Pharmacognosy**

[*http://aok.pte.hu/en/egyseg/index/1640*](http://aok.pte.hu/en/egyseg/index/1640)

- **University of West Hungary Faculty of Agriculture and Food Science, Department of Botany and Department of Medicinal Plants**

[*http://mek.mtk.nyme.hu/index.php?id=996*](http://mek.mtk.nyme.hu/index.php?id=996)

10. Education on MAPs (see: #17)

11. National incentives

National Medicinal Plant Strategy, 2014.

(http://www.gyogynovenyszovetseg.hu/wtDocument/browse/root/Gyogynoveny_Strategia_2014.pdf) in Hungarian