Research, technology transfer and training related to Medicinal and Aromatic Plants

wild harvesting

in Spain

Eva Moré,
Non-wood Forest Products Department

www.ctfc.cat

Medicinal and aromatic plants wild harvesting in Spain

Research on wild harvesting in Spain

www.ctfc.cat
Medicinal and aromatic plants wild harvesting in Spain

Research (1997-2012)

• PROJECTS: 3
  ➢ Catalonia (1997-1999)
  ➢ León, Castilla La Mancha (2008-2011)
  ➢ La Rioja (2010-2011)

• STUDIES: 15
  ➢ 1 Spain
  ➢ 1 Castilla La Mancha
  ➢ 13 Catalonia
Medicinal and aromatic plants wild harvesting in Spain

Research (1997-2012)

- PROJECTS: 3
  - Catalonia (1997-1999)
  - León, Castilla La Mancha (2008-2011)
  - La Rioja (2010-2011)

- STUDIES: 15
  - 1 Spain
  - 1 Castilla La Mancha
  - 13 Catalonia

- SPECIES: 13
  - 10 Gentiana lutea
  - 6 Thymus vulgaris
  - 5 Arnica montana
  - 3 Arctostaphylos uva-ursi, Satureja montana, Lavandula angustifolia
  - 2 Lavandula latifolia
  - 1 Vaccinium myrtillus, Pinus sylvestris, Rosmarinus officinalis,
    Santolina chamaecyparissus, Salvia lavandulifolia, Equisetum arvense,
    Rosa canina, Sambucus nigra

---

Medicinal and aromatic plants wild harvesting in Spain

Research

1997-1999 – University of Lleida. To show the compatibility between gathering of natural aromatic and medicinal plants, the conservation of their natural area and the viability of its cultivation in the Pyrenees as an alternative crop. (LIFE97 ENV/E/000260). Financed by Life-Environment.

Student studies of University of Lleida:
Medicinal and aromatic plants wild harvesting in Spain

Research

1998-1999 – University of Lleida. Study of the regeneration of populations of *Gentiana lutea* and *Gentiana burseri* submitted to exploitation by root extraction and consequences of this activity in the habitat and in the same population in Cerdanya county. Financed by ACOM, Government of Catalonia.

2004 – Forest Sciences Center of Catalonia (CTFC). Study of the wild harvesting of medicinal and aromatic plants and proposal of recreational activities for disseminate its traditional uses in the Bon Repòs State. Financed by Provincial Council of Lleida.

Species: *Thymus vulgaris, Satureja montana*.


• Species: *Satureja montana, Thymus vulgaris, Lavandula angustifolia*.

2005-2006 – Study about the wild harvesting of *Gentiana lutea* and other plants of economic interest. Possibilities of common commercialisation between the municipalities of Cabrillanes, Villabino, Placios de Sil and Murias de Paredes (León). Plan 42, Ministry of Environment of the Junta de Castilla y León, a través del Plan 42.

Species: *Gentiana lutea, Vaccinium myrtillus*.
Medicinal and aromatic plants wild harvesting in Spain

Research

• Species: Arnica montana, Thymus vulgaris, Satureja montana, Lavandula angustifolia, Gentiana lutea.

• Species: Thymus vulgaris, Gentiana lutea, Arnica montana, Pinus sylvestris.

2008 – Forest Sciences Center of Catalonia (CTFC). Valorisation of medicinal flora in Els Ports Natural Park. Financed by Provincial Council of Tarragona, Obra Social “La Caixa”.
• Species: Rosmarinus officinalis, Thymus vulgaris, Lavandula latifolia, Santolina chamaecyparissus, Salvia officinalis subsp. lavandulifolia. (9)

2009 - Centre de Desenvolupament Rural Integrat de Catalunya (CEDRICAT). Use without abuse: sustainable use of wild plant resources as a way for its conservation and for the economic development in mountainous areas, Obra Social Caja Madrid.
• Species: Arnica montana. (2)
Medicinal and aromatic plants wild harvesting in Spain

Research


Medicinal and aromatic plants wild harvesting in Spain

Research


- Berries: *Rosa canina, Sambucus nigra*
- Medicinal and aromatic plants: *Arnica montana, Lavandula sp., Thymus vulgaris.*


Medicinal and aromatic plants wild harvesting in Spain

Technology transfer on wild harvesting in Spain

www.ctfc.cat

Medicinal and aromatic plants wild harvesting in Spain

Technology transfer (1997-2012)

• PROJECTS: 2
• STUDIES: 7
• TECHNICAL SHEETS: 7
• MAGAZINES: 1
• REFERENCES IN BOOKS: 1
• ARTICLES IN PROCEEDINGS: 2 (English)
• POSTERS IN CONGRESSES: 2 (1 English, 1 Catalan)
• ARTICLES IN JOURNALS: 6 (4 Spanish, 2 English)
• ARTICLES IN MAGAZINES: 15
• INTERNET: 3 websites
• DVD: 1

www.ctfc.cat
Medicinal and aromatic plants wild harvesting in Spain

Technology transfer (1997-2012)

- Species:
  - 6 Gentiana lutea
  - 3 Arnica montana
  - 2 Thymus sp.
  - 1 Vaccinium myrtillus, Arctostaphylos uva-ursi, Rosa canina, Achillea millefolium, Ramonda myconi, Lavandula sp.

www.ctfc.cat
Medicinal and aromatic plants wild harvesting in Spain

**Technology transfer: projects and studies**


This report reviews European trade and documents the results of in-depth studies in eight countries: Albania, Bulgaria, France, Hungary, Spain, Turkey and the UK. It identifies 150 species that could be at risk in one of several countries from over-collection in the wild.

[www.ctfc.cat](http://www.ctfc.cat)

---

1997-1999 – University of Lleida. To show the compatibility between gathering of natural aromatic and medicinal plants, the conservation of their natural area and the viability of its cultivation in the Pyrenees as an alternative crop. (LIFE97 ENV/E/000260). Financed by Life-Environment.

2002 – Forest Sciences Center of Catalonia (CTFC). *Viability study of the harvesting, manufacturing and trade of non wood forest products in the municipality of Josa and Tuixent (Lleida).* Financed by the County council of Alt Urgell.


[www.ctfc.cat](http://www.ctfc.cat)
Medicinal and aromatic plants wild harvesting in Spain

Technology transfer: projects and studies


Studies:
- MORÉ, E. 2004. Market research of MAPs in Catalonia

• Technical guides: Wild Herbs, root of *Gentiana lutea*, flower of *Arnica montana*, fruit of *Vaccinium myrtillus*, legislation

http://www.ctfc.es/silvapyr6/webcat/pampf.htm

www.ctfc.cat
Medicinal and aromatic plants wild harvesting in Spain

Technology transfer: projects and studies


2007. Special bulletin of wild harvesting of aromatic and medicinal plants. Editor Forest Sciences Center of Catalonia (CTFC). Financed by Fundación Biodiversidad (SMEs awareness on issues related to the environment). Catalan / Spanish

http://pam.ctfc.es/bulletin/

Technology transfer: projects and studies

2009 – Forest Sciences Center of Catalonia (CTFC). Study of the production viability of local species in the Alt Urgell county with industrial applications in the medicinal and aromatic sector. Financed by the Alt Urgell County Council and the Institute for the Development and Promotion of High Pyrenees and Aran (IDAPA)

• Proposal for the Valley of La Vansa-Tuixent to harvest wild medicinal flora for providing minor species to the market.
Medicinal and aromatic plants wild harvesting in Spain

Technology transfer: projects and studies

2009 - Centre de Desenvolupament Rural Integrat de Catalunya (CEDRICAT).
Spanish

• Species: Arnica montana.

www.ctfc.cat

Medicinal and aromatic plants wild harvesting in Spain

Technology transfer: projects and studies


www.ctfc.cat
Medicinal and aromatic plants wild harvesting in Spain

Technology transfer: posters in congresses


Technology transfer: articles in proceedings


Medicinal and aromatic plants wild harvesting in Spain

Technology transfer: references in books


- Legislation on wild harvesting activities.
- Wild sources of plant material in Spain.

Technology transfer: articles in journals


Medicinal and aromatic plants wild harvesting in Spain

Technology transfer: articles in journals


Technology transfer: articles in magazines

• Medicinal and aromatic plants wild harvesting studies and cultivation implantation in the Pyrenees. Butlletí ACPPAM num. 6, winter 2004. Catalan.


Medicinal and aromatic plants wild harvesting in Spain

Technology transfer: articles in magazines

2007. Special bulletin of wild harvesting of aromatic and medicinal plants. Editor Forest Sciences Center of Catalonia (CTFC). Catalan / Spanish

• MORE, E. The importance of wild harvesting in Europe. The current situation of the wild harvesting of medicinal and aromatic plants.
• MORE, E. The wild harvesting in Spain is concentrated in the south-east. The case of thymes. The current situation of the wild harvesting of medicinal and aromatic plants.
• FANLO, M. The activity in Catalonia. The current situation of the wild harvesting of medicinal and aromatic plants.
• MORE, E. Interviews to harvesters in Spain.
• MELERO, R. Legislation that could affect the wild harvesting of medicinal and aromatic plants in Spain.
• CRISTOBAL, R.; MELERO, R. Research on wild harvesting of medicinal and aromatic plants in Catalonia. What's on research?
• MELERO, R. The wild harvesting in Spain is concentrated in the south-east. The case of thymes. The current situation of the wild harvesting of medicinal and aromatic plants.
• PELLIN, P.P. The essences of the mountain, a rural alchemy.
• APROGEN. The project Gentian in the mountains of León. What's on research?
• BLANCO, E. Possibilities of exploitation in Castilla y León. What's on research?
• ROMERO, R. Ecological, molecular and medicinal compounds yield characterisation of Arnica montana in Galicia. Potencial valorisation as an alternative cultivation.
• MELERO, R. Guide of good harvesting techniques of MAPs. The sheet.
• CRISTOBAL, R. Elaboration process of an International Standard for the sustainable wild harvesting of medicinal and aromatic plants (ISSC-MAP).
• PELLIN, P.P. The essences of the mountain, a rural alchemy.
Medicinal and aromatic plants wild harvesting in Spain

Technology transfer: internet


Information on:
• Harvesting calendar.
• Harvesting alerts.
• Harvesting info.
• Plants sheets (toxic an protection info).

http://www.herbam.net

www.ctfc.cat

Medicinal and aromatic plants wild harvesting in Spain

Technology transfer: internet

Informative blog on medicinal and aromatic plants. Catalan

APSB-CTFC

http://infopam.wordpress.com

http://www.ctfc.cat

Wild harvesting posts:
• 4th May 2012. Seminar: wild harvesting of medicinal plants in Andorra (Teruel)
• 28th November 2011. Video: memory of the turpentine harvesters in Tuixent-la Vansa
• 27th June 2011. Seminar: Demonstration of wild harvesting of thyme in France
• 2nd November 2010. Interview: harvester of medicinal plants for homeopathic laboratories

68 posts tagged “harvesting”
• Mainly courses of: MAPs botanical recognition and harvesting walking for products elaboration.
Medicinal and aromatic plants wild harvesting in Spain

Technology transfer: internet

Harvesting of medicinal plants from the wild and cultivation. Spanish

http://www.ecoaldea.com/plmd/recoleccion.htm

- Harvesting according to part of the plant.
- How to dry.
- How to preserve.
- Harvesting calendar.

Technology transfer: others

2005 - DVD: Production of medicinal and aromatic plants. CTFC and Unit of audiovisual production, Center for agrorural studies and training, Department of Agriculture, Government of Catalonia. Catalan, Spanish, English, French

- Interview to a gentian harvester and a medicinal plants harvester in the Pyrenees in Catalonia.
- Species: Gentiana lutea, Rosa canina, Achillea millefolium, Ramonda myconi
Medicinal and aromatic plants wild harvesting in Spain

Training on wild harvesting in Spain

Training (1997-2012)

- SEMINARS: 5 (4 Catalonia, 1 Castilla y León)
- LECTURES IN SEMINARS: 19
- LECTURES IN COURSES: 4 (3 Catalonia, 1 Aragón)
- A lot of COURSES for MAPs botanical recognition and harvesting walking for products elaboration

- Species:
  - 4 Gentiana lutea,
  - 2 Arctostaphylos uva-ursi
  - 1 Colchicum autumnale, Thymus sp.
Medicinal and aromatic plants wild harvesting in Spain

Training: Seminars

2000 – Conservation and exploitation of wild species of medicinal use. Organised by CTFC. Solsona (Lleida), 7th April 1999. Catalan

• CODINA, C. Approximation to the study of Colchicum autumnale as a possible alternative cultivation in depressed agricultural areas.

• AYMERICH, P. Study of the natural regeneration models of the bearberry (Arctostaphylos uva-ursi).

• PERY, M. Programmes of the Department of Environment, Government of Catalonia, for the flora conservation.

• AIELLO, N. Cultivation essays of gentian (Gentiana lutea L.) in Italy. French

• MULET, S. Study of the regeneration and multiplication models of gentian (Gentiana lutea L.)


• AGELET, A. The use of healing flora in the folk culture of Catalonia.

• MORÉ, E. Current international market of medicinal and aromatic plants.

• BLANCO, E. Environmental and economic impact of the use of aromatic and medicinal plants in Spain. Spanish

• CONESA, J.A. Interesting populations of medicinal and aromatic plants for the industry. Distribution and ecology.

• CONESA, J.A. Legal frame for the wild harvesting activity in Catalonia and Spain.

• QUERALT, J. Wild harvesting of Gentiana lutea L.
Medicinal and aromatic plants wild harvesting in Spain

Training: Seminars


- BLANCO, E. Wild harvesting of *Thymus* sp. in Spain. Spanish
- RECASENS, J. Wild harvesting of *Arctostaphylos uva-ursi* L. in the Catalan Pyrenees.
- FANLO, M. Possibility of wild harvesting of healing flora in the valley of La Vansa-Tuixent and its trade.
- CRISTOBAL, R. Good harvesting techniques guide for medicinal and aromatic plants.
- SCHIPPMAN, U. Impact of cultivation and collection on the conservation of medicinal plants: global trends and issues. English

www.ctfc.cat


NWFPs: MAPs, mushrooms and truffles, fruit, cork, honey and resins.

- Current situation regarding production of goods and services and sustainable forest management in the Mediterranean region
- Use, transformation and commercialisation.
- Sustainability of NWFP use in the Mediterranean region
- Relation between the use of the Mediterranean forest as a NWFP producer and other uses, such as tourism, grazing or wood production
- Integration and enhancement of NWFP production in national and international policies concerning forest and rural development and natural environment management

www.ctfc.cat
Medicinal and aromatic plants wild harvesting in Spain

Training: lectures on seminars

- CRISTOBAL, R. Current situation of exploitation of MAP’s. From wild harvesting to cultivation.

- MELERO, R. The gentian in Catalonia: legal state, exploitation and uses.

- MELERO, R. Sustainable harvesting of medicinal and aromatic plants as a conservation measure.

Training: lectures in courses


CRISTÓBAL, R. Sustainable harvesting of Medicinal and Aromatic Plants. Invited lecture in the class subject “Sustainable exploitation of the forest”. School of gardening Rubió i Tudorí. Barcelona, 26th March 2007. Catalan


SAZ, P. 2012. Harvesting and preservation of plants. Graduate Course of Naturist Medicine, University of Zaragoza. Spanish

www.cfic.cat
Medicinal and aromatic plants wild harvesting in Spain

Research, Technology transfer and Training

<table>
<thead>
<tr>
<th>STRENGTHS</th>
<th>WEAKNESSES</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Research on commercial medicinal plants (Gentiana lutea, Arnica montana, Arctostaphylos uva-ursi).</td>
<td>- More importance of the cultivation.</td>
</tr>
<tr>
<td>- High interest in Catalonia and León.</td>
<td>- Few training on wild harvesting techniques.</td>
</tr>
<tr>
<td></td>
<td>- No economic studies on harvesting activity (only conservation ones)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>OPPORTUNITIES</th>
<th>THREATS</th>
</tr>
</thead>
<tbody>
<tr>
<td>- Training to domestic harvesters on sustainable techniques.</td>
<td>- Decreasing of wild harvesting knowledge (botanical, habitat)</td>
</tr>
<tr>
<td>- Rural development projects (mainly in mountains).</td>
<td>- Few revenue.</td>
</tr>
</tbody>
</table>

www.ctfc.cat

Thank you for your attention