Interaction of farmers and gene banks - aromatic and medicinal plants in Switzerland
Switzerland
A country in the middle of Europe, made of rolling hills, lakes and high mountains
Switzerland

- Area: 41’000 km²
- Altitude: 195 m - 4634 m
- 26 cantons, 4 national languages
- Political system: federalism, direct democracy

Forest ~30%
unproductive ~25%
mountains, glacier...
Agriculture ~24%
Viticulture 0.3%
Grassland ~13%
Cities, infrastructures ~7%

Aromatic and medicinal plants: ~250 ha
~200 growers
Location of the essential oil distillery

Bassins, 722 m elevation
Historical background

1963 Joint venture of two small farmers Pierre Genevay and Karl Velan to cultivate their 30 ha land together

1972 First experiments in cultivating aromatic plants for the perfume industry ending in 1975 in building a distillery in Bassins to process Salvia sclarea and Anethum nobilis

1985 Jean-Marc Genevay takes place in the company and is joined by Frederic Guenin in 2000….

2018 …43 years of experience

A SUCCESS STORY
The essential oil distillery of Bassins

- Largest essential oil distillery in Switzerland
- Essential oil from 20 different plants, included conifers
- > 50 ha crops at different altitudes for a scaled harvest time
- Pioneers in selection, seed production and cultural practices
- Research of cultivars adapted to local soil and climatic conditions
- Innovative on-farm experiments to develop new products

- 2002 Start to market own cosmetic products and essential oils
### The gene bank of Switzerland

Leaded by Beate Schierscher, Agroscope, Changins, Nyon (VD)

<table>
<thead>
<tr>
<th>Plant species</th>
<th>Number of accessions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Wheat <em>(Triticum estivum)</em></td>
<td>5258</td>
</tr>
<tr>
<td>Spelt <em>(Triticum spelta)</em></td>
<td>2261</td>
</tr>
<tr>
<td>Barley <em>(Hordeum vulgare)</em></td>
<td>799</td>
</tr>
<tr>
<td>Triticale <em>(x Triticosecale)</em></td>
<td>846</td>
</tr>
<tr>
<td>Rye <em>(Secale cereale)</em></td>
<td>73</td>
</tr>
<tr>
<td>Mays <em>(Zea mais)</em></td>
<td>410</td>
</tr>
<tr>
<td>Oat <em>(Avena sativa)</em></td>
<td>45</td>
</tr>
<tr>
<td>Soya bean <em>(Glycine max)</em></td>
<td>37</td>
</tr>
<tr>
<td>Vegetables (42 different species)</td>
<td>629</td>
</tr>
<tr>
<td>Forage plants</td>
<td>98</td>
</tr>
<tr>
<td><strong>Aromatic and medicinal plants</strong></td>
<td><strong>381</strong></td>
</tr>
</tbody>
</table>
Medicinal and aromatic plants in the Swiss national gene bank


- Resulted in a National inventory
- 381 accessions for 86 plant species
- Multiplication ongoing
- In the future most of them could join the Svalbard Global Seed Vault
Clary sage (Salvia sclarea)

1984 First accessions of aromatic and medicinal plants in the gene bank from the essential oil distillery of Bassins

Clary sage (Salvia sclarea) white and blue flowers, selected by an Austrian botanist working for a fragrance and flavour company multiplied by the distillery since 1975

A WIN-WIN joint-venture
- The distillery regenerate regularly seeds from this species to grow on large scale and uses facilities on the gene bank to achieve this job
- Conservation of the seeds assumed by Agroscope

Samples deposited TODAY
1985 Essential oil distillery of Bassins started growing parsley, a biannual plant to gain oil from the flowers

- Seeds from the seed company Blank (Switzerland)
- The company disappeared in 1992
- Seeds are than produced by the distillery itself and have been recently introduced in the national genebank (Agroscope)
- Essential oil of parsley is based of most of the worldwide perfumes and alimentary industry

A clever way of growing biannual plant: simultaneous seed of parsley between sunflowers

Parsley grow in the shadow under the sunflowers
Perspectives and conclusions

On-farm development
- use and conservation
- provide gene bank with material
- exchange of experiences

Swiss National Genebank
- conservation
- description
- documentation
- free distribution
- research of genetic resources in other genebanks
Perspectives and conclusions

Plants grown and seed-multiplied by the essential oils distillery of Bassins

Dill
*Anethum graveolens*

Angelica
*Angelica archangelica*

Lovage
*Livesticum officinale*

Common sage
*Salvia officinalis*

Hysope
*Hysopus officinalis*

Lavender
*Lavandula angustifolia*

Origano
*Origanum vulgare*

Garden thyme
*Thymus vulgaris*

+ 28 species of the Swiss conservation list, in stage of multiplication at Agroscope…..
….will be available for the GSV, Thanks farmers initiatives and competences

Thank you for your attention…
Essential oil distillery of Bassins (Switzerland)
Jean-Marc Genevay et al., Svalbard Global Seed Vault, 10 years anniversary

...and welcome in Switzerland to discover essential oil for wellness

www.distilleriedebassins.ch