



## Wild harvesting business of medicinal and aromatic plants in Lithuania

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## The most important MAP species wild collected in Lithuania for a commercial use

		t/year
<i>Rubus idaeus</i>	leaves	7.2
<i>Urtica dioica</i>	leaves	6.7
<i>Arctostaphylos uva-ursi</i>	leaves	6.2
<i>Thymus</i> spp.	herb	5.6
<i>Hypericum perforatum</i>	herb	4.7
<i>Cetraria islandica</i>	thallus	3.9
<i>Artemisia absinthium</i>	herb	3.7
<i>Menyanthes trifoliata</i>	leaves	3.7
<i>Vaccinium vitis-idaea</i>	leaves	3.0
<i>Lycopodium</i> spp.	spores	2.6

## Biogeographical regions



EEA (European Environment Agency) Report No 1/2002

## Production estimation

5320 forest plots, 15 % of territory in 1979-1990

- Area occupied
- Relief
- Type of soil
- Type of vegetation
- Age of trees

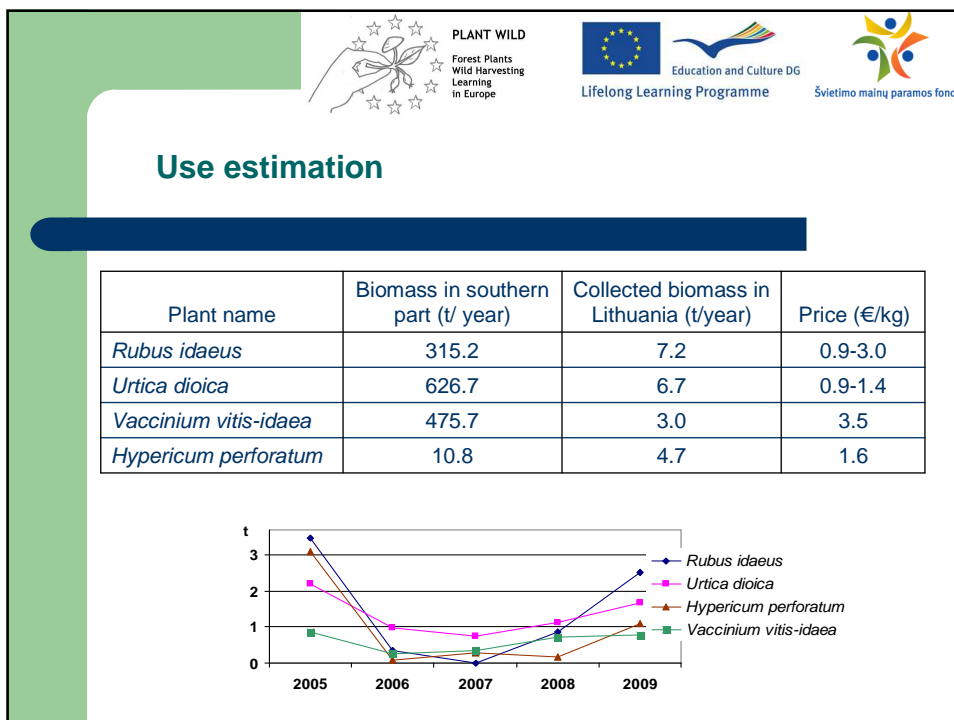
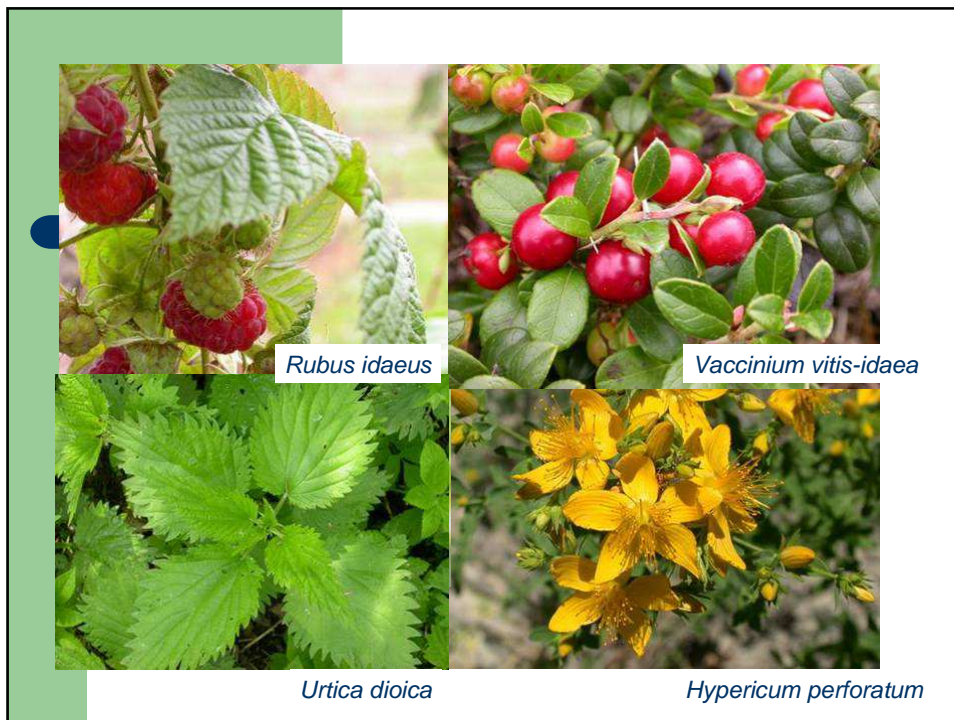
200 MAP species

- Abundance (species cover %).
- State of population.

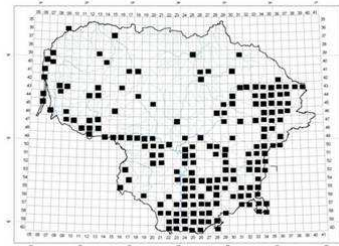
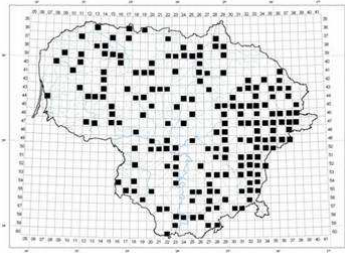
## Production estimation

- Area occupied by various vegetation types (VT)
- Biomass of MAP species in each VT
- Part of biomass available for collection
- Year of return
- Mass of raw material could be collected annually

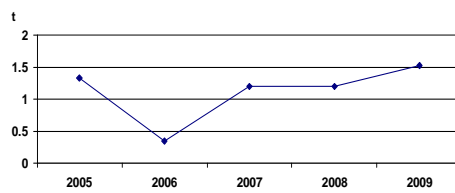




## Distribution of *Thymus pulegioides*    *T. serpyllum*



## Use estimation (*Thymus* spp.)



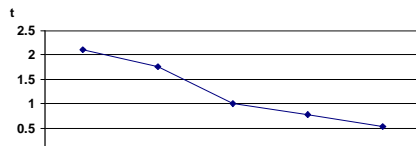
15.8 t annually in southern part of Lithuania

Price 2.9 (€/kg)

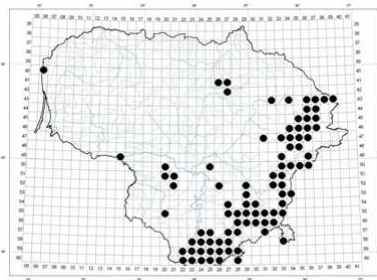




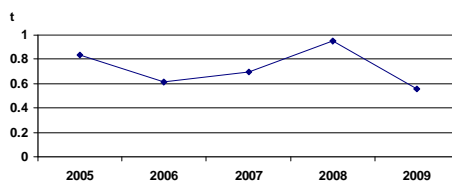
## Distribution and use estimation of *Arctostaphylos uva-ursi*



12.6 t annually  
Price 3.8 (€/kg)

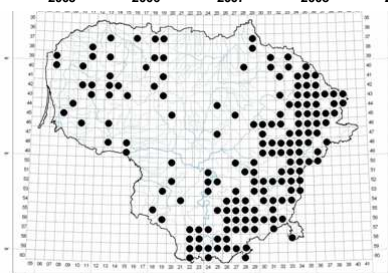


## Distribution and use estimation of *Menyanthes trifoliata*

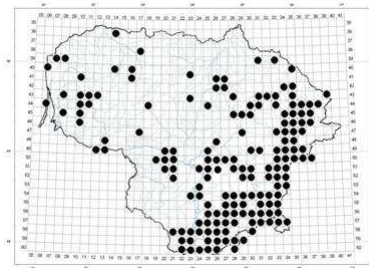


21.2 t annually

Price 4.9 (€/kg)

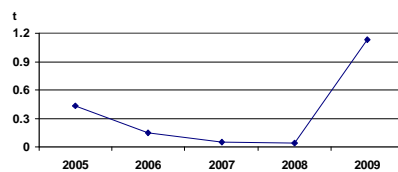


## Distribution of *Lycopodium clavatum*



*Lycopodium* sp

## Use estimation of *Lycopodium* spp.



Price 19 (€/kg)

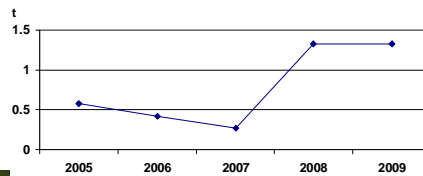


*L. annotinum*

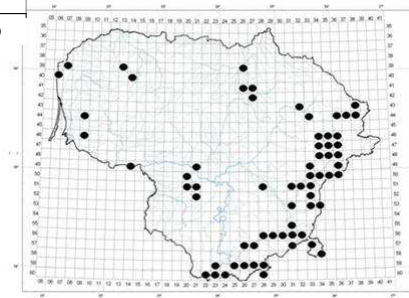


*Diphasiastrum tristachyum*

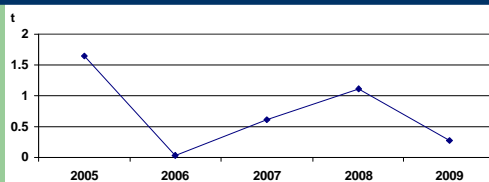
## Distribution and use estimation of *Cetraria islandica*



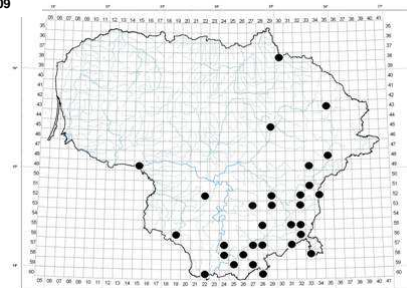
Price 3.2 (€/kg)



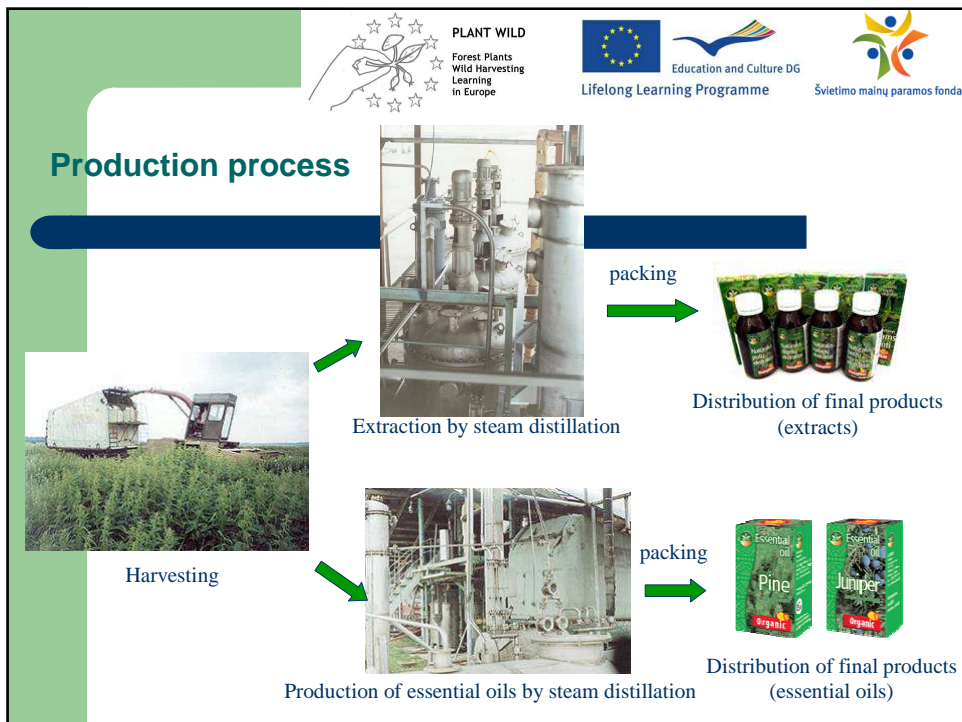
## Distribution and use estimation of *Artemisia absinthium*



Price 1.14 (€/kg)

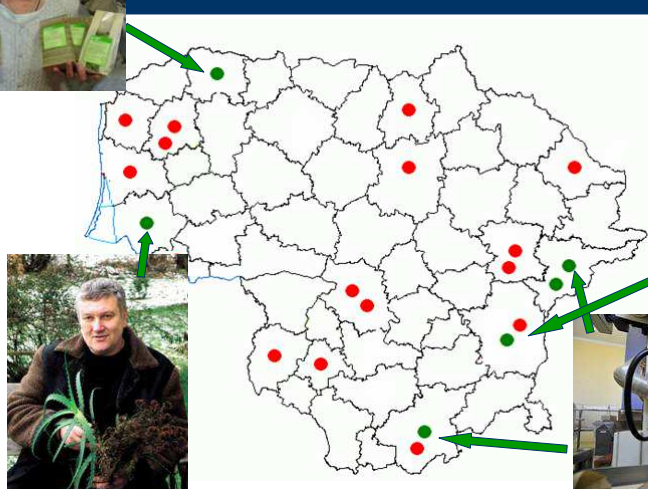








## Enterprises dealing with MAPs WH



## Training needs

	Importance	Training subjects						
		Sustainable WH techniques	Good collecting practices	Transformation training	Good manufacturing practices	Products elaboration	Commercialisation and market aspects	Normatives and procedures
Local population	1	x	x	x				
Group of harvesters	1	x	x	x				
Professional harvesters	1	x	x	x			x	x
Enterprises	1	x	x	x	x		x	
Forest owners	4		x	x			x	
Wholesalers	3				x		x	x
Companies	3				x		x	x

## Training needs

	Training actions							
	Regular training	Voluntary training	leaflets, posters, CD, DVD	technical documents	open seminars	mobile apps	media actions	on-line training
Local population		x	x		x		x	
Group of harvesters	x	x	x		x		x	
Professional harvesters	x		x	x	x			
Enterprises	x		x	x	x			
Forest owners		x	x		x		x	
Wholesalers	x		x	x	x			
Companies	x		x	x	x			x

## Strongnesses

- Gradual increase of non-timber forest production in the last five years.
- Harvesting of MAP had old traditions and provides additional income for the local community.
- Use of waste of timber industry (pine and birch branches) for production of extracts and essential oils.
- Inventory of plant resources and elaborating of sustainable MAP harvesting methodology have been carried out from 1980.



## Weaknesses

- Low prices of MAP raw material.
- Manufacturers and wholesalers prefer large quantities of raw materials.
- Most collectors are old people.
- Lack of the people's knowledge on sustainable harvesting and use of MAP.



## Threats

- Spontaneous market and weak control lead to the overexploitation of MAP resources.
- Great demand on plants with limited resources or long period of restoration.
- The self-educated harvesters become physicians and instruct customers.
- Increased cutting intensity and decreased forest stand age could impact MAP species composition and resources.

## Opportunities

- Broader use of waste of timber industry for production of extracts and essential oils.
- Great unused resources of common MAP species.
- There are many abandoned lands where various MAP could be harvested.
- Land and forest owners are highly potential harvesters for sustainable use, maintain and restoration of MAP wild resources.

