

# Agroforestry – an opportunity for regional development and rural landscape sustainability



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# What is agroforestry?



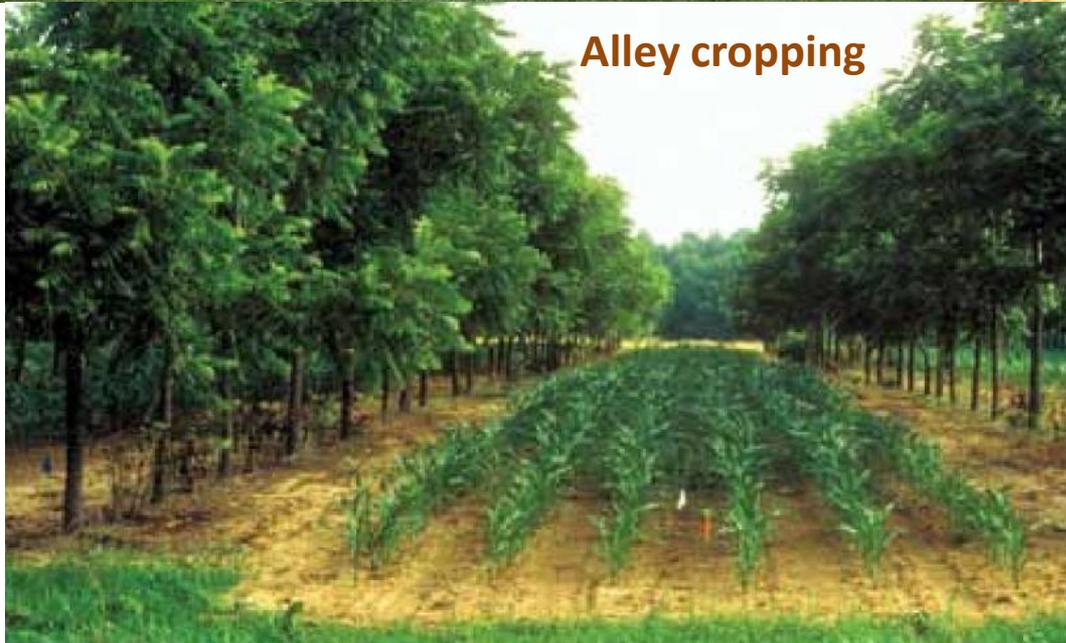
# Defining agroforestry in Europe

- EU regulation 1325/2013  
Agroforestry means that the soil is used in a way that trees are grown in a combination with agricultural production on the same soil unit.
- ČSAL (Czech Agroforestry Society)  
Agroforestry is the management of agricultural or forest soil combining the planting of trees with some form of agricultural production on a specific piece of land– either in terms of time or space. To be called agroforestry, the components of the agroforestry system (wood plants, crops, animals and/or others) must be grown and/or kept with an economic, environmental or cultural intention.
- Agroforestry (AF) = growing of trees/wood plants by farmers (on agricultural soil)
- The definition is generally very broad – different types must be defined for implementation

**Silvopasture**



**Alley cropping**



Extent and distribution of agroforestry in Europe based on LUCAS data categorised according to the three different systems and total extent.

Country	Total territorial area	Utilised Agricultural area (UAA) <sup>a</sup>	Arable agroforestry	Livestock agroforestry	High value tree agroforestry	All agroforestry	Estimated proportion of total territorial area	Estimated proportion of UAA
	1000 ha	1000 ha	1000 ha	1000 ha	1000 ha	1000 ha	%	%
Austria	8388	2878	1.3	158.2	23.3	160.8	1.9	5.6
Belgium	3053	1358	0.0	43.7	2.5	43.7	1.4	3.2
Bulgaria	11090	4476	3.3	866.5	26.7	869.9	7.8	19.4
Cyprus	925	118	3.8	43.6	10.3	47.5	5.1	40.1
Czech Republic	7887	3484	0.0	45.8	7.2	45.8	0.6	1.3
Denmark	4290	2647	1.2	14.9	0.0	16.2	0.4	0.6
Estonia	4523	941	0.0	14.4	0.0	14.4	0.3	1.5
Finland	33843	2291	0.0	158.1	0.0	158.1	0.5	6.9
France	54397	27837	5.7	1557.9	58.2	1562.2	2.9	5.6
Germany	35713	16704	5.7	257.7	35.8	263.5	0.7	1.6
Greece	13196	5178	15.2	1601.2	136.5	1616.4	12.2	31.2
Hungary	9302	4686	2.0	36.1	2.0	38.1	0.4	0.8
Ireland	6980	4991	0.0	224.4	0.0	224.4	3.2	4.5
Italy	30134	12856	106.1	1303.6	202.2	1403.9	4.7	10.9
Latvia	6456	1796	0.0	23.4	0.0	23.4	0.4	1.3
Lithuania	6530	2743	1.7	36.9	8.4	38.6	0.6	1.4
Luxembourg	259	131	0.0	7.2	2.4	7.2	2.8	5.5
Malta	32	11	0.0	0.4	0.0	0.4	1.3	3.5
Netherlands	4154	1872	0.0	27.8	3.7	27.8	0.7	1.5
Poland	31268	14447	2.9	97.5	14.3	100.4	0.3	0.7
Portugal	8909	3668	76.5	1105.1	154.2	1168.3	13.1	31.8
Romania	23839	13306	10.0	878.2	80.1	888.2	3.7	6.7
Slovakia	4904	1896	2.0	41.9	2.0	43.9	0.9	2.3
Slovenia	2027	483	0.0	56.3	3.8	56.3	2.8	11.7
Spain	49851	23753	117.0	5490.0	260.7	5584.4	11.2	23.5
Sweden	43858	3066	2.0	463.6	2.0	465.5	1.1	15.2
United Kingdom	24853	16882	2.0	547.6	14.2	551.7	2.2	3.3
<b>EU-27 total</b>	<b>430659</b>	<b>174499</b>	<b>358</b>	<b>15102</b>	<b>1050</b>	<b>15421</b>	<b>3.6</b>	<b>8.8</b>

<sup>a</sup> Source: Eurostat online data sources: Farm structure statistics (2010). Available online: [http://ec.europa.eu/eurostat/statistics-explained/index.php/Farm\\_structure\\_statistics](http://ec.europa.eu/eurostat/statistics-explained/index.php/Farm_structure_statistics).

# The benefits of agroforestry

- **Social**

- higher job creation in rural areas, tackling the seasonal nature of production
- long-term financial investment which returns then harvesting the wood plants
- support of family-run farms and intergeneration exchange in farming

- **Cultural**

- support of a relationship with the landscape

- **Produkční a ekonomické**

- diverzita produktů při uchování nebo zvýšení celkové produkce
- multifunkční zemědělství a rozložení rizik hospodaření
- tvorba vysoce hodnotných produktů

- **Environmentální a ekologické – pozitivní vliv na složky životního prostředí**

- celkovou biodiverzitu, půdu, vodní režim v krajině
- stabilita lokálního klima, omezení průsaku živin, porušení podorniční desky
- globální změny - významná a dlouhodobá vazba uhlíku, změny klimatu
- Omezení eroze
- Omezení dopadu extrémních klimatických jevů (povodně, sucho)
- zlepšení welfare hosp. zvířat
- Nižší potřeba aplikace hnojiv a ochranných prostředků
- Ekologická stabilita krajiny a zvýšení biodiverzity

## Research project "Agroforestry" of the TACR *Éta AF potential in the South Moravian Region*

- Agroforestry – an opportunity for regional development and rural landscape sustainability
- Main researcher: Czech University of Life Sciences Prague
- Further researchers: Research institute Silva Taroucy for the landscape and decorative gardening, Mendel University in Brno, Ethnological institute of the CAS, Botanical institute of the CAS, Association of Private Farming of the Czech Republic
- Research area: Central Bohemian and South Moravian regions – application partners)

# These project outputs are planned

- Typology of the Czech landscape regarding the application of agroforestry systems
- Analysis of subsidy programmes for AF
- Stocktaking and classification of AF in the CR
- Study of environmental benefits of AF
- Study of legal barriers and opportunities for AF application in the CR
- Sociological study of the relationship of farmers to trees on agricultural soil
- Ethnological study of the use of trees in Czech farming

# Ethnological study

- In-depth ethnological research
- 25-30 farmers
- Ethnological research methods (e.g. the go-along methodology)
- recording the knowledge and opinions on trees in agro zones (without the AF context)

# Sociological study

- focus groups: semi-structured group discussions (emphasis on revealing the deeper context of the relationship of farmers towards trees in agricultural landscape in the context of AF)
- Standardised questionnaire survey (a representative sample and/or exhaustive investigation)
- Objective of the questionnaire survey:
  - farmers' attitudes towards AF
  - negative and positive expectations
  - risks and obstacles from the farmer's point of view (limiting factors)

**Thank you for your attention!**  
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*Find more information at:*

**ČSAL (Czech Agroforestry Society) – [www.agrolesnictvi.cz](http://www.agrolesnictvi.cz)**  
**EURAF – European Agroforestry Federation-**  
**[www.agroforestry.eu](http://www.agroforestry.eu)**