



TRansition paths to sUstainable legume-based systems in Europe

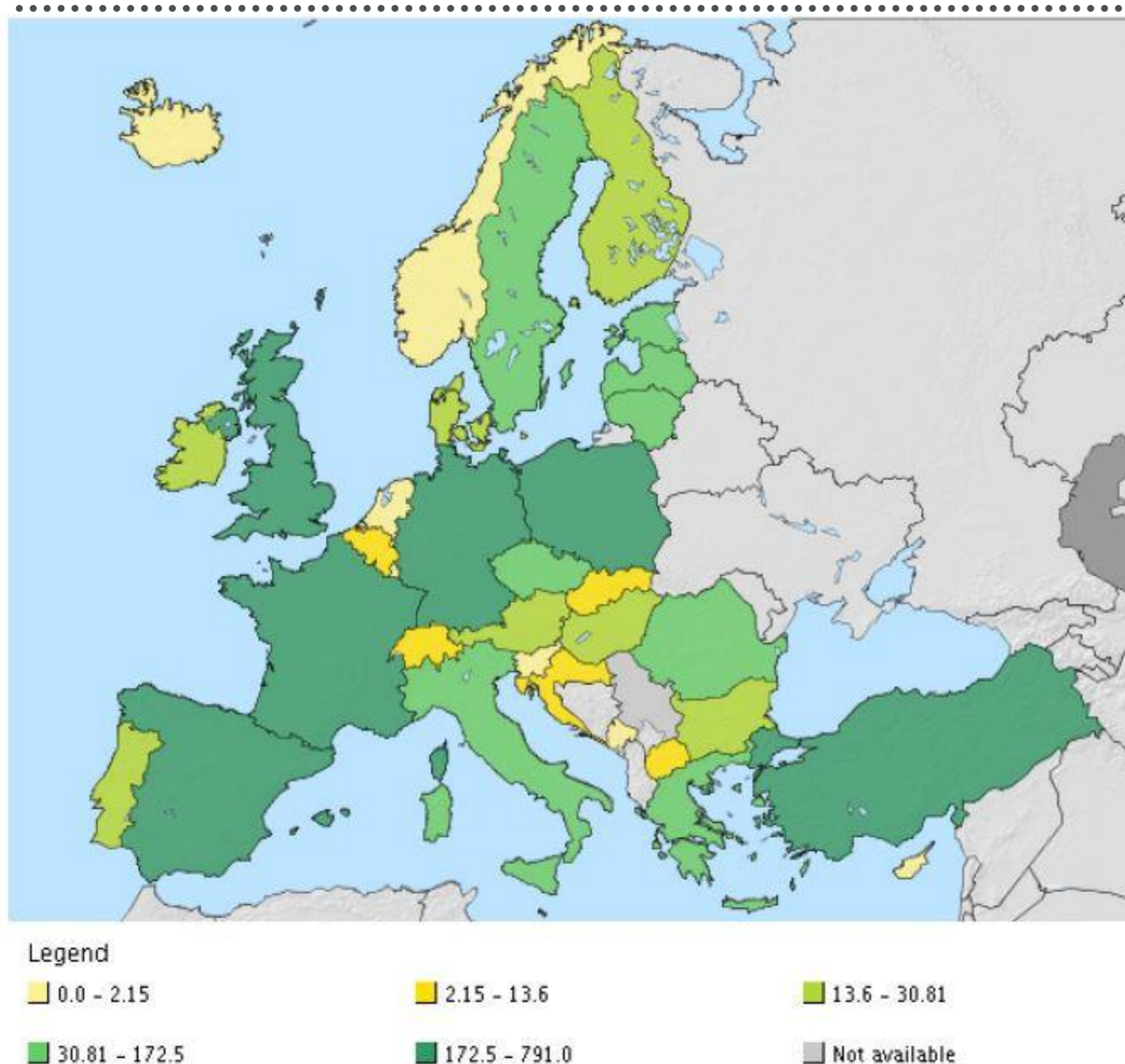
Legumes : their potential role in Croatian agricultural production

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Croatian Case study and Legume Innovation Network

REDEA's **Case Study** is focused on the research of current state of legume production and also on defining the most important factors that affect the development of legume production processes in Croatia. The general aim is to encourage and stimulate farmers to increase cultivation and production of these important crops and for consumers to raise awareness of their importance in a healthy diet. This aim will also be achieved through development of policy recommendation framework for sustainable development and also creation of the prerequisites for setting up the first **Croatian Legume Innovation Network**. At the end of the project implementation, all members of the Croatian Legume Innovation network will become part of an international network that will ensure the transfer of information and examples of good practices from different EU countries. In this way, members of the network will have the opportunity to acquire the specific knowledge and skills necessary to incorporate the legumes into their production systems and processes to enhance their current business.

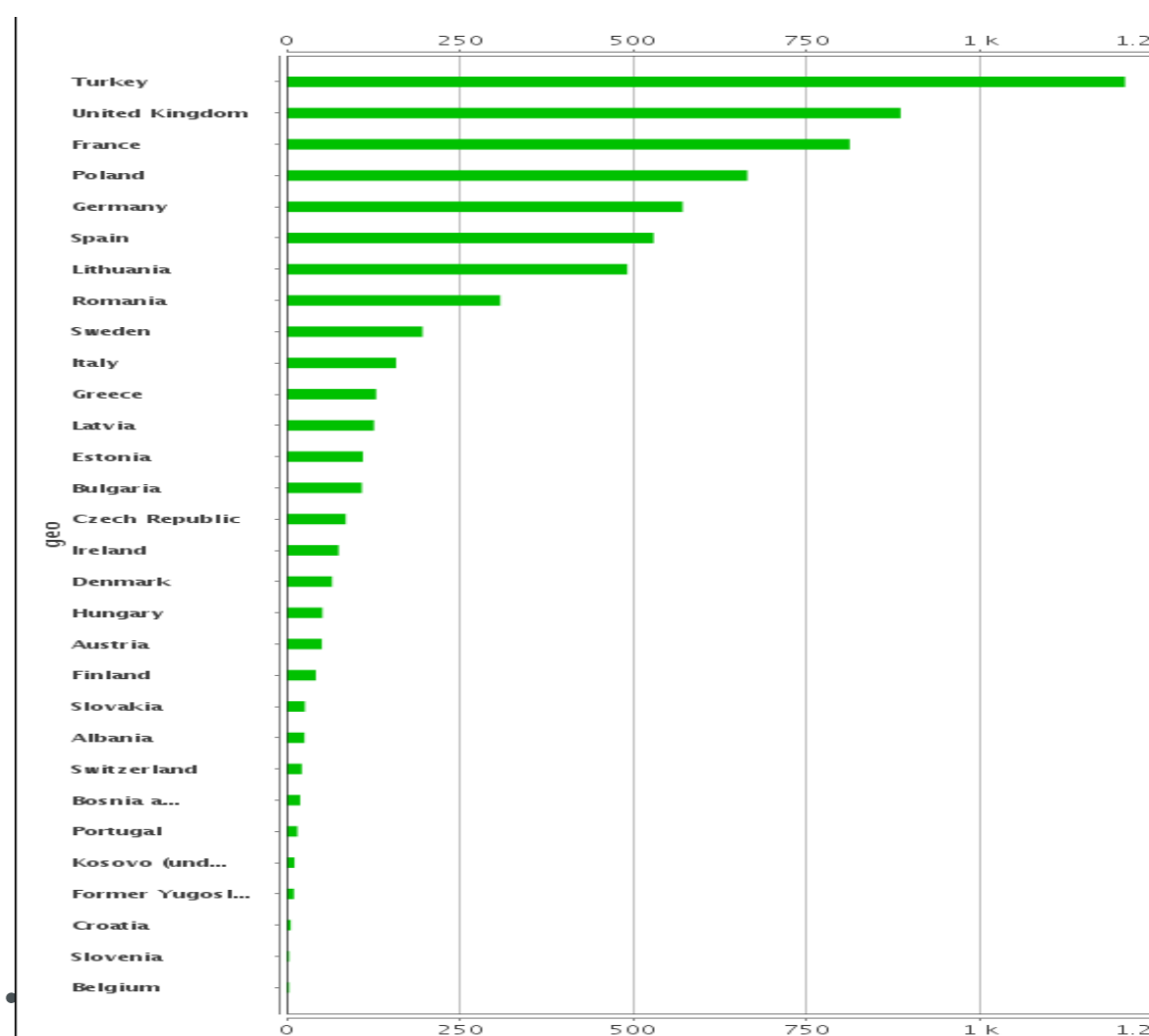


Cultivation, production and processing of legume crops in Croatia

Growing legumes comes down to small family farms who grown legumes exclusively for their own use. Farms engaged in crop production, use legumes as one component of crop rotation and for green fertilization. The farmers engaged in livestock production, grow legumes for the production of feed for livestock. But nevertheless, intensity of legumes cultivation is at the unenviable level. According to the data from Paying Agency for Agriculture, Fisheries and Rural Development in Republic of Croatia, legumes occupy a share of 12 % UAA (Utilized Agricultural Area) of which 7 % are cultivated for food and 5 % for feed. In the group of legumes cultivated for food there is evident predominance of soybeans, beans and peas and in the group cultivated for feed most common are alfalfa, clover, soybean and pea.

Case study:

- Identification of legume producers and processors.
- Types of legumes produced.
- Legume products and quantities.
- Monitoring the number of legume producers and processors.
- Monitoring trends regarding types and quantities of legumes produced and processed.
- Added value in legume production and diversification of legume based products.



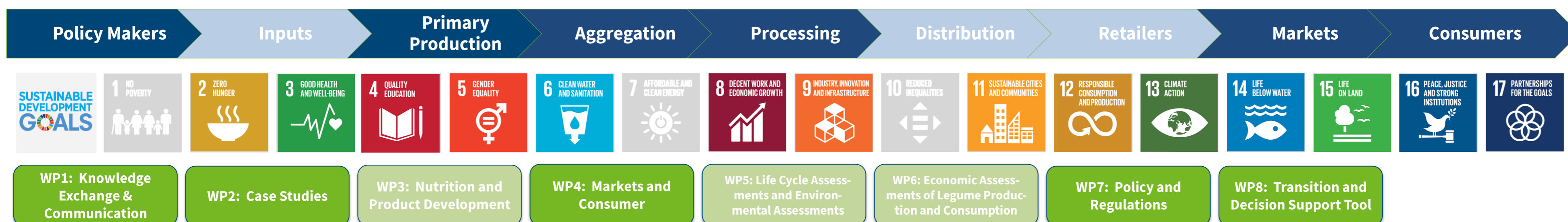
Legumes decrease the usage of artificial fertilizers

The Eurostat data shows that over the last couple of years in EU-28 the use of nitrogen fertilizers per hectare is increasing. The nitrogen fertilizer consumption per hectare of UAA increased during the period 2006-2015 in EU-28, from 67.4 kg/ha in 2006 to 74.4 kg/ha in 2015. The total volume of nitrogen fertilizer used in EU-28 agriculture increased around 5 %, to be more exact, from 10.8 million tones N in 2006 to 11.4 million tones N in 2015. In Republic of Croatia over 80 kg of nitrogen fertilizers is used per hectare of UAA, which classify Croatia as an intense user of artificial nitrogen fertilizers. There is a broad recognition that long term applications of fertilizer nutrients such as N and P lead to an enhanced risk of degradation and pollution.

	2015		
	Fertilised UAA (1000 ha)	Nitrogen/Fertilised UAA (kg N/ha)	Phosphorus/Fertilised UAA (kg P/ha)
EU-28	152 691	74.4	7.4
Belgium	1 321	108.7	2.6
Bulgaria	4 334	78.8	6.4
Czech Republic	3 458	114.8	6.1
Denmark	2 578	79.0	5.6
Germany	16 341	111.5	8.0
Estonia	953	37.6	3.9
Ireland	3 541	93.5	10.3
Greece	3 073	60.2	7.2
Spain	16 799	63.6	10.7
France	26 813	82.4	7.0
Croatia	1 081	80.9	11.9
Italy	11 171	46.4	6.7
Cyprus	115	65.4	6.9
Latvia	1 425	53.2	7.5
Lithuania	2 903	57.4	6.8
Luxembourg	131	99.1	3.9
Hungary	4 561	78.6	7.8
Malta	11	59.0	3.0
Netherlands	1 787	137.1	2.1
Austria	2 247	55.8	5.8
Poland	13 921	72.1	9.5
Portugal	2 098	57.7	9.2
Romania	12 907	27.7	4.5
Slovenia	413	68.6	10.0
Slovakia	1 855	72.5	5.9
Finland	1 998	71.8	5.5
Sweden	2 817	67.5	4.4
United Kingdom	12 039	87.1	7.1

Case study RESULTS

- implemented initiatives connected to enhancement of legume production and consumption
- educated farmers and consumers about benefits of legume production and consumption
- raised a public awareness about the nutritional value of all kinds of legumes
- increased daily consumption of legumes
- established Croatian Legume Innovation Network



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