

LEGUME CROPS FOR THE UK

Grain legumes are a sustainable source of home-produced plant proteins, both for humans and animal feed, but remain under-utilised. They are often considered difficult to grow and unreliable, though they bring many benefits to arable rotations.

Faba bean and pea are the UK's major legume crops, and research has led to many improvements in yield, quality, and disease resistance. Despite this, the combined area is relatively static at about 200,000 ha.

Could other legume crops increase the area, and provide diverse sources of protein?

Major legumes

	Pea	Faba bean
Cool season legume	Yes	Yes
Highest protein content	24%	29%
Drawbacks	Needs care at establishment	Yield instability
	Quality may be lost at harvest	Frequent bruchid damage



Soya plants



Lentils

Alternative legumes

	Lentil	Chickpea	Lupin	Phaseolus (navy/haricot) beans	Soya
Cool season legume	Yes	Yes	Yes	No	No
Protein content	25% (highest)	18% (highest)	38% (highest)	22% (average)	38% (average)
Key features	Frost tolerant, harvest late August	Limited frost tolerance, needs warm and dry seasons	Some limitations on high pH soils	Intolerant of cold soils, warm and dry conditions needed at end of season	Intolerant of cold soils, warm late summer temperatures needed to ripen
Current imports pa	25,000 t	75,000 t	Nil – used for on-farm feeding	50,000 t	1.9 million t soya meal & 0.75 million t of soya bean
UK production area estimate	12 ha	<10 ha	7,000 ha	<10 ha	3,000 ha

As a cool season food legume, lentil offers good adaptation to UK conditions, but progress in other crops has seen the successful harvest of small areas. Further developments in genetics and agronomy are needed, both for established and alternative legumes, to create reliable supply chains and novel uses in food products.