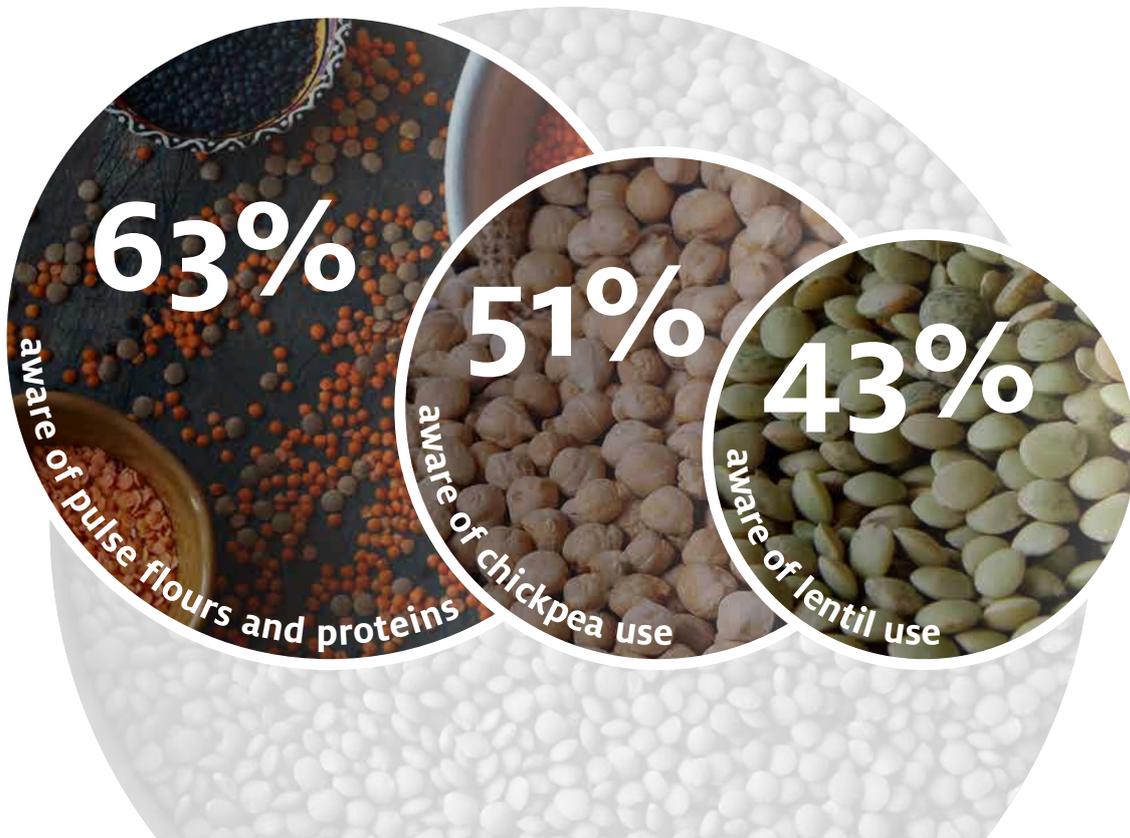


ON THE PULSE

What European consumers really think about pulses and where to use them*

THINK POSITIVE

63% of consumers surveyed are aware of pulse flours and proteins as ingredients and welcome their addition to food products. The use of chickpeas and lentils as ingredients were the most widely known.



WHAT'S SO GOOD ABOUT PULSES?

European consumers recognise pulses as ingredients and associate them with multiple perceived health benefits:

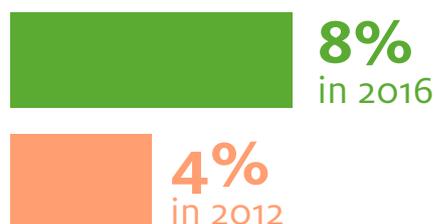


PROTEIN POWER

PLANT PROTEINS ARE ON TREND

Over the past 5 years, 25,145 new packaged products containing plant proteins have been launched in Western Europe. In 2012, 4% of all packaged food products contained plant proteins. This doubled to 8% in 2016**.

SHARE OF NEW PACKAGED PRODUCTS THAT INCLUDED PLANT PROTEINS:





When it comes to protein, European consumers recognise pulses as key ingredients and associate them with being high in protein.



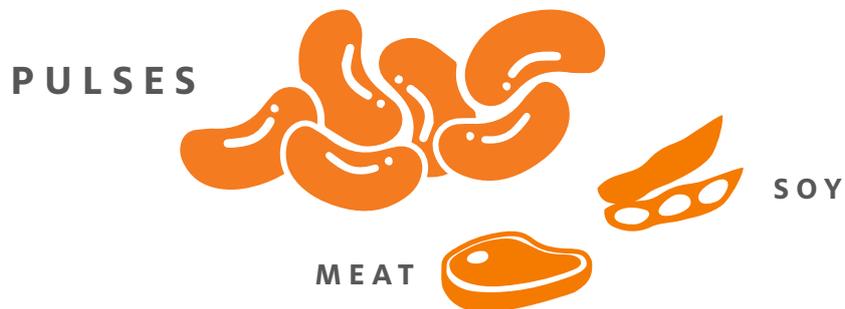
Pulse flours and protein concentrates are ideal sources of protein for food products with a vegetarian or vegan positioning.



1 in 4 consumers are aware that pulses like peas, chick peas, lentils and faba beans are high in protein.

32% liked a lentil soup for being high in protein.

PULSE PROTEINS ARE PREFERED OVER MEAT AND SOY PROTEINS



MAKING AN APPLICATION

Using pulses in applications like bread, meat and savoury snacks can increase consumer appeal. 75% of consumers liked chicken nuggets with a lentil flour batter instead of wheat flour and meat-free “chicken” nuggets made with lentil protein as they are perceived as a healthy and natural alternative to conventional options.

TAKING THE PULSE

Consumers know, like and understand the health benefits of pulses but they wonder about the impact on taste and colour:

“I fear that it changes the taste of the food”

Increasing use of clean taste pulse ingredients from Ingredion with their neutral flavour profile will overcome this and enable more flavour-sensitive applications to explore the benefits of pulses.

CLEAN TASTE PULSE APPLICATIONS ARE BROAD AND INCLUDE:

DAIRY

DAIRY
ALTERNATIVES

NUTRITION
MIXES

PASTA

SWEET
BAKERY

CEREALS
AND BARS

To find out more about how to formulate successfully with pulse flours and proteins, [click here](#) and browse our Pulsepedia.

Ingredion
idea labs™ ^{i2s}

*all figures refer to consumer research commissioned by Ingredion and carried out among 800 European consumers in the UK, France, Germany and Spain in 2017 unless indicated otherwise.

**figures from Mintel GNPD.

CLEAN & SIMPLE™ ^{i2s}

Ingredion.