

## Plant Protein and Plant-Based Meat Alternatives



### Market Overview

The rise of vegan and vegetarian food around the world is driven by the surge of consumers adapting to the flexitarian lifestyle. The flexitarian consumers make up 42% of the global market<sup>7</sup>, who wish to improve the nutrient density of their diet, although they may still consume meat occasionally. The more recent growth in the plant-based meat segment is aligned with the interest in plant-based diet as a healthier dietary pattern<sup>3</sup>.

### The Selection of Plant Protein Sources

Soy flour, soy protein concentrate, and soy protein isolate are commonly used to formulate meat-analogues<sup>10</sup>. Soy protein is a complete protein as it contains all essential amino acids with good gel-like properties and water holding capacity that are suitable for plant-based products, including plant-based burger patties, minced meat and sausages that mimic real meat products<sup>3,11</sup>.

Another common plant protein which is used during the meat alternative application is wheat gluten. It has the natural capacity to form thin protein films, and transform the meat analogue dough into a fibrous material which resembles the real meat texture<sup>5,9</sup>. Apart from being used as a structuring agent, wheat gluten is also able to function as a binding agent in meat analogue<sup>11</sup>.

Legume proteins from pea, lentil, lupine, chickpea, faba-bean, mung bean have exhibit advantages including emulsification and gel formation that crucial for shaping plant-based meat texture<sup>1,2,6,8,12</sup>. Among the types of protein which are suitable to be used to meat alternatives, pea protein has gained a lot of attention as it can be functionally used to bind water and fat, and create a firm texture after the thermal processing<sup>13</sup>.

## **Conclusion,**

Creating plant-based meat that is able to mimic meat from a nutritional and textural aspect can increase people's willingness to substitute (part of) their meat consumption<sup>10</sup>. The structural organization of plant-based meat is reliant on protein properties, in particular, the ability to retain liquids, gelation and solubilizing capabilities<sup>4</sup>. Therefore, choosing a suitable protein source remains one of the key aspects for plant-based meat alternative productions. At DPO, we are honoured to partner with **Beneo** and **Sinoglory** to bring you a wide range of ingredient choices that will elevate the quality of your plant-based meat products.

## References

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