

## POPULAR SCIENCE

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In the last couple of years, the offer of plant-based milk alternatives has increased tremendously. Milk alternatives made with oats, soy, or almond are showing up everywhere in the supermarkets or restaurants, and the question 'do you want cow milk or something else?' has become completely normal when ordering a coffee. Sproud is one of the companies that has made it their mission to sustainably create dairy alternatives, by using yellow split peas.

Milk can also be spray dried into a powder, and usually incorporated in products that you use on a day to day bases. Spray drying is a process that is used all over the world to make powders for example for medicine but also for food. A solution containing the ingredients is sprayed in a chamber filled with hot air. The water in the solution evaporates by this hot air, and a powder is formed that can be collected and packaged. In Sweden, the average person consumes about 2kg of milk powder each year. The soup you heated up for lunch, ice cream you bought on a warm summer day, or the cookies you took at work with a cappuccino from the coffee machine, probably all contain milk powder. Right now, all this milk powder used in so many different products comes from cows. To produce milk, these cows need a lot of resources to grow and live, while during their life also emit large amounts of greenhouse gasses. On top of that, more and more people have to or choose to eat more or only plant-based foods for instance because of a food allergy, or wanting to be more cautious of the environment and animal welfare.

If there is a way to take these animal-based milk powders that are currently used in food products, and replace them with a plant-based alternative, without changing the flavour of the food, it would not only decrease the amount of greenhouse gasses emitted but also make these foods available for almost everyone. In this research, an attempt was made to create a powder similar to milk powder, but then made from only plant-based ingredients. The good news is that it was actually possible to make, but to make this powder function exactly the same as regular milk powder, will take some more time. This is why it is very important to keep performing research on trying to create powders like these, without the use of animals and the negative aspects this brings to our society and environment.