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NewMoo creates Casein in plants for crafting Moo-Free Cheese

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Rehovot, Israel - Food-tech start-up NewMoo, Ltd. makes its debut in the â??happy cowâ? space by using plant molecular farming (PMF) to produce casein proteins for making cheese. Caseins comprise about 80% of the proteins in dairy milk. The resulting product allows cheesemakers to deliver the same genuine cheese experience as traditional dairy cheese via a cost-effective, animal-free, and sustainable pathway.

Until now, cheese alternatives have struggled to offer consumers the real cheese experience, nutrition, and price. Cheese analogs do not contain the key dairy proteins, caseins, necessary to precisely recreate the sensory properties of dairy cheese.

Creating dairy, without the cow

The scientists at NewMoo discovered a way to express casein proteins in plant seeds that can grow abundantly through traditional field agriculture. After three years of stealth, NewMoo unveils proteins that match dairy proteins in nutrition, composition, and function.

The start-upâ??s technology and concept are built on exclusive research and intellectual property derived at the Weizmann Institute of Science, in Rehovot, Israel. The innovation allows for the expression of two or more caseins within a single plant via a novel approach to plant molecular farming. The seeds are then sown in outdoor fields. After harvesting the plants, the NewMoo casein liquid base is produced through a unique development process that yields a hormone-free liquid casein naturally free of lactose and cholesterol and that replicates the functionality of dairy cheese.

â??Our animal-free liquid casein mimics all the functional traits of real milk protein for crafting cheese the traditional way,â? explains Daphna Miller, NewMoo co-founder and CEO. â??This means it can seamlessly replace dairy milk in any dairy cheese manufacturing facility without the need for any special equipment or reconfiguration of existing equipment. NewMooâ??s caseins can form the basis for a cheese that has the exact melting and stretching behavior as animal dairy cheese, and delivers the typical aroma, flavor, and texture that cheese eaters crave. Our animal-free proteins are literally identical to animal-derived caseins.â?•

NewMoo allows for a highly efficient, cost-effective process that sets the cow free from the industrial milk production process and sequesters carbon during natural cultivation. This makes for a more sustainable source of milk proteins.

Caseins are considered the â??holy grailâ?• of milk structure by the dairy industry. By developing animal-free caseins through plants instead of cows, it is possible to make almost any dairy product, starting with cheese.