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What is the effect of switching from a corn-based to a grass-based forage system on the contribution of dairy products to the human nutritional requirements?

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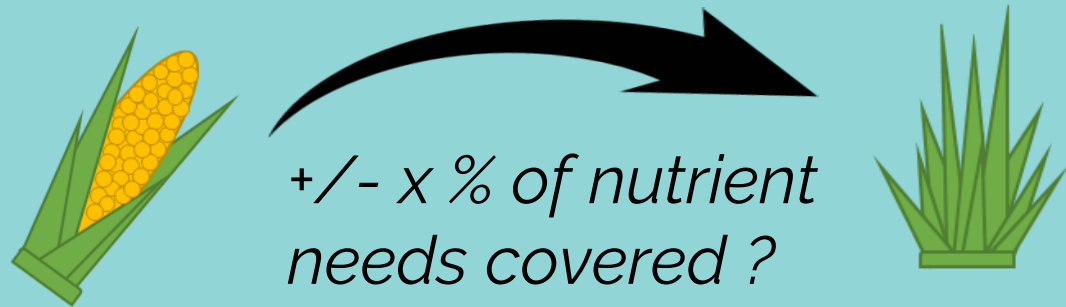
Agro

What is the effect of switching from a corn-based to a grass-based forage system on the contribution of dairy products to the human nutritional requirements?

Context

Grass-fed cows vs corn-fed cows: milk with higher nutritional value.

→ What effect on the contribution of dairy products to meeting human nutritional requirements if all the cows would switch from a corn-based to a grass-based diet?



Material & methods

Calculation of the contribution of dairy products to nutrient recommended dietary intake according to the dominant forage

→ If dairy consumption is constant

→ If all the milk is produced with a same dominant forage



EU consumption of dairy products

Concentration of nutrients in bulk milk / type of forage

EU consumption of nutrients through dairy products / type of forage

EU Dietary reference values for each nutrients



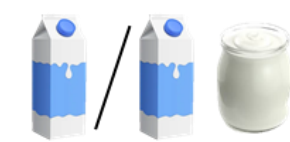
Results

Switching from a corn-based diet to a grass-based diet...

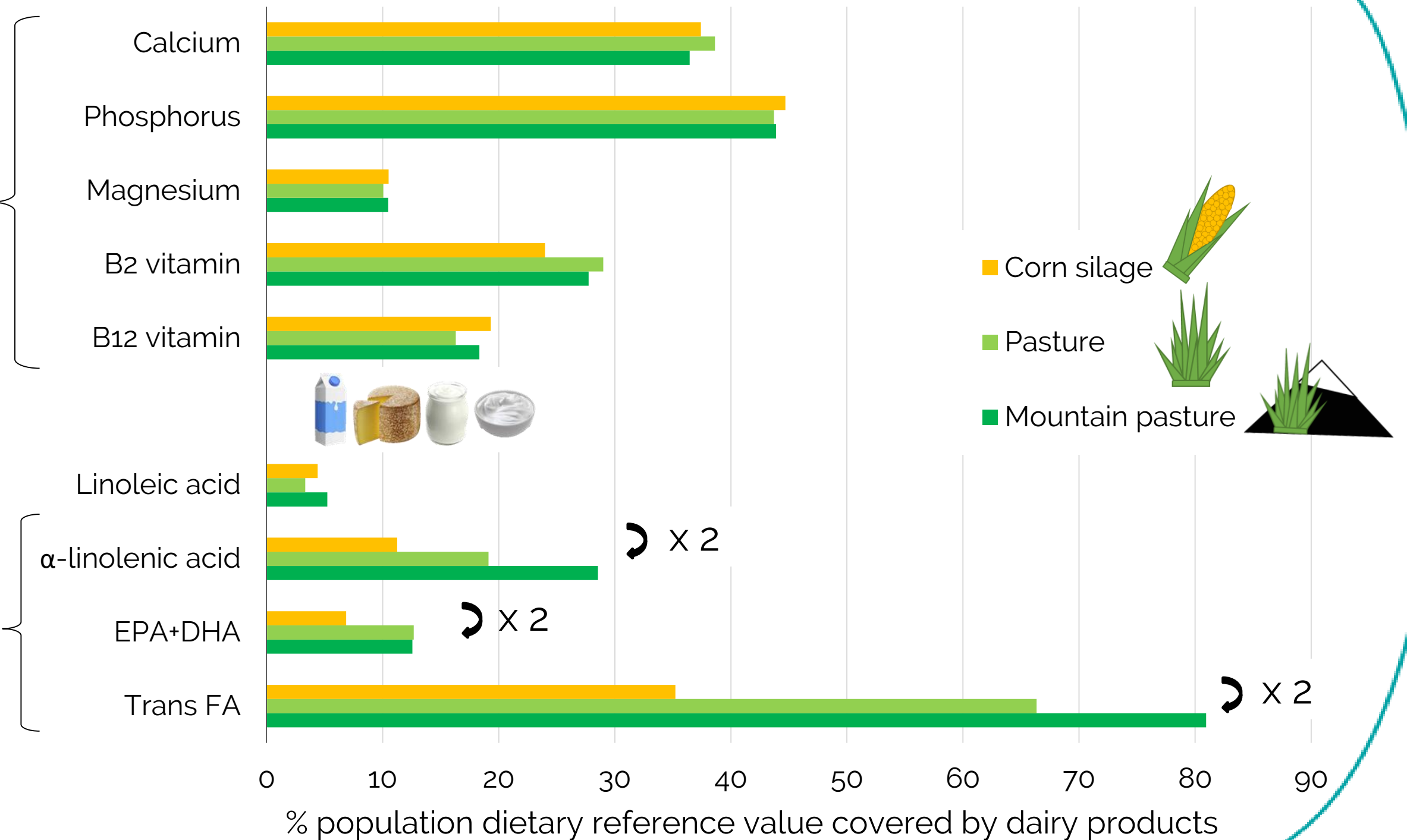
... had no major impact on the contribution of dairy products to meeting dietary reference values for mineral & B vitamins

... doubled the contribution of dairy products to meeting dietary reference values of FA:
+ pour essential FA
- For trans FA

... with a stronger effect with mountain than plain grass



Products taken into account (no or minor effect of process on nutrients content)



Conclusion & perspectives



No major impact on minerals & B vitamins
++ Essential FA coverage (but ++ trans FA)



Approach to be continued with integration of water-soluble vitamins & oligo-minerals and be extended to other animal-based products



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