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Reducing GHG emissions through animal feed

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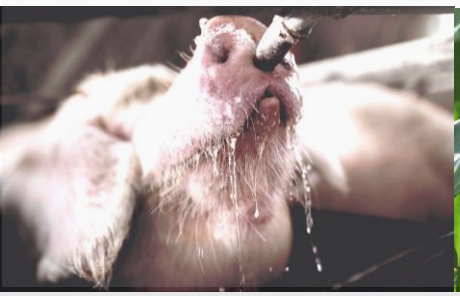


Reducing GHG emissions through animal feed

How to reduce GHG emissions through animal feed ?

In pig production, the main source of GHG emissions is feed production (over 50 %) while the second source is manure, whit emissions varying based on the nutritional value of the feed.

There are two main ways to reduce GHG emissions from feed :

1 INGREDIENTS USED

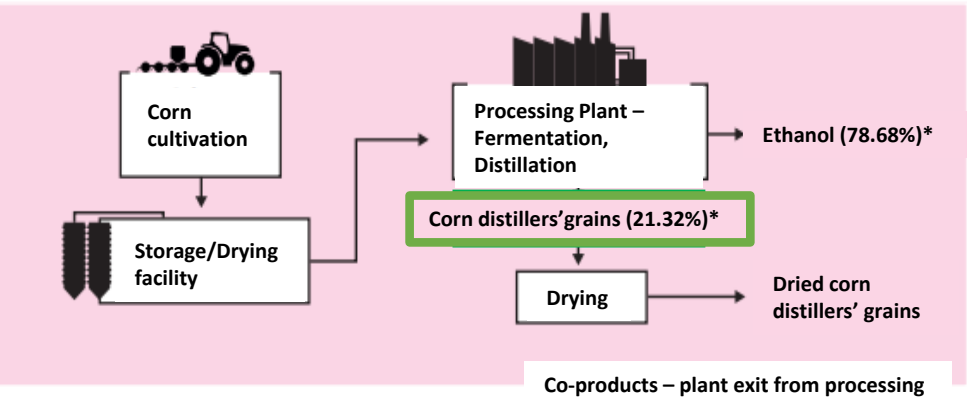
Replace cereals with **by-products of interest**

- Replacement with by-products **must not adversely affect performance**

Replace cereals with → **By-products / co-products** → **Ensure that replacement will not impact performance**

Sometimes requires the combination of several by-products!

A by-product of **lesser economic interest**, i.e. pig feed is not the primary reason for cultivation!



* % of economic allocation

Source: RMT - élevages et environnement, 2019

Local ingredients - Consistently good?

Not always environmentally advantageous !

- *Transport by boat has less impact than the equivalent transport by truck*
- *Importing ingredients from countries with better growing conditions (e.g. higher yields) could reduce GHGs, rather than growing them locally with lower yields.*

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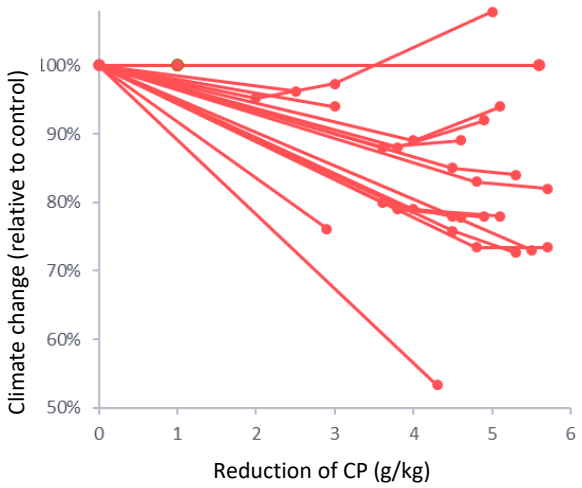
2 NUTRITIONAL VALUE OF FEEDS

Everything that can **positively affect feed efficiency (FE)** to reduce crude protein (nitrogen) waste and limit the quantities of ingredients used!

* **Aim for the same performance with fewer nutrients/feeds**
* **Aim for better performance with the same nutrients/feeds**

> **“ In both cases, nutrient (nitrogen) emissions will be reduced ! ”**

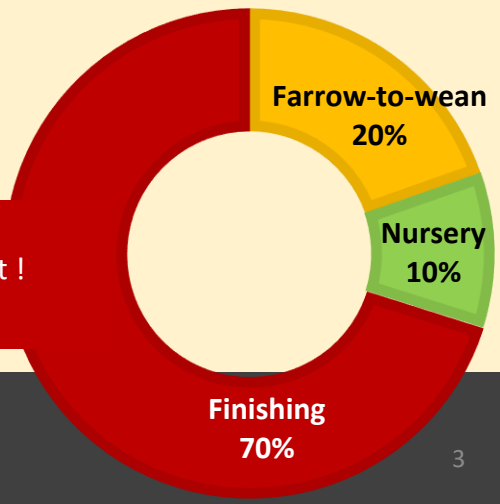


Reduced environmental impact of reduced crude protein (CP) intake in recent life cycle assessment studies in pigs

Feeding strategies to improve FE or reduce nitrogen intake

1. Use of synthetic amino acids
2. Food additives
3. Food particle size and texture
4. Precision feeding strategies

PROPORTION OF GREENHOUSE GASES PRODUCED BY LIVESTOCK CATEGORY



! Strategies targeting the finishing phase will have a greater impact !

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Plan pour une économie verte

Québec

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