

Optimal decision making in feeding dairy cows

Synergia WP3

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What to feed the cows?

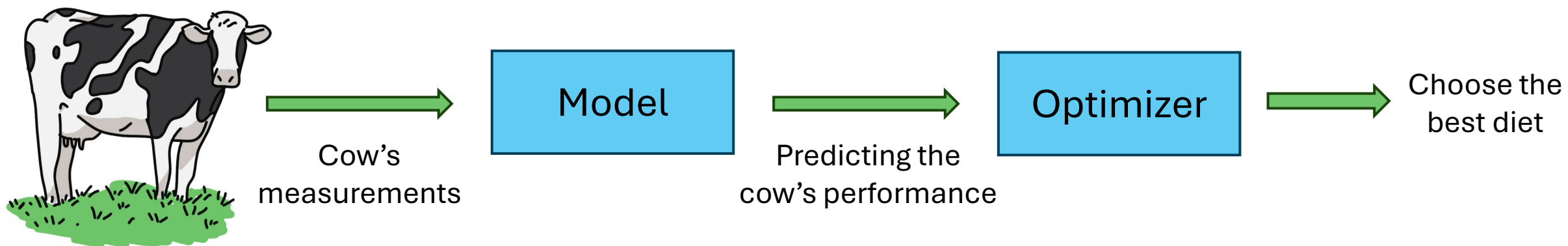
- Cow's milk production
- Farm's profitability
- Health of cow
- Carbon footprint

Dairy farming is unsustainable and not fully efficient.

This PhD:

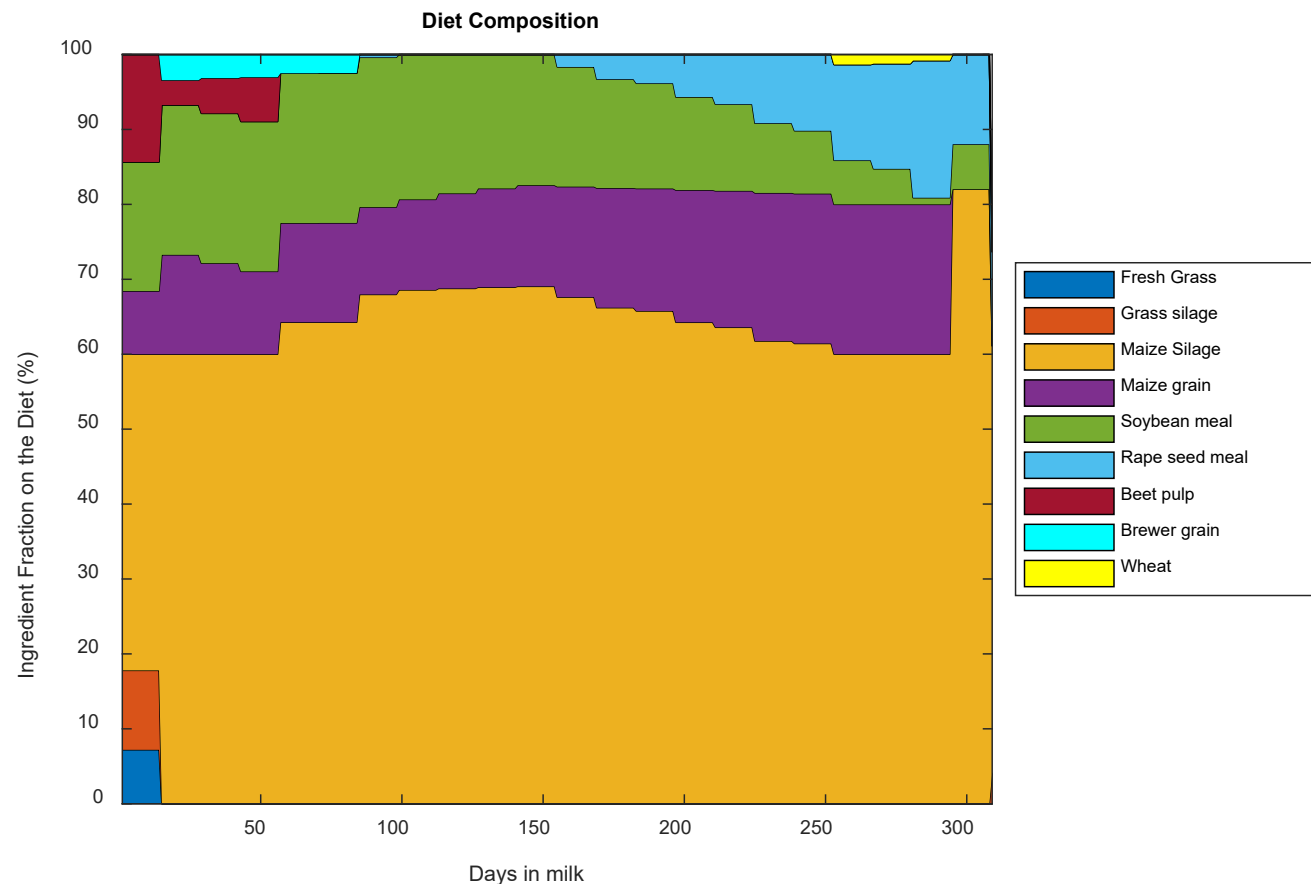
- Semi-supervised tool to optimize diet of dairy cow to:
 - Decrease enteric methane production
 - Decrease feeding cost
 - Maintain the milk production level
 - Maintain the cow's health

How does it work?



Results

	Individual level performance (average per day)	
	Optimized diet	Reference diet
Feed margin (Euro/day)	13.59 (4.6%)	12.99
Methane (g/day)	398 (-7.6%)	431



Conclusion

- Change of diet, especially concentrate ratio, over time is needed

Future work

- Extend the tool to different individual cows, collaborating with Lely