

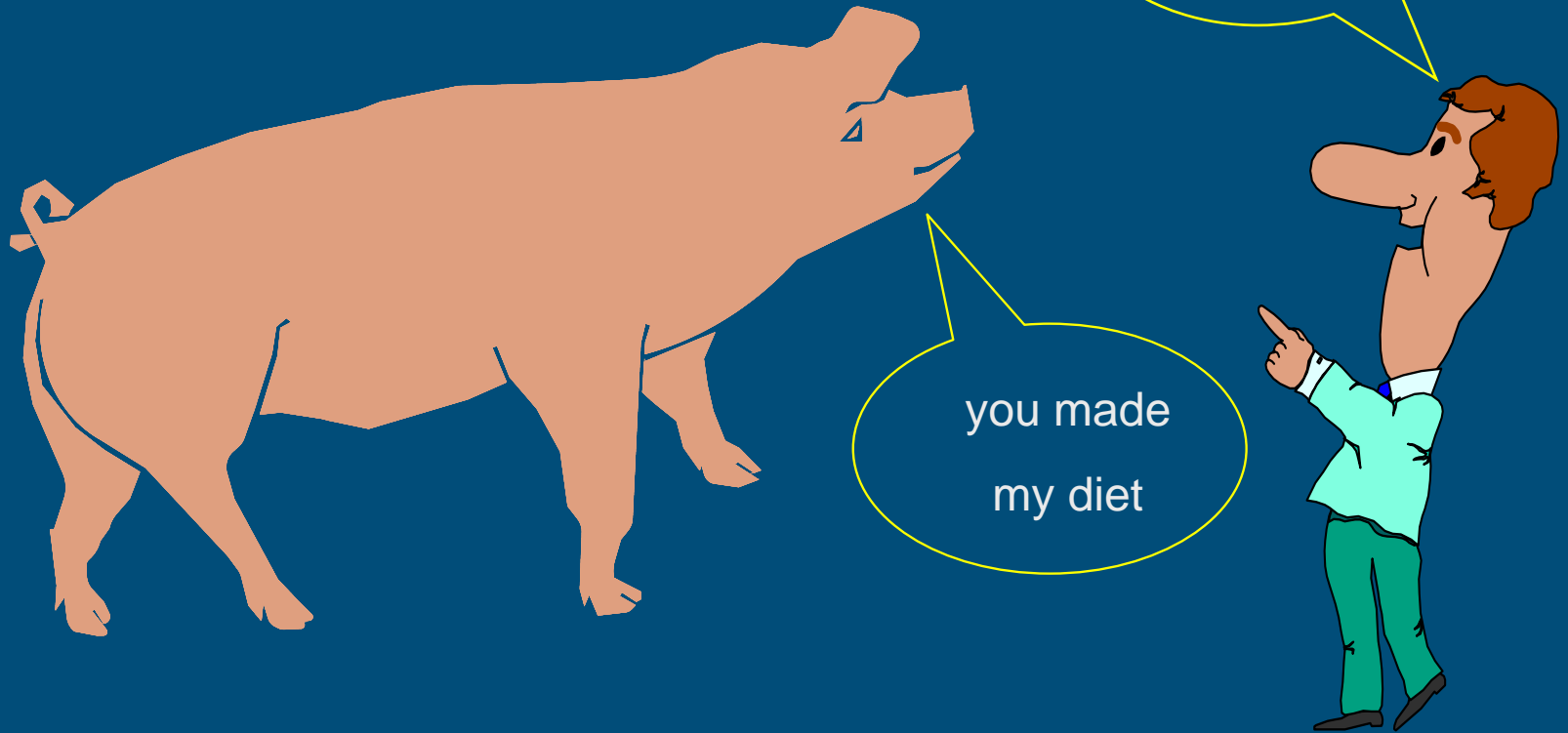
Nutrition and emissions

André Aarnink

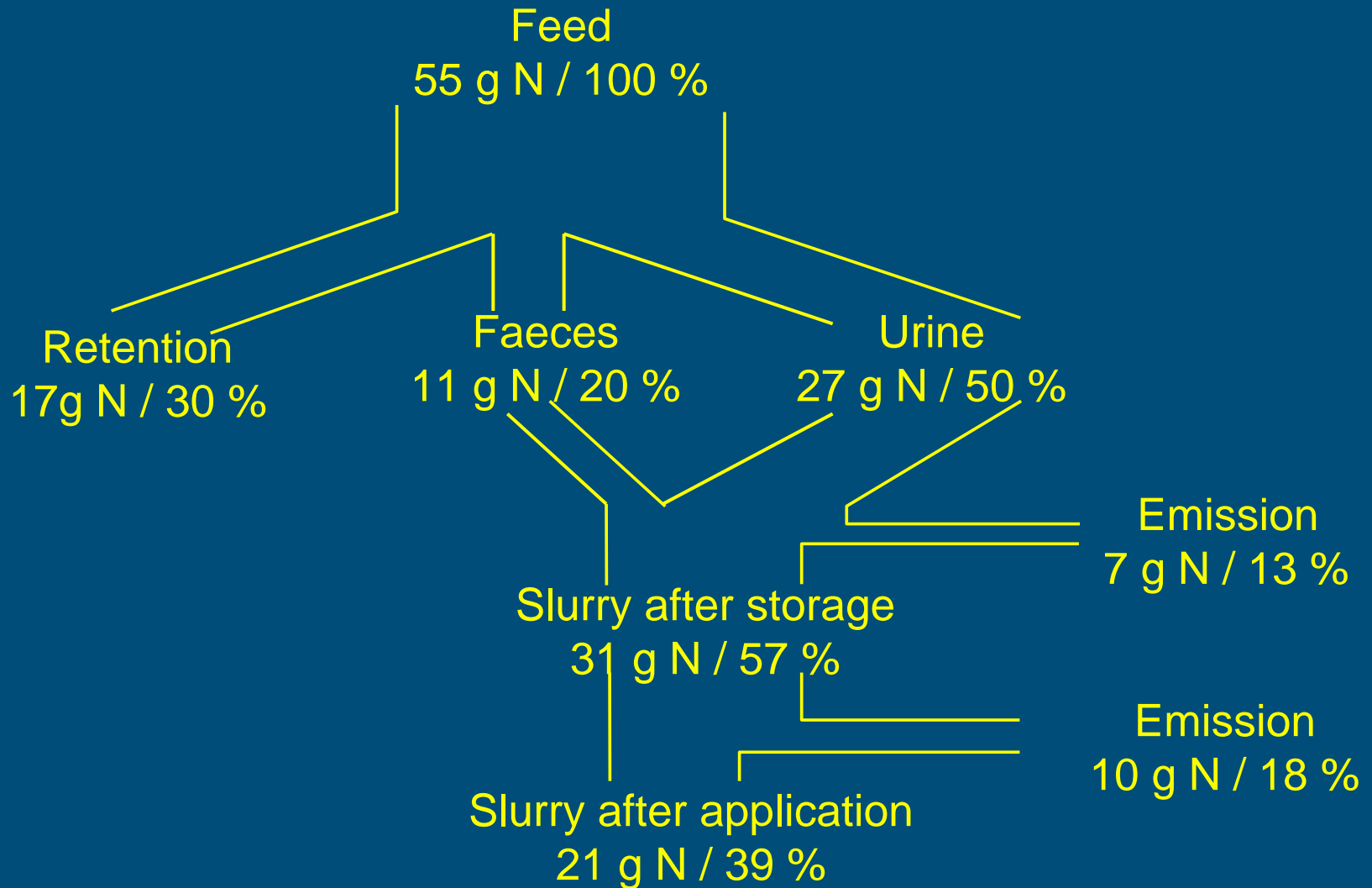


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State of the art



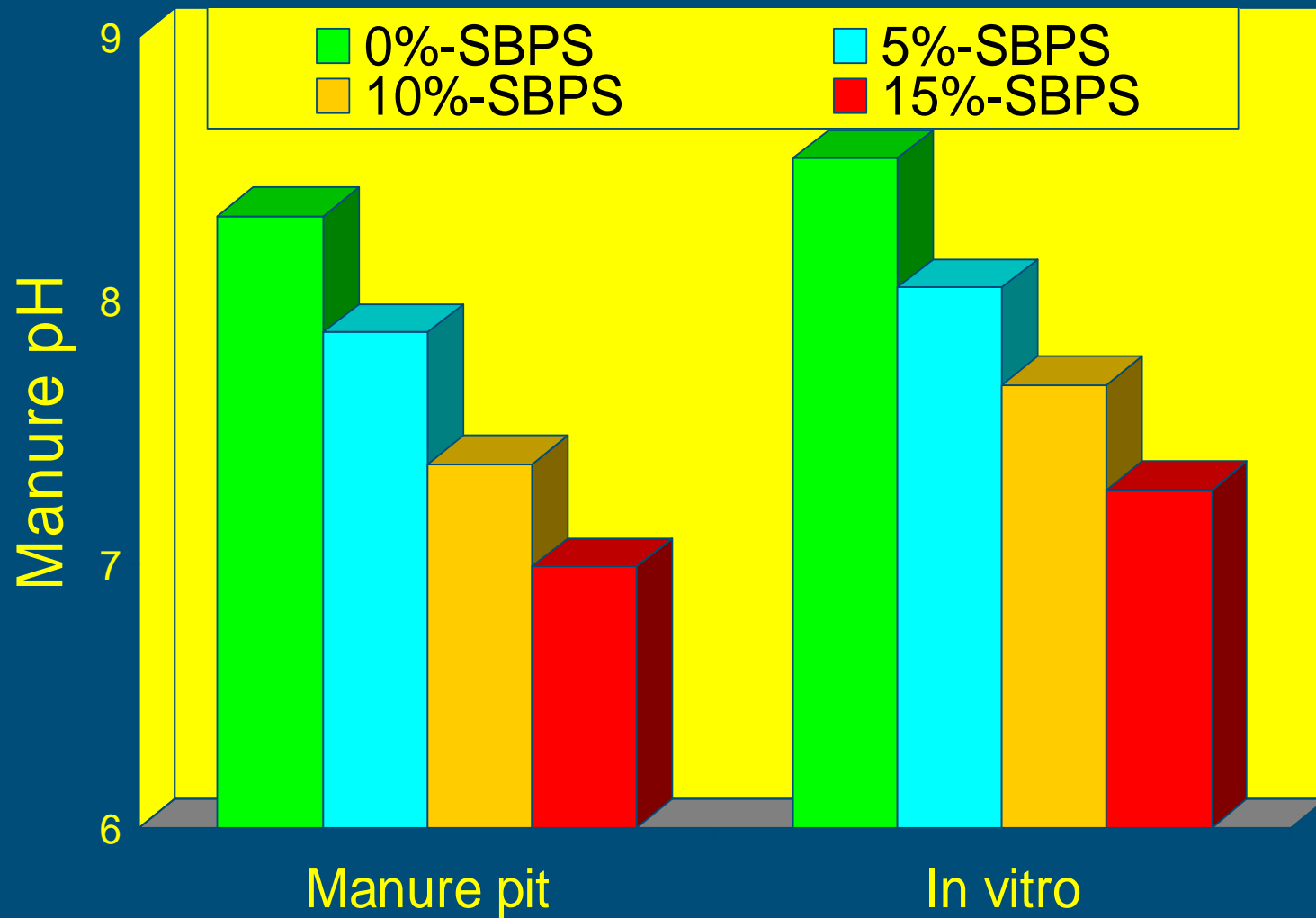
Nitrogen flow in growing-finishing pig production



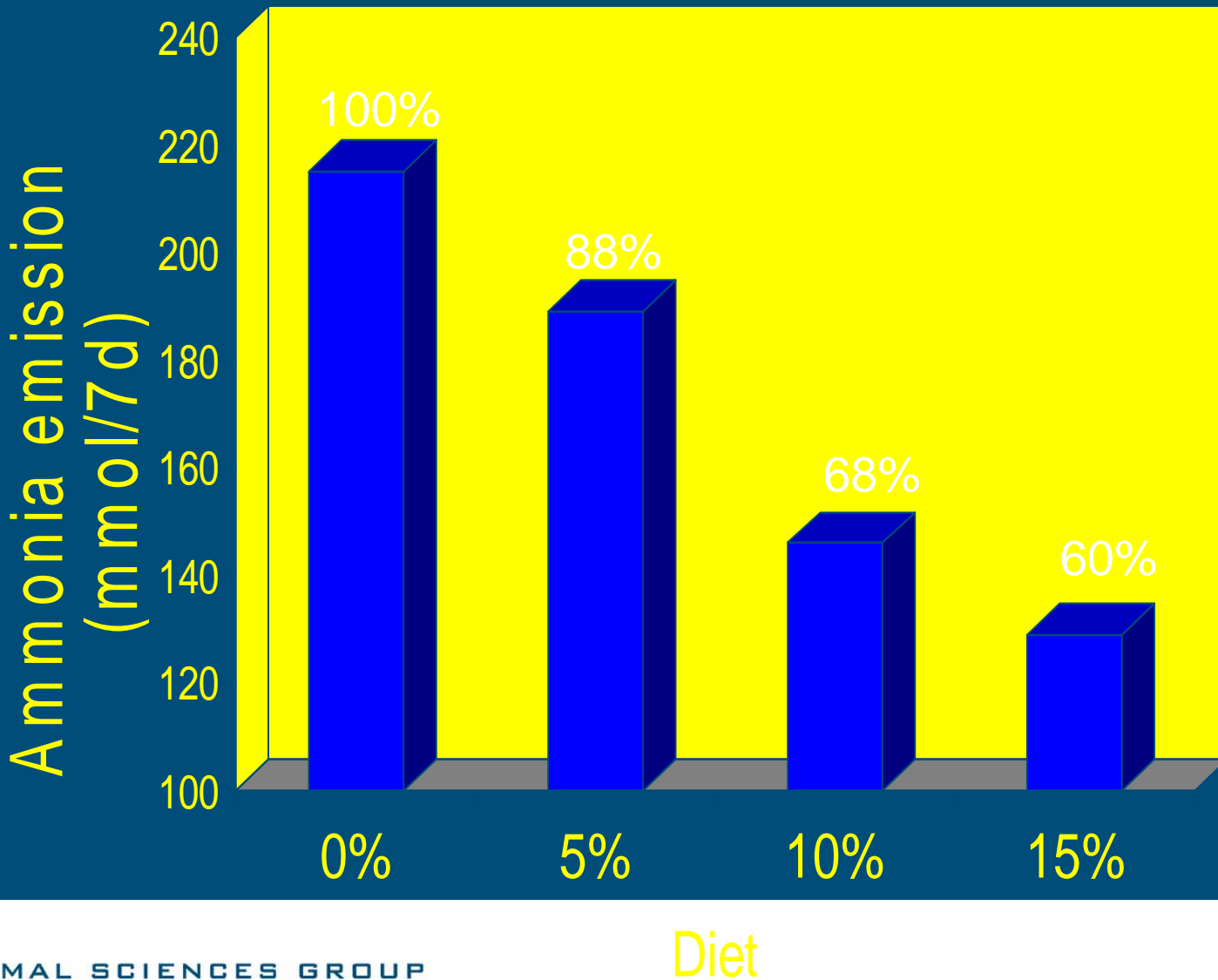
Three main strategies to reduce ammonia emission by dietary composition

- reducing dietary nitrogen (nitrogen intake).
- shifting nitrogen excretion from urine to faeces.
- reducing slurry pH (urinary pH and/or faecal pH).

pH of manure

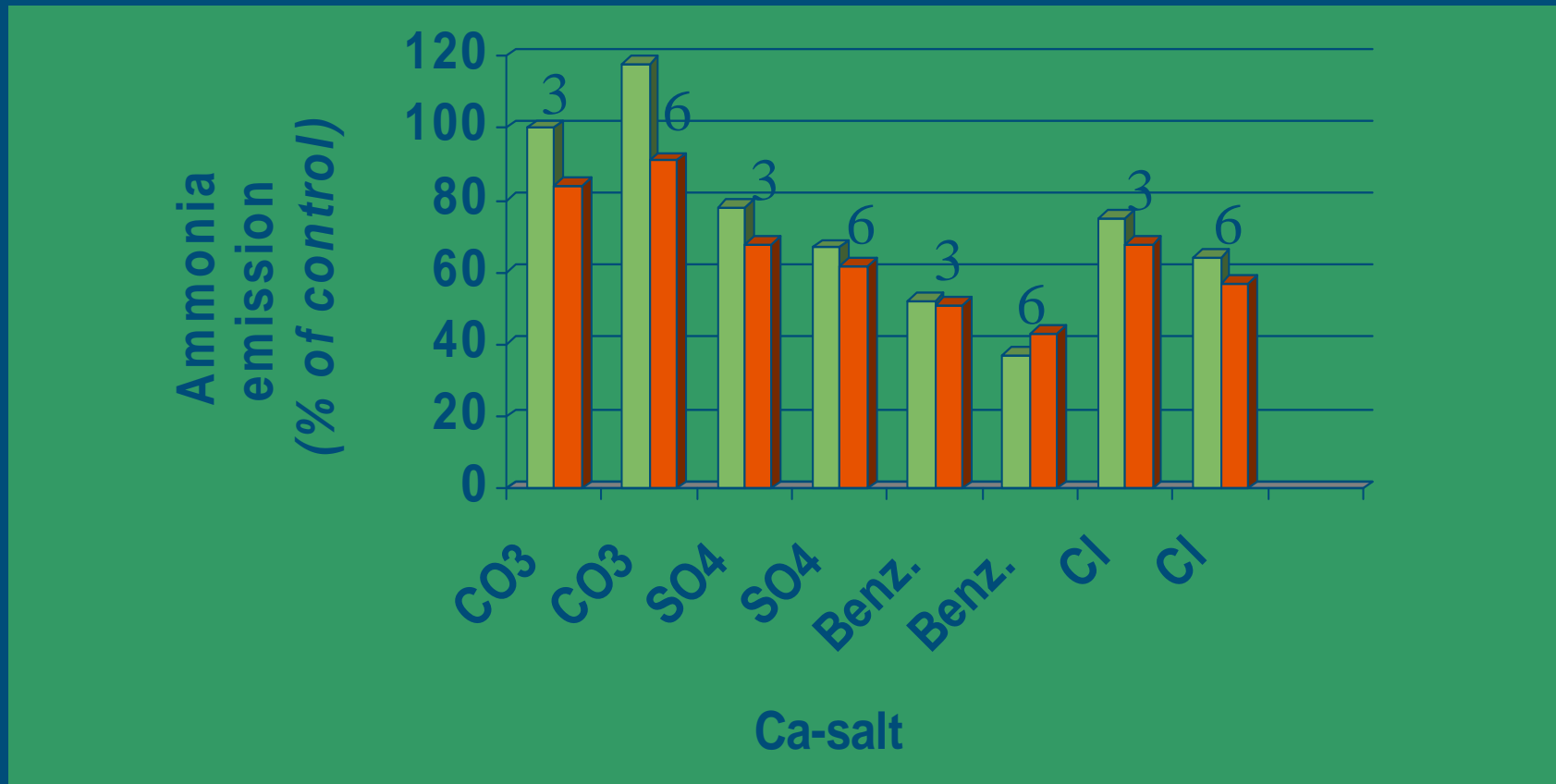


Ammonia emission from manure



Ammonia emission from slurry of pigs depending on dEB, Ca-salt and Ca-level

■ High dEB, 320 meq/ kg DM ■ Low dEB, 100 meq/ kg DM



Control diet

- 16.5% protein
- 15% NSP
- 5 g CaCO₃
- NH₃-emission: 100%

Treatment 1

- 12.5% protein
- 15% NSP
- 5 g CaCO₃
- NH₃-emission: 60%

Treatment 2

- 16.5% protein
- 30% NSP
- 5 g CaCO₃
- NH₃-emission: 70%

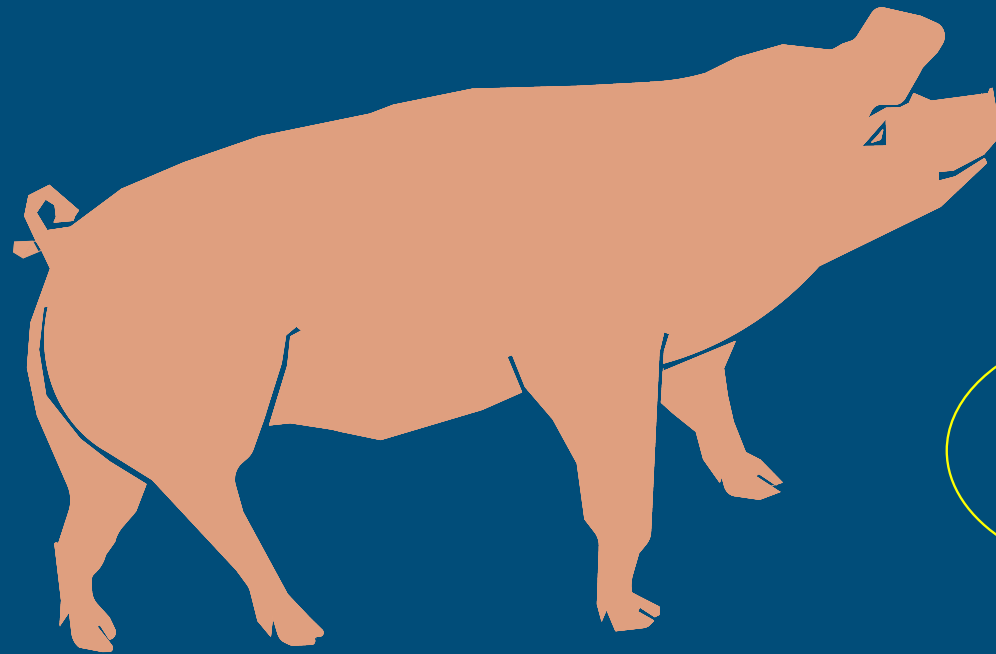
Treatment 3

- 16.5% protein
- 15% NSP
- 5 g CaSO₄
- NH₃-emission: 75%

Combined treatment

- 12.5% protein
- 30% NSP
- 5 g CaSO₄
- NH₃-emission: 31.5%

Conclusion



you changed
my diet

you don't
pollute the
environment
anymore!

