

PETFOOD FORUM

Where the GLOBAL PET FOOD
INDUSTRY does business

New Methods in High Moisture Extrusion for Wet Pet food

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Innovation

#petfoodforum

April 28-30, 2025, Kansas City, Missouri, USA



Pet Food Trends



Humanization &
Premiumization



Health &
Wellness



Sustainability



Food Safety

Pet Food Trends



Humanization &
Premiumization

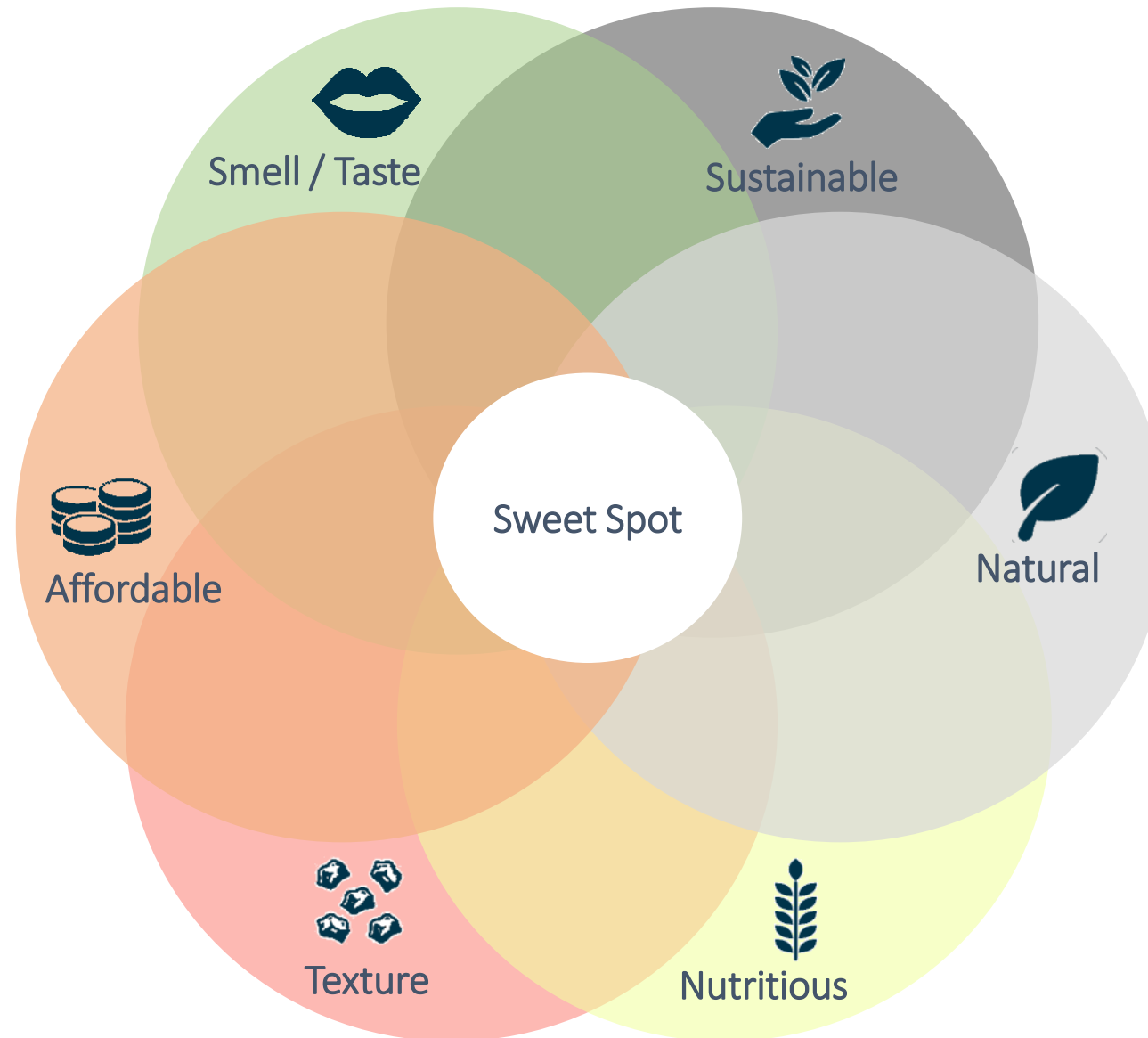


High
Fresh Meat
Addition



Wet Tex
Petfood

Customer (consumer) requirements for petfood.



Introduction to Wet Petfood

- Wet Petfood: 26% of Petfood Market (Retail Value)
- Growth is stronger in Wet vs. Dry Petfood
- Wet Petfood is especially important for cats (43% of all Cats Petfood)
- Mainly positioned in the mid-priced to premium segment (>77%)
- Main markets are clearly North America and Europe
- Globally successful products are “Felix”, “Whiskas” and “Sheba”, as an example
- Format: meaty pieces in sauce (jelly or gravy)
- Wet Petfood are mainly produced in steel or aluminum cans, trays and pouches
- Downstream process: Addition of gravy or jelly – filling in packaging - sterilization - cooling
- Cats are more challenging eater and are carnivores, require formulations that include animal proteins.
- An important quality factor for cats are the “palatability”;
- Acceptance tests are mandatory



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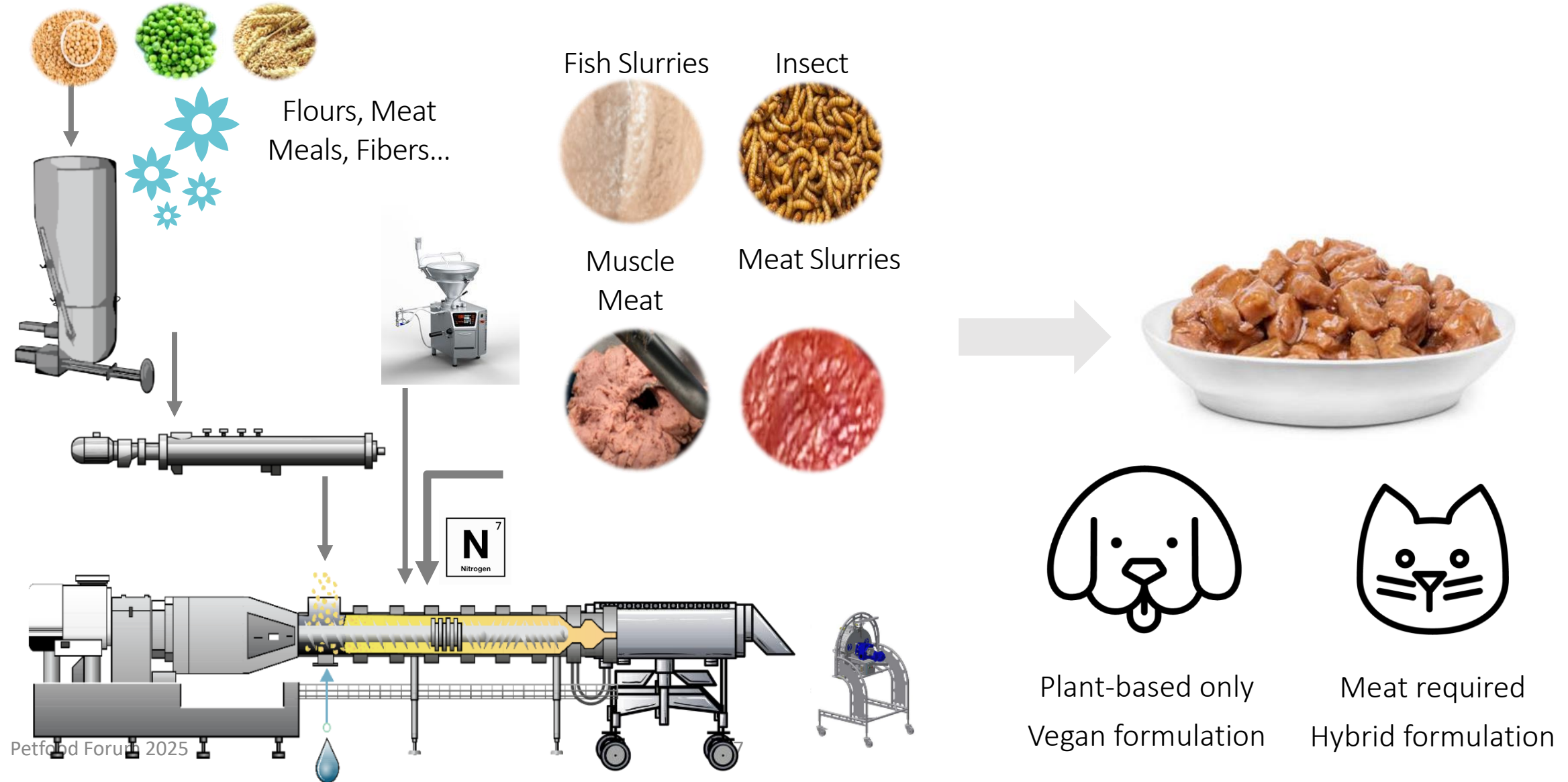


Wet Tex Technology for Wet Petfood creation

- Creation of different colors, textures, densities and thicknesses
- Fish like textures
- Microporous structure (by Aeration) for better palatability, nutrition and better holding of fats & sauces
- Flexibility in raw material use, be it in powder form or as a liquid, be it animal, insect or plant protein
- Textured products can therefore be with a hybrid (meat & veggie) formulation or completely plant-based
- HME technology enables high throughputs and sustainable wet petfood production



Wet Tex Technology for Wet Petfood creation



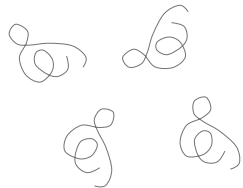
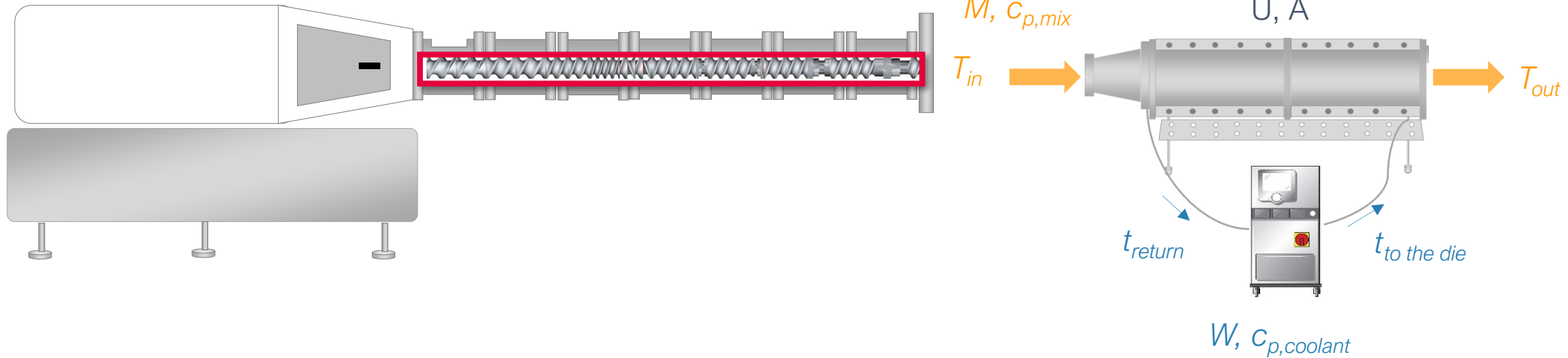
Wet Tex Technology for Wet Petfood creation

Formulation:

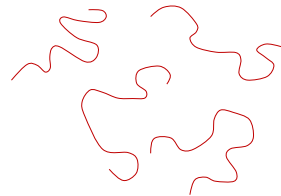
- 25-50% solids
- 50-75% water



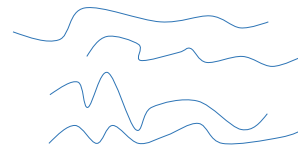
Energy input:
Heat & Shear



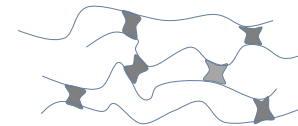
Native /
Folded
proteins



Denaturing /
disentanglement



Rearrangement
& elongation



Aggregation &
Solidification

Structuration with *Breaker Plates*

Possible applications

- Plant-based muscle meat cuts
- Fish-like products



Different breaker plates



Color & Texture modification with Aeration Technology

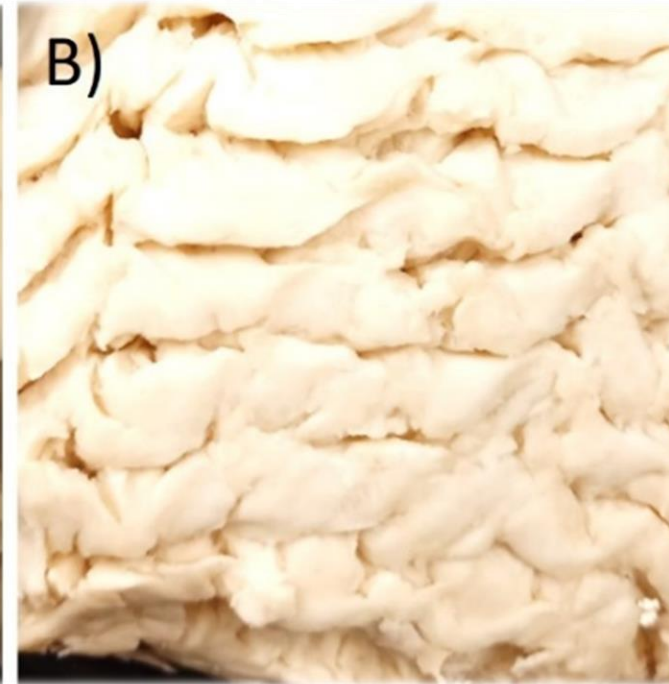


Fig. A Effect of Protein Aeration Technology on texture.

Fig. B Example meat alternative produced with breaker plates and Protein Aeration Technology.

→ Aeration can be an alternative to whitening agents!

Microporous structure

Lighter color

Thicker product

More flavour absorption

Great biting properties
and mouthfeel

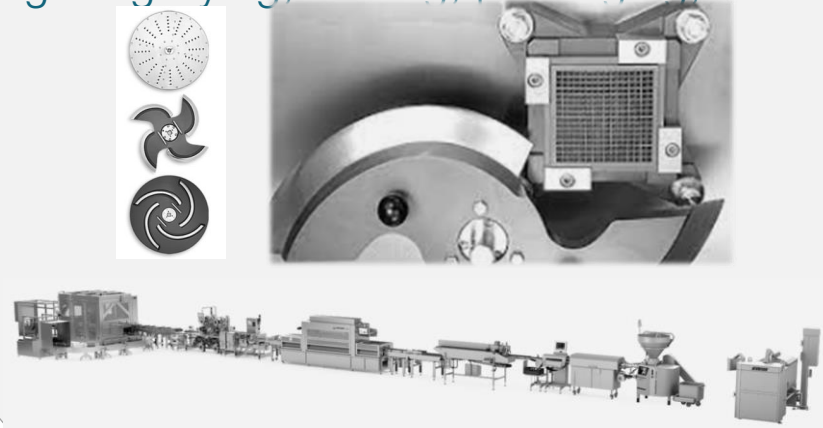
Finished Product Solutions

- Additional equipment required:
 - Up-stream equipment for fresh meat handling (frozen-meat-grinder) and emulsifying (if required)
 - down-stream equipment for jelly/sauce addition, sterilization (120°C) and packaging

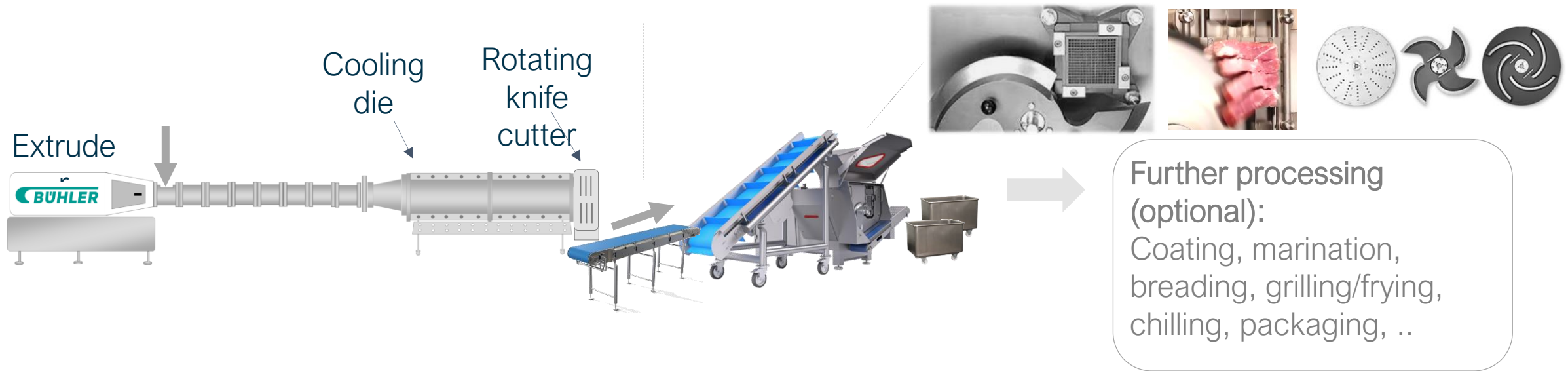
Upstream processing (optional):
Grinding, mixing, emulsifying, pumping, forming, dosing, etc.



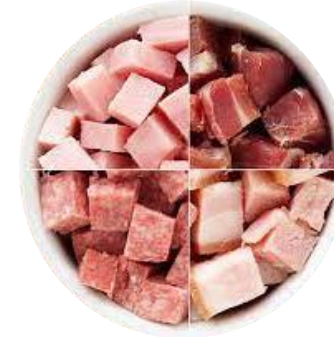
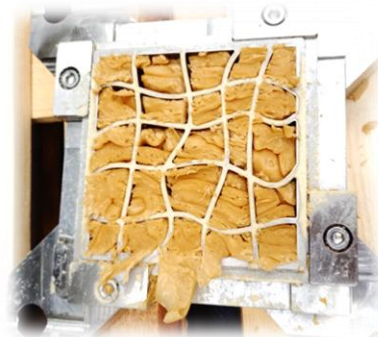
Further processing (optional):
Coating, marination, breading, grilling/frying, chilling, packaging, ..



Innovative shapes



Various geometries are possible:



Wet Tex offers new possibilities for Wet Pet food



Take away

High Moisture Extrusion with Aeration technology and Breaker Plates designs provide additional tools in your box to create nutritious and delicious products from different sources of raw materials with unique textures, shapes and colors.

Questions?



INNOVATIONS FOR A BETTER WORLD

- www.buhlergroup.com

