



Pflanzliche Proteine - Rolle der Rohstoffherkunft heute und morgen

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SWISS GRANUM - QUALITÄTSTAGUNG 2023

planted.

planted.



planted.

Why Planted? Our top 3 reasons:

We raise the standards,
expectations and awareness in the
plant-based meat category.



Clean label &
only natural ingredients

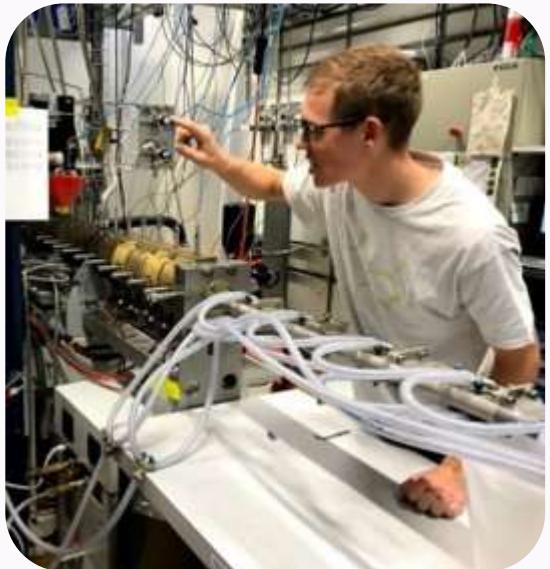


Best taste & texture
confirmed by top
European chefs



Industry-leading
in-house production

2018



Trial & error
at ETH Zurich

August 2019



Company foundation &
first foodservice client

October 2019



7 million CHF fundraising
& go-ahead for construction
of production & offices in
Kemptthal

January 2020



Product launch at the first major retailer, Coop, in Switzerland

August 2020



Our own production facility in Kemptthal (Switzerland) is up and running

November 2020



Next Stop Germany with launch at retailer EDEKA



January 2021

Welcome to the family
planted.pulled & retail launch
at SPAR in Austria



January – August 2021

Successful closing
Of Series A and pre-series B
financing round (13M CHF &
15M CHF)



September 2021

We have broken the Guinness
World Record for the longest
schnitzel with 119 meters!

May 2022



We double production capacity to over 1 ton of plant-based meat per hour

August 2022



Launch of our first true whole-cut:
planted.chicken Crispy Strips!

August 2022



First touch-down in UK retail & 8 products in Swiss retail

September 2022



New whole-cut launched
for gastronomy:
plated.chicken Filet

September 2022



Successful closing
of our 70 million CHF
Series B financing
round!

November 2022



Happy Holidays!
We launch our plated.roast
in collaboration with
chef Sebastian Copien

February 2023



Special edition launch with
Tim Raue across
DACH: planted.chicken Green
Paprika & Lime

March 2023



Better than meat from
animals: Publication of
updated LCA numbers

April 2023



Ready for summer: Launch
of our second BBQ product
planted.bratwurst

May 2023



Special edition launch with
Neni and Haya Molcho

September 2023



Planted receives B
Corp Certification!

October 2023



For **duck's** sake: Launch In
Tesco UK with our new
planted.duck as well as start
of new packaging rollout

October 2023



ANUGA 2023



Our planted.chicken Filet goes retail in Switzerland & Germany

Better than meat from animals



A glimpse into the
near future....

Scaled fast since founding in 2019



Retail:

8780+

Employees:

200+

Foodservice:

6144+

Funding to date (in CHF):

115m

Webshop (shipping in):

Europe

Patents filed to date:

9

The first transparent meat production

At Planted's HQ in Kemptthal (Switzerland),

we produce most of our meats under a glass-house production facility - the first transparent meat production open to the public.

Over 65 employees work in the areas of science, engineering, and product development.



In-house Innovation
& Development Lab



In-house kitchen with
Michelin Star Chefs



In-house
production

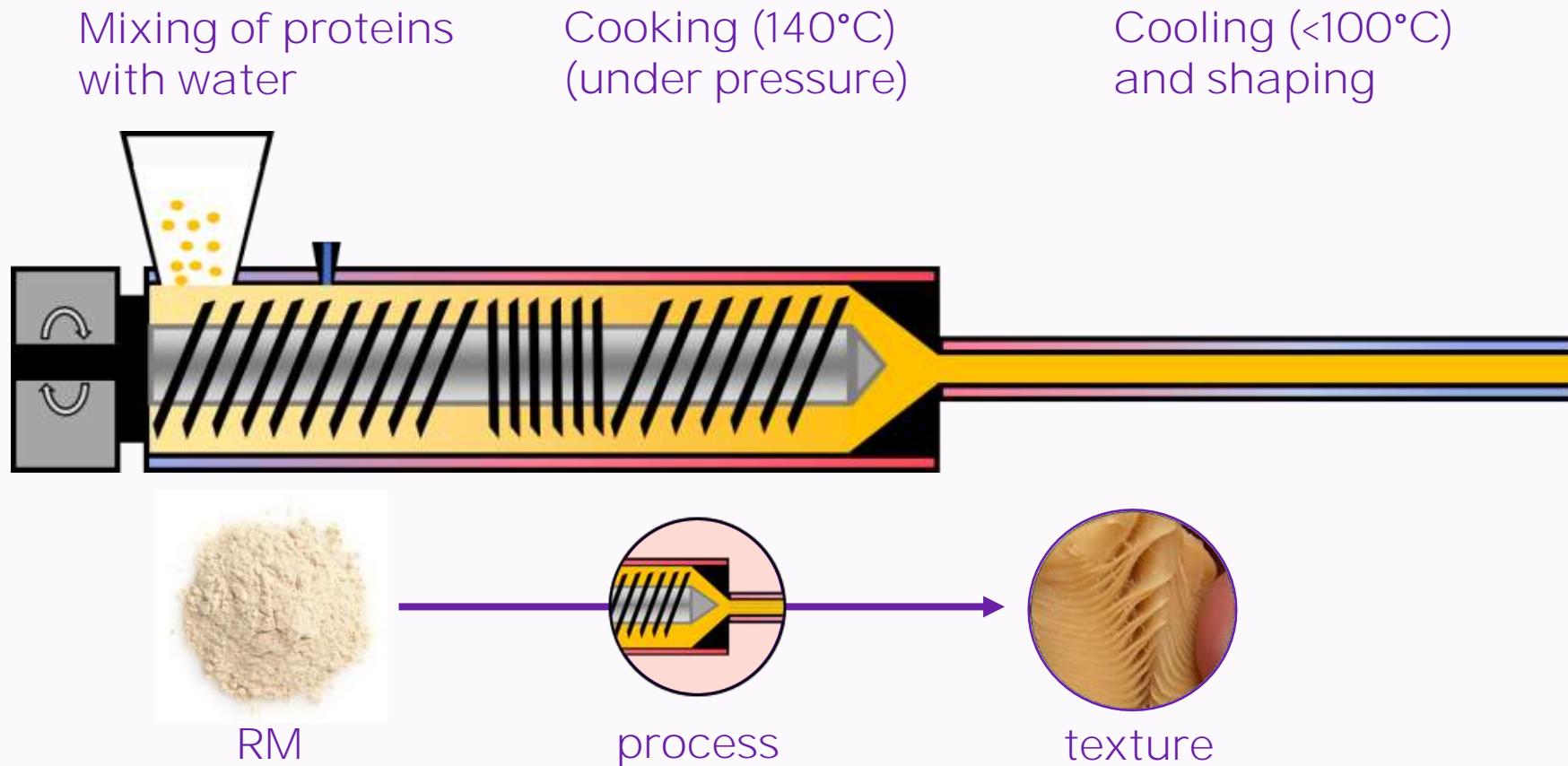


In-house
restaurant

Visit us!

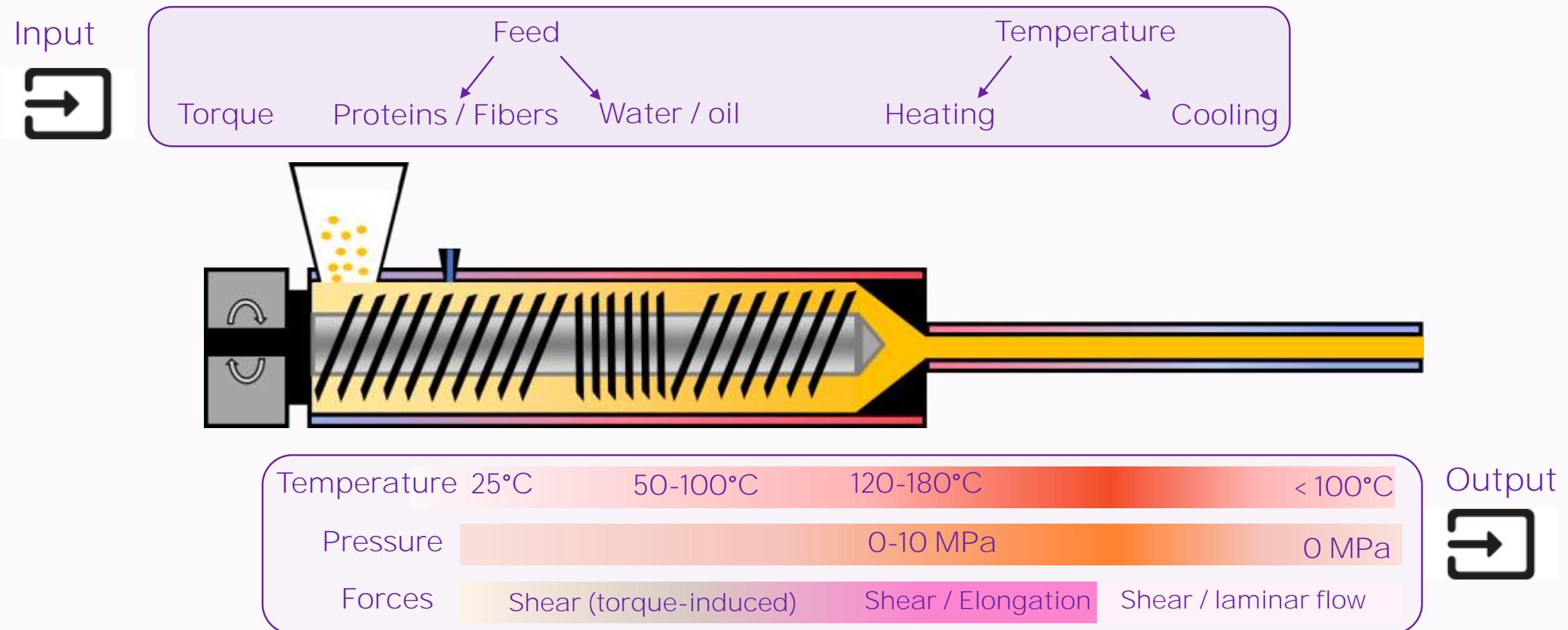
protein under pressure

High moisture extrusion - short

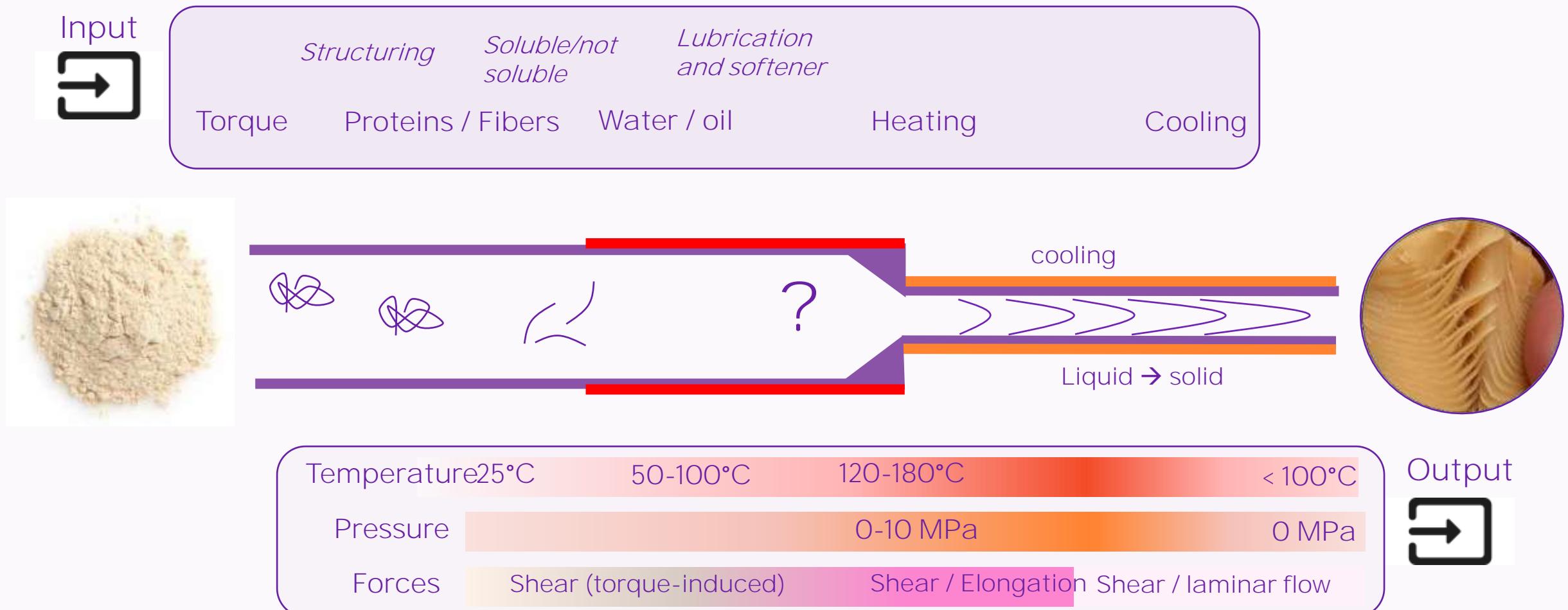


High moisture extrusion allows to convert plant proteins into meat mimicking structures by using serially combined processing steps in one

A highly interdependent flow cooking system

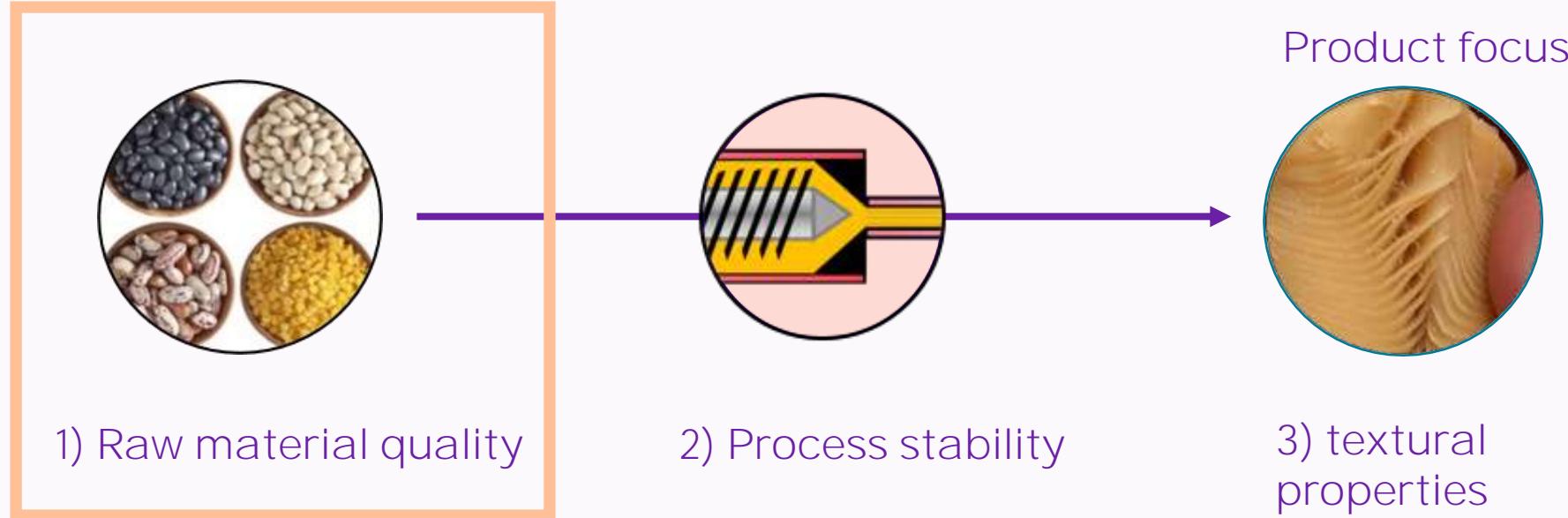


The extruder - a black box



Bring light to the dark.

What is important for industrial high moisture extrusion?

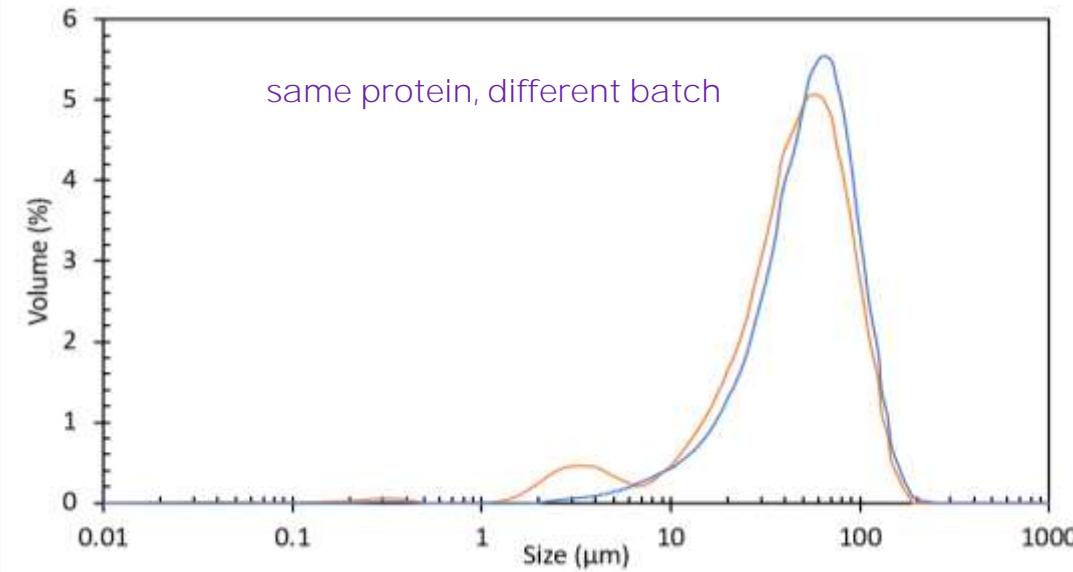
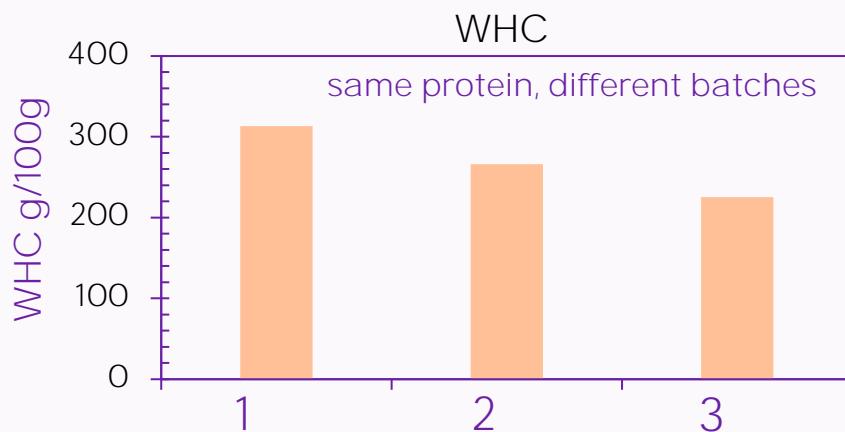


For industrial extrusion product and process quality and stability are the main drivers.

Quality of raw materials and analytical techniques



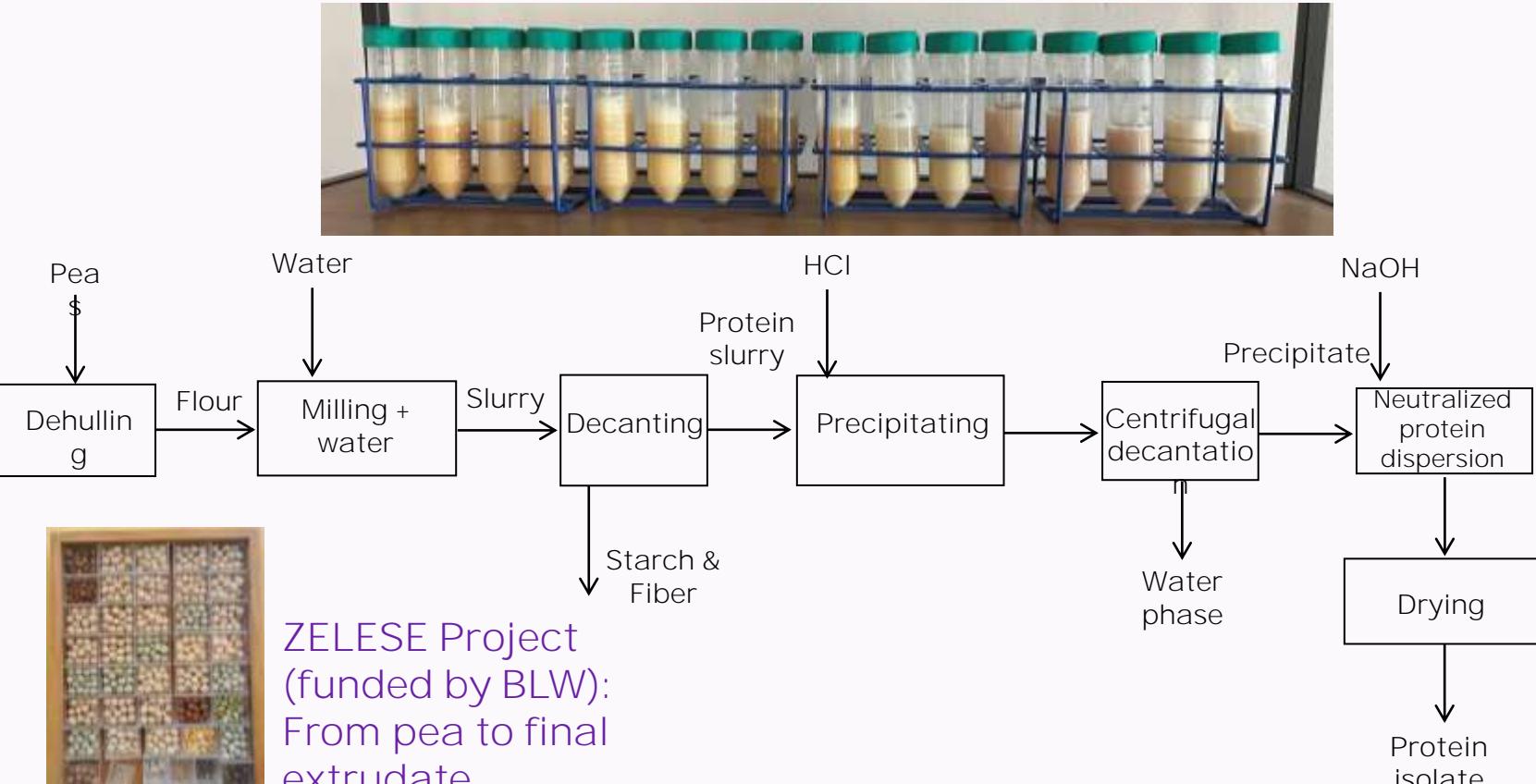
- WHC / OBC
- Rheology
- Composition
- Gelling
- Solubility



- Same proteins from different batches differ dramatically in properties
- Need for analytical techniques that determines the structure-property-process relationship

Quality of raw materials; identical proteins (same supplier) differs greatly from batch to batch causing production problems

Quality of pea protein isolates

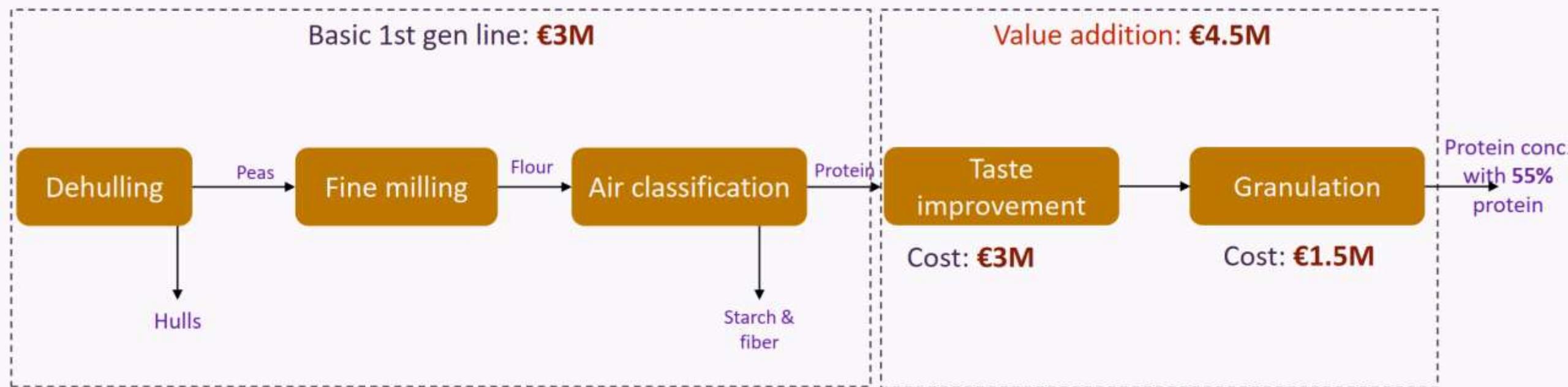


- All of these are pea protein isolates. But half of them do not work well in extrusion
- Processing history of proteins is crucial, for example final pH of powder, water holding capacity, agglomeration
- There is a need for (a) more sustainable and healthier raw material extraction techniques and (b) from crop to extruder relationships

Process secrets and adjustments lead to a different final protein composition and functionality. New extraction processes are crucial for a more sustainable and healthy solution

Protein Concentrates

Process flow & Investment: 0.5-1 ton/hr concentrate production



Challenges & Conclusion

Preis:

- Isolate oder Konzentrate sind teuer und weisen Verluste auf in der Verarbeitung
- technologisch anspruchsvoll in der Herstellung
- benötigen eine kritische Grösse um profitabel zu sein (Amortisationen)

Qualität:

- verwendete Technologie diktiert die Anforderungen an die Qualität. Es fehlt noch an Grundlegenden Erfahrungswerten (Varietät – Verarbeitung – Technologie)
- “one size fits all” Ansatz sehr verbreitet -> wenige Möglichkeiten Rohmaterial zu optimieren
- Sorten noch jung in der Züchtung und oft nicht für Protein gezüchtet

Wertschöpfungskette:

- Volumen sind bescheiden gegenüber traditionellen Weizen, Mais oder Kartoffeln
- Wertschöpfungskette ist weniger ausgebaut -> Investition um über die kritische Masse zu kommen
- Motivation in der Kette muss hoch gehalten werden, von Bauer über Verarbeiter zu Lebensmittelproduzenten

Nachhaltigkeit:

- ökologisch: Nebenströme bei Leguminosen sowie Energieverbrauch bei der Nassfraktionierung im Auge behalten
- ökonomisch: Unit economics stimmen.

->Die Herausforderung und Chance der Schweiz liegt darin einen kompetitiven Heimmarkt zu gestalten: neue und kompetitive Wertschöpfungsketten, hohe Qualitäten sowie Verarbeitungstechnologien welche Produkte ermöglichen, die Kunden wollen.