

Current & future approaches for Circularity @ Pfeifer & Langen in Sugar Business

Dr. Timo Koch, 21.09.2023

Food & Bio Global Summit '23; Summit Lab 3: Circular Green Transition



Pfeifer & Langen a family owned business with passion for food



Amidori Food Company



Grafschafter



Intersnack



Krüger



Naturkost Übelhör



Pfeifer & Langen Zucker



SAVANNA Ingredients

Pfeifer & Langen „Sugar“: Our sites - A statement for Europe

Germany

Headquarter Köln,
Appeldorn, Elsdorf,
Euskirchen, Jülich,
Könnern, Lage

Slowenia

Ptuj

Italy

Minerbio

Poland

Poznań, Glinnojeck, Gostyń,
Miejska Góruka, Środa

Netherlands

Lelystad



Ukraine

Chorostkiw, Kosowa, Radechiw,
Sbarasch, Tschortkiw

Romania

Oradea

Hungary

Kaposvár

Greece

Thessaloniki
Athen

Pfeifer & Langen „Sugar“ in Numbers (2022)



➤ Turnover

1.330 Mio. €



➤ employees

2.521

12,2 Mio. t^{*1}



➤ Beet processing

1,9 Mio. t^{*2}



➤ Sugar production

^{*1} thereof 2,4 Mio. 50 %-Joint Venture in Ukraine

^{*2} thereof 0,3 Mio. t 50 %-Joint Venture in der Ukraine

Three strategic pillars for future transformation

Energie & environment



- Exit coal as energy source
- New technologies for reduced energy use
- CO₂ neutral sugar factory

Circular & new value chains



- New uses of side stream
- Coupling material & energy streams

Innovation in Food



- Use of Bio-Tech for new food products
- Expanding existing value chains

Energy & Environment

Our Aim:

- Leading Transformation within our industry
- Decarbonisation till 2040 (not 2045)

Our Approach:

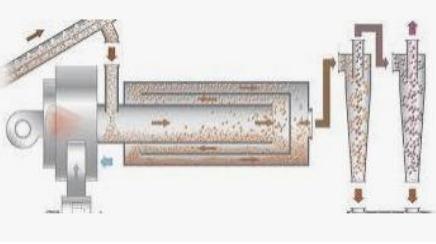
- Side stream products for energy production (Biogas, pellet fired boiler house)
- Electrification (electricity instead of steam)
- New technologies for increased efficiency (low temperatur dryer)

Challenges:

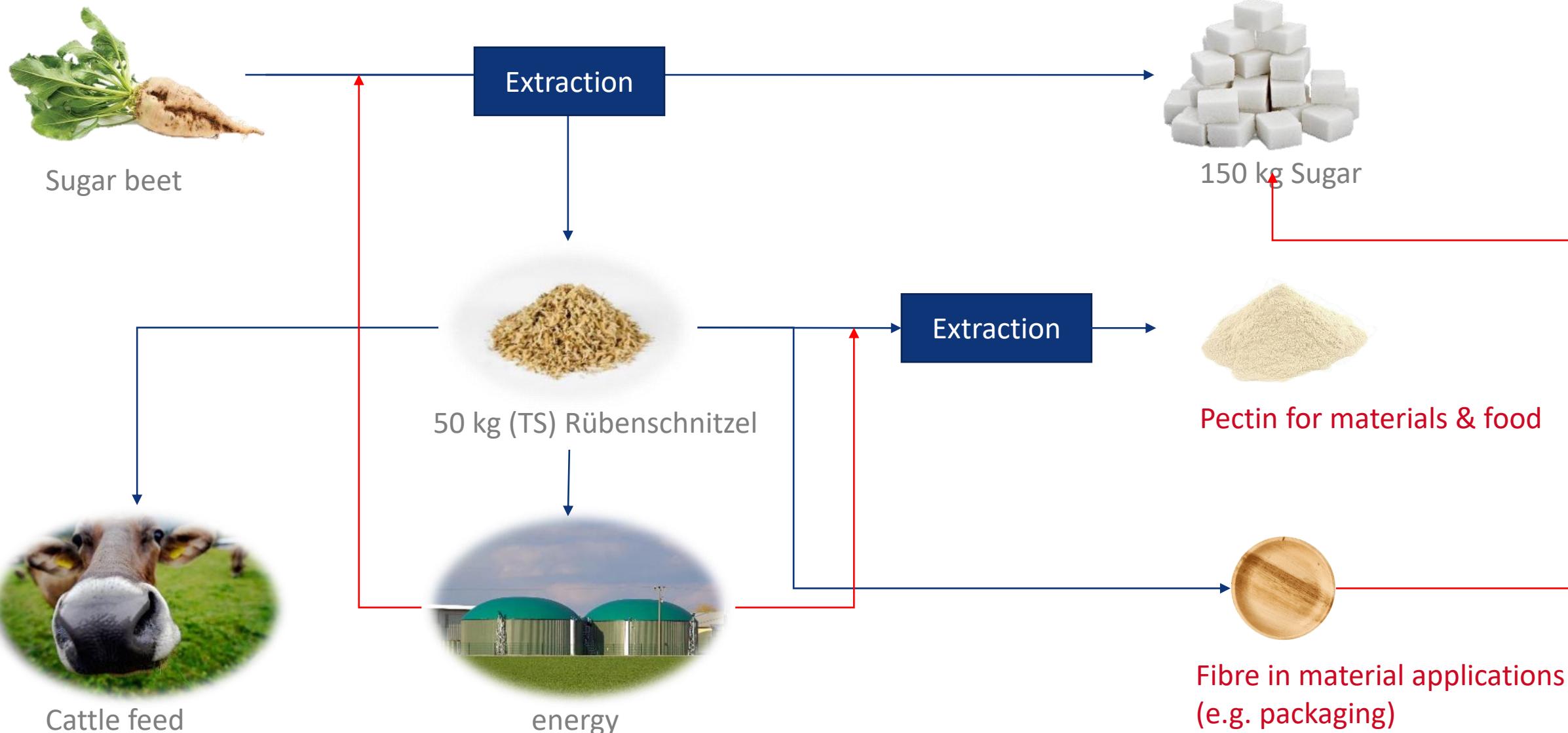
- Security of investment (in terms of legislative framework)
- Grid expansion
- Political framework



Decarbonisation* – 2020 bis 2040

| |  |  |  |  Pfeifer & Langen |
|------------------|---|---|---|---|
| 2020 | Power plant 1.200.000 MWh 375.000 t CO₂ | Pulp dryer 175.000 MWh 55.000 t CO₂ | Lime killn 90.000 MWh 32.000 t CO₂ | total 1.465.000 MWh 462.000 t CO₂ |
| 2021-2030 | 145.000 t CO₂ 40 % | 27.000 t CO₂ 50 % | 32.000 t CO₂ 100 % | 204.000 t CO₂ ~. 45 % |
| 2030-2040 | 80.000 t CO₂ 21 % | 0 t CO₂ 0 % | 32.000 t CO₂ 100 % | 112.000 t CO₂ ~. 25 % |
| 2040-2050 | 0 t CO₂ 0 % | 0 t CO₂ 0 % | 0 t CO₂ 0 % | 0 t CO₂ 0 % |

Circular & new value chains



Innovation in Food: Future.Food Campus



...Transformation from sugar factory to a regional innovation hub for development and production in BioTech & Food...

Innovation in Food: Selected projects

Beet fibre in material applications

Fibre



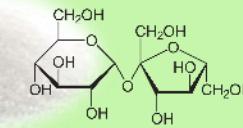
Composite



Product



Sugar



Allulose



Food

