



MAPPING ACTORS AND CURRENT TRENDS IN VALORISATION

INSIGHTS FROM A SURVEY OF KENYAN DAIRY PROCESSORS AND KEY INFORMANT INTERVIEWS

Roundtable Workshop on Dairy Industry Sustainability through Adding Value to Processing Sidestreams, Nairobi 5 February 2024

Bockline Bebe, Egerton University



THE APPROACH

- Survey of 25 dairy processors
- 12 involved in cheese processing
- 4 KILs interviewed

Processing outlook

Milk processors distribution (n = 125)



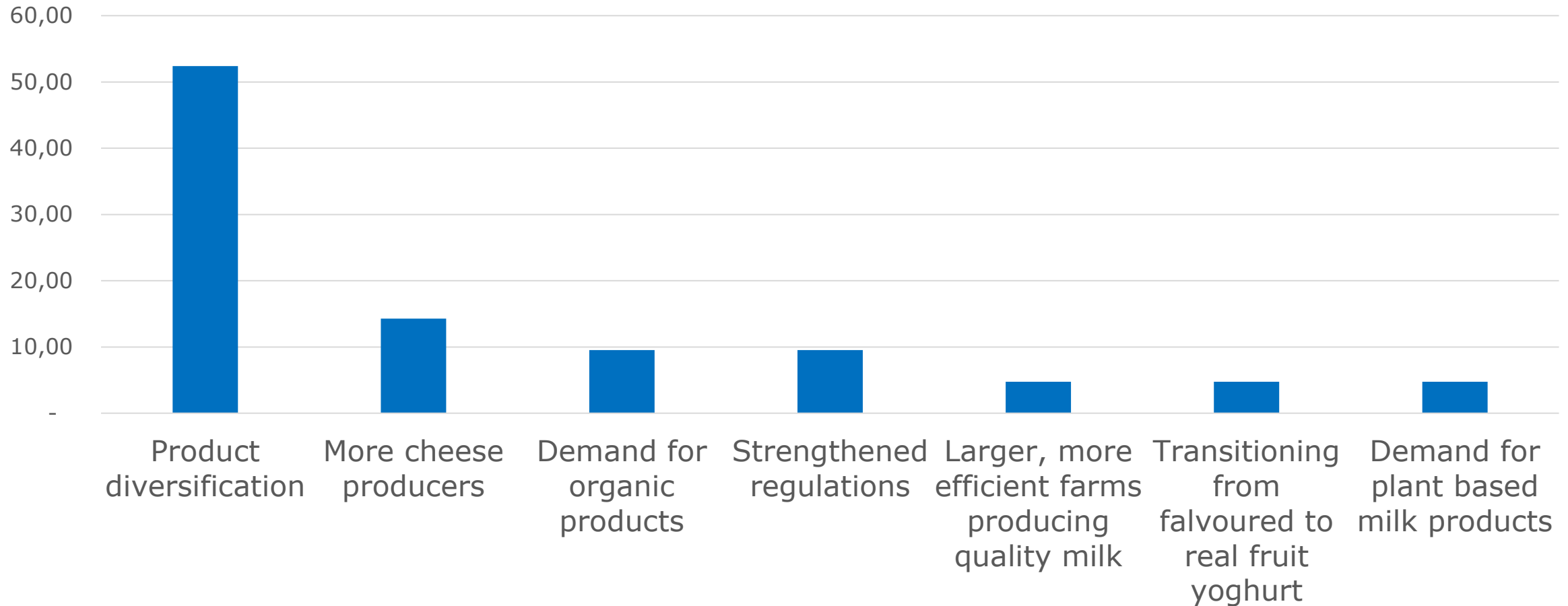
Source: ESADA Data

Increase in **processed products** (e.g. butter, yoghurt, fermented milk and cheese) that produce valuable **sidestreams** (whey) that are not valorised today.

'**Lost milk**' due to substandard quality is another major sidestream - informal value-added-

Processors' outlook on dairy sector trends

Frequency (%) Perspectives on expected trends in the dairy sector (n=25)



New products introduced by processors last 12 months (2022/3)

Cheese

Market demand / high profit prospects

- Mozzarella
- Paneer
- Ricotta
- Gouda and red cheese
- Ricotta from whey

Yoghurt

Consumer preference

- Goat milk yoghurt
- Yoghurt with chocolate
- Plant based yoghurts
- Thicker yoghurt - adjusted acidity
- Improved formulation of yoghurt

Lala

- Improved lala formulation

Ice cream

- Mini butter - 8g (airline order)

Processed milk

- Tetra fino Long-life milk
- Fat free and lactose free milk
- Coconut milk (plant based)

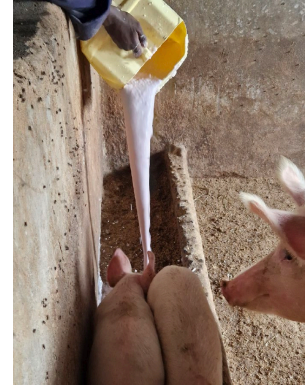
Planning to introduce

Responding to market

- Flavored UHT milk
- Probiotics
- Butter

Dairy sidestreams generated and their utilization

Acid whey	<ul style="list-style-type: none">• Feeding pig and calves (free or sold to farmers)• Produce smoothie
Sweet whey	<ul style="list-style-type: none">• Feeding pigs and calves (free or sold)• Produce whey juice/drink• Produce ricotta cheese, butter and ghee• Drained to sewer lines
Buttermilk	<ul style="list-style-type: none">• Feeding pig and calves (free or sold)• Produce ricotta cheese
Ice cream wash water	<ul style="list-style-type: none">• Drained into sewer lines
Ice cream cone waste	<ul style="list-style-type: none">• Incinerated
Whipping cream rinses	<ul style="list-style-type: none">• Drained into sewer lines
Discarded milk, spilled milk and yoghurt	<ul style="list-style-type: none">• Feeding calves and pigs (free or sold)• Drained into sewer lines
Wastewater	<ul style="list-style-type: none">• Drained into sewer lines/agriculture

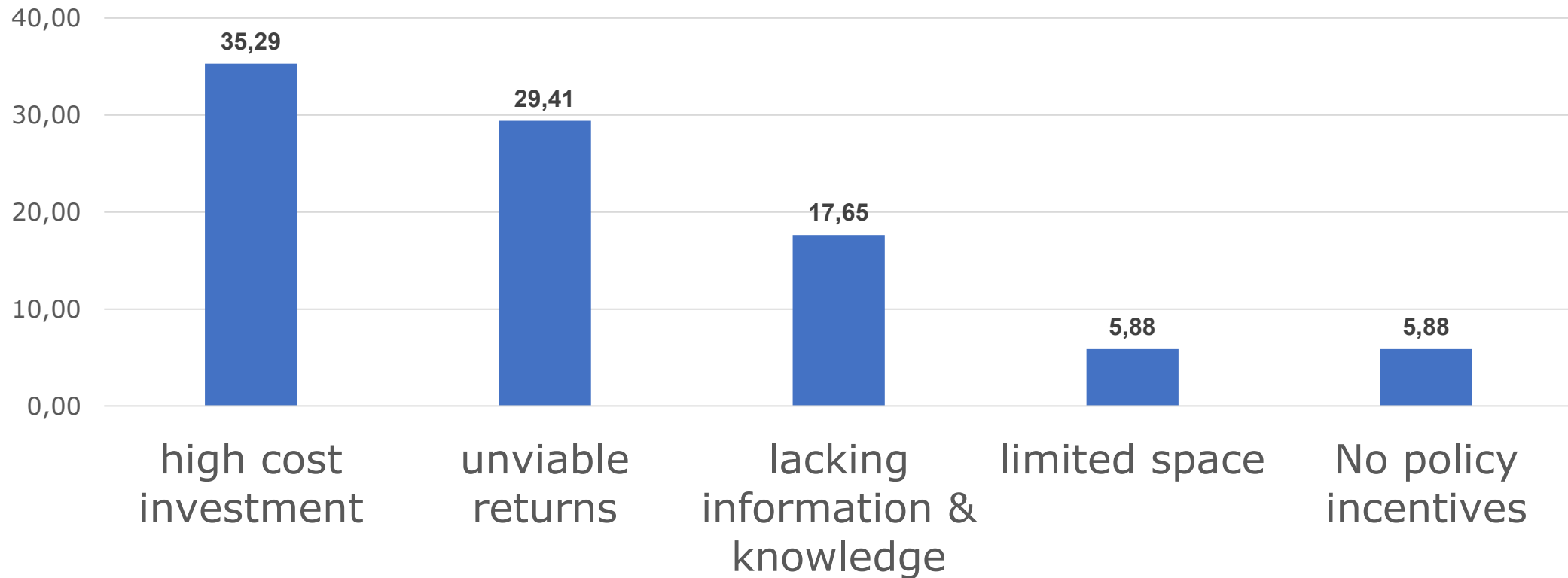


Some current uses
of whey



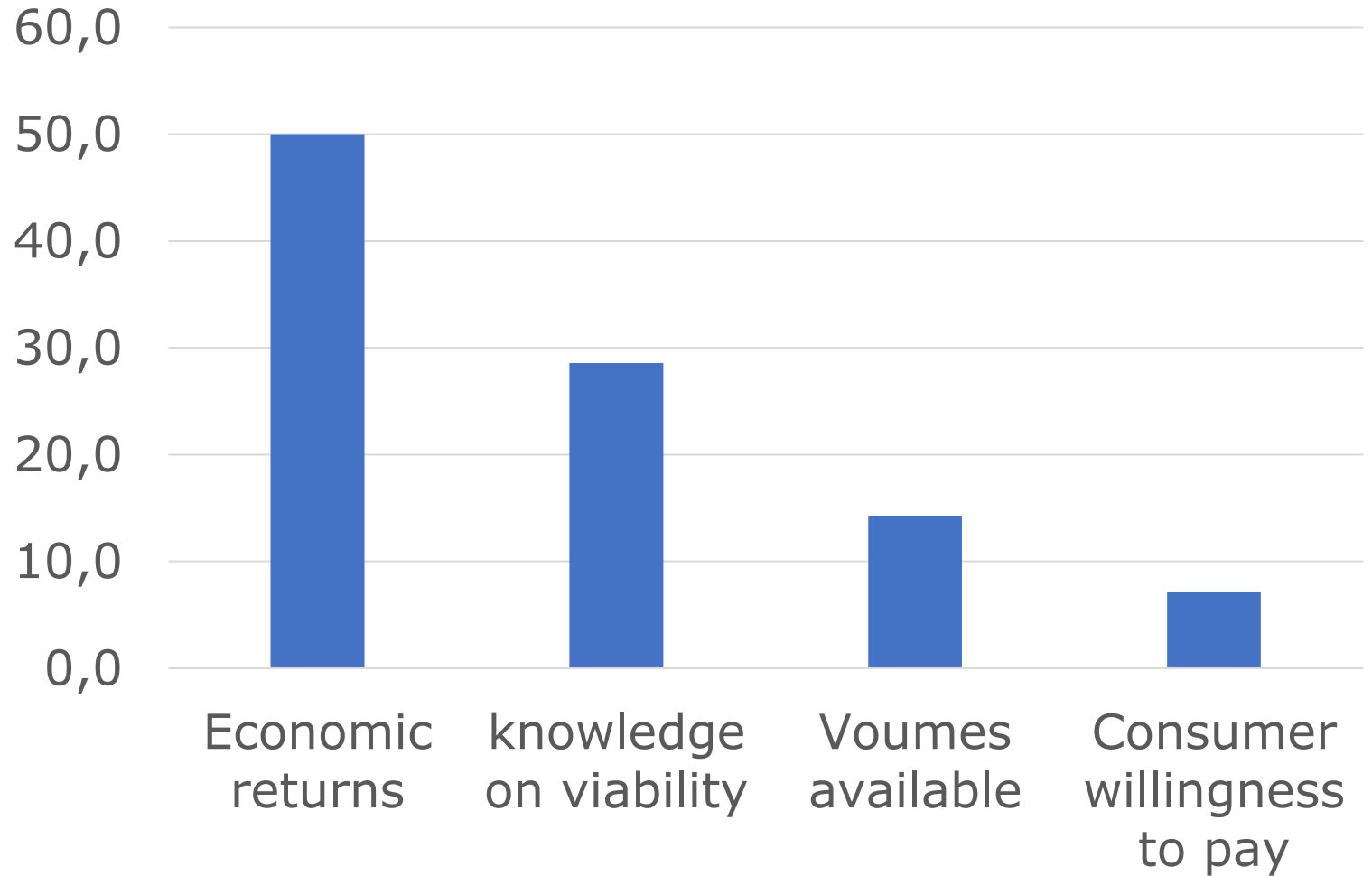
Why do processors not utilize the sidestreams?

Frequency (%) of reasons for not using sidestreams (n=25)



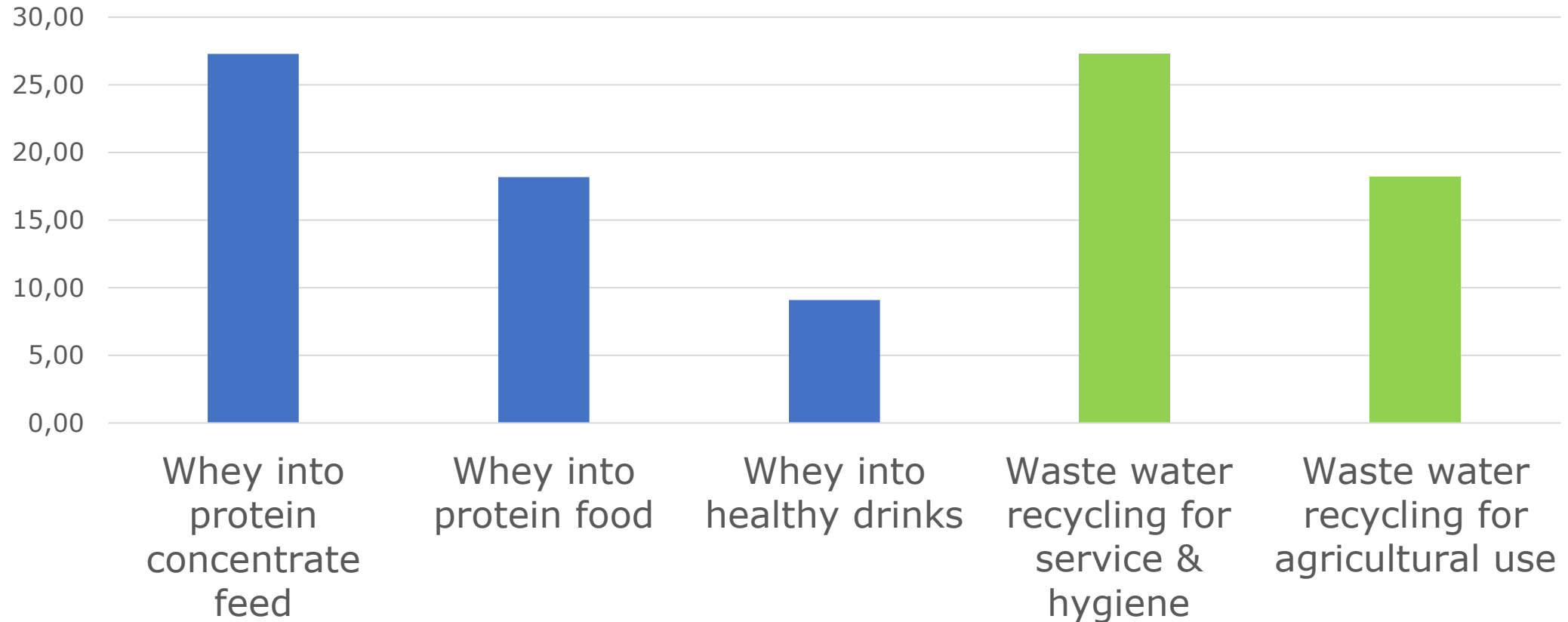
What would processors consider to valorize side streams?

Frequency (%) of considerations by processors



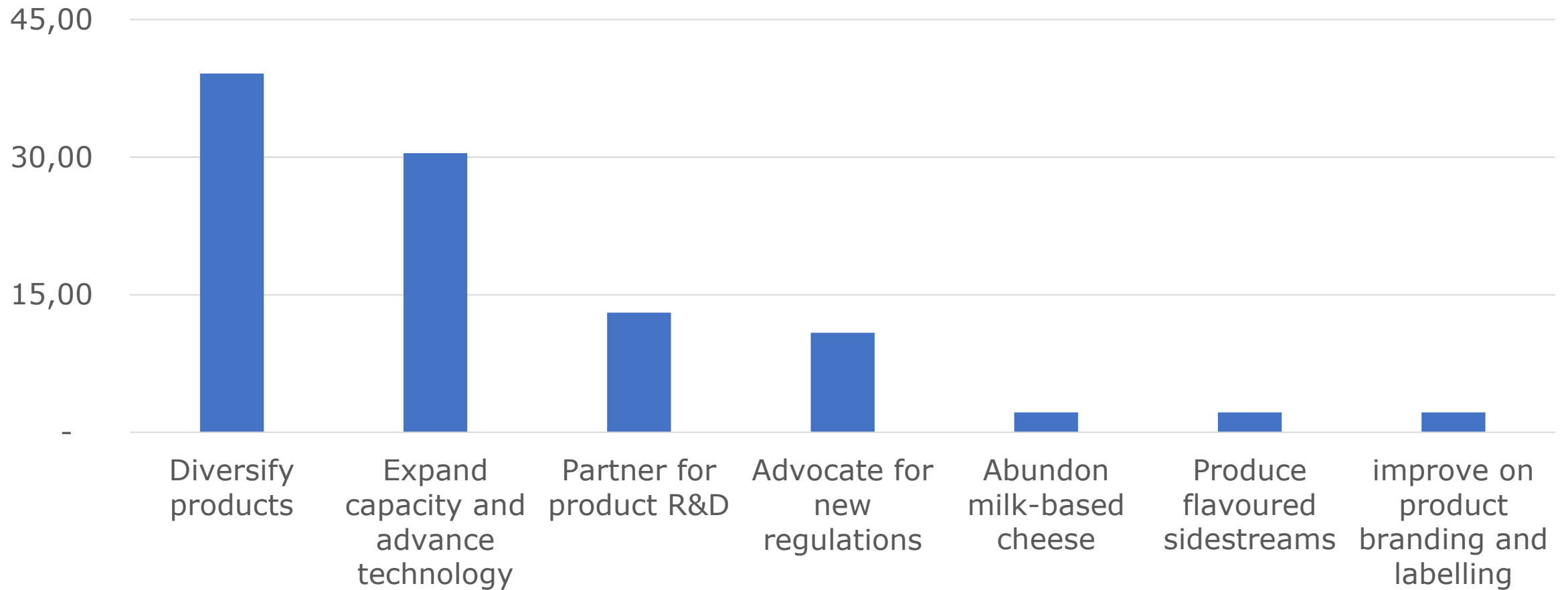
Processors plans of managing the sidestreams

Frequency (%) of plans to manage sidestreams

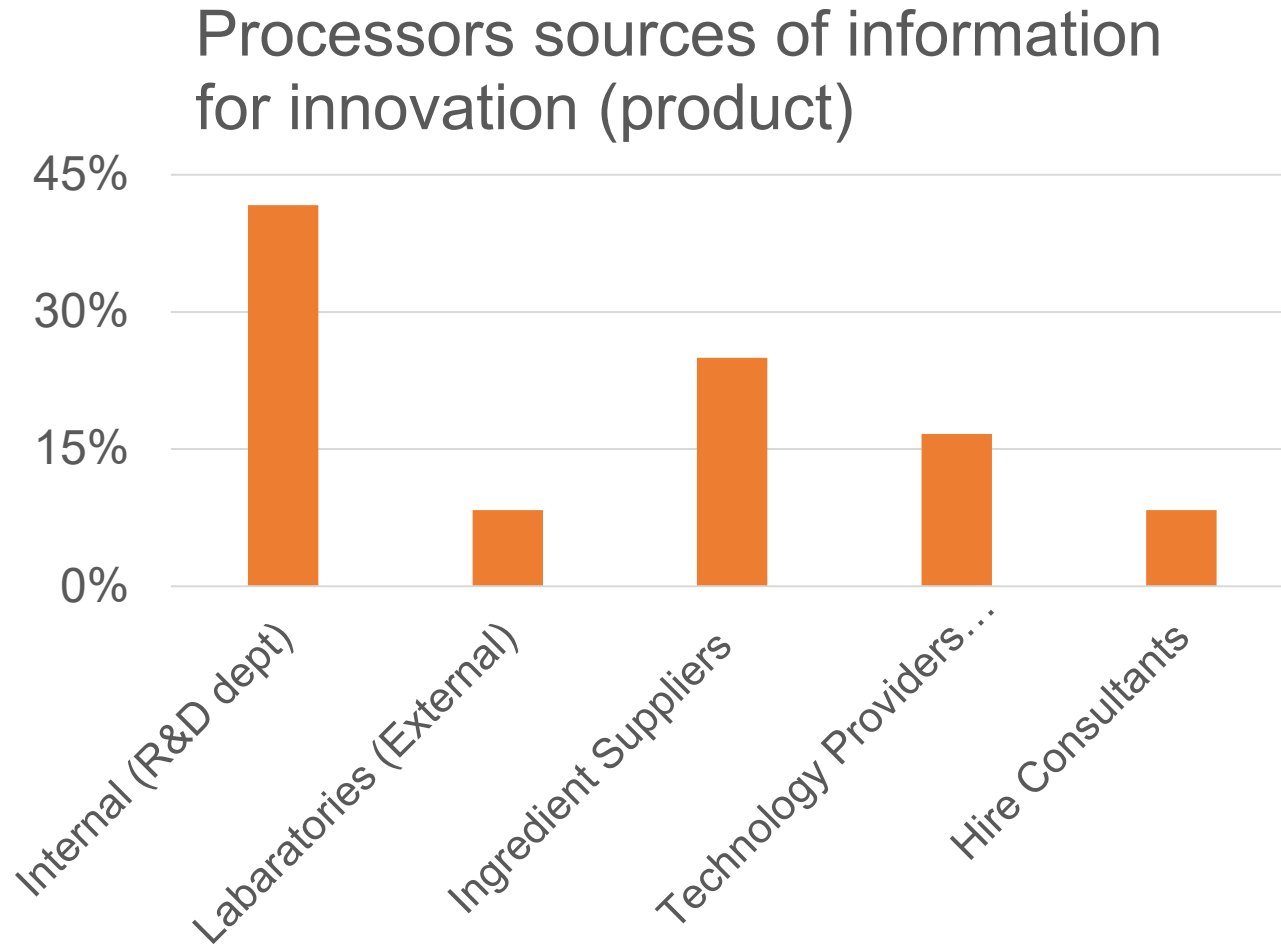


Processors planned responses to market dynamics

Frequency (%) of adjustments planned to respond to market dynamics



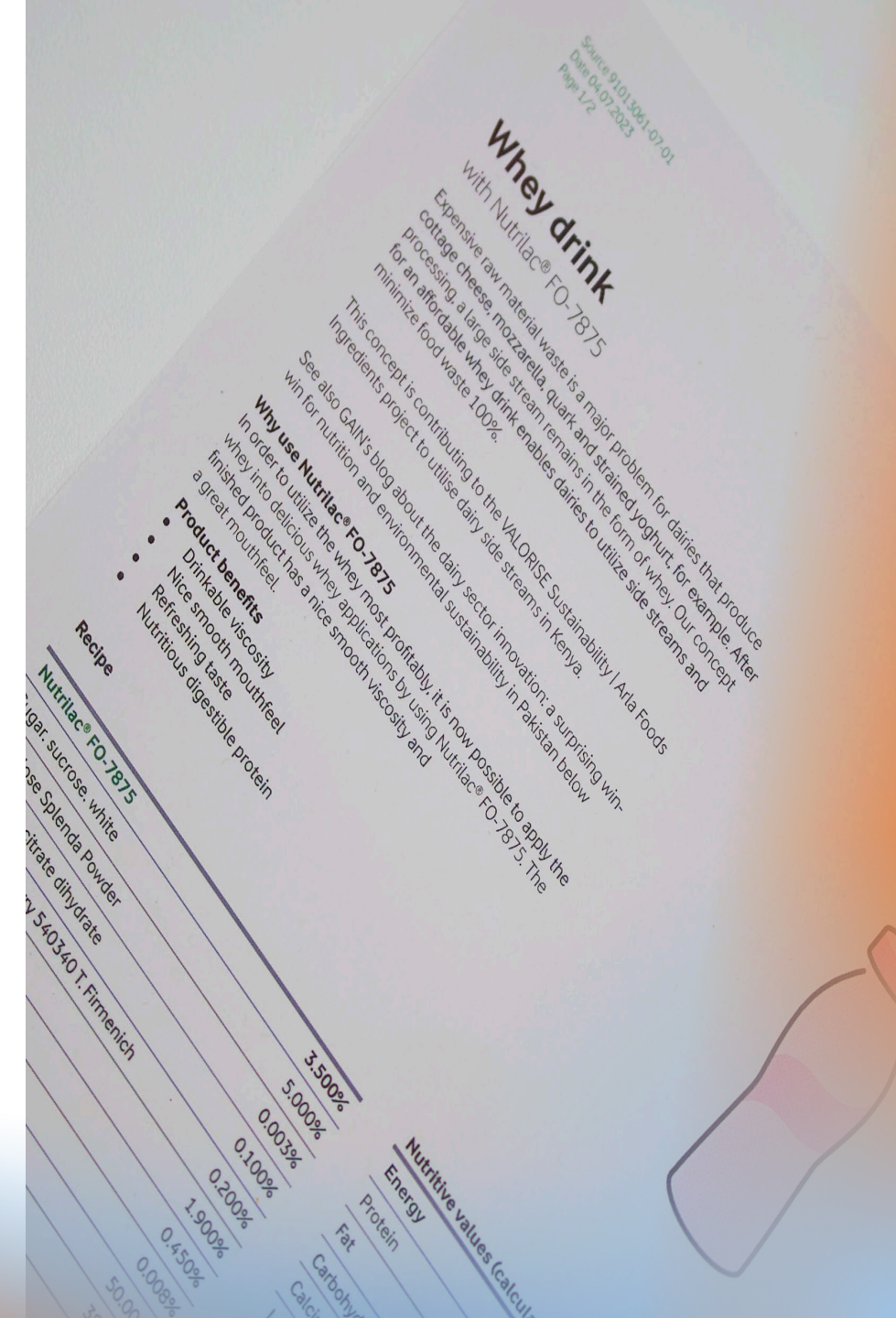
Processors source of knowhow and finance for innovation



- Most processors use own funds to support R&D/innovation
- Few depend on local financial institutions or investors to provide financing.

Take-aways

- Kenya's dairy processing is growing in diversity of products
- Processors have clear opportunities to integrate a circular bio-economy (CBE)
 - E.g., valorize whey sidestreams
- Harness opportunities in transitioning to CBE:
 - Market, technology, capacity and finance
 - Policy readiness
- What policy and market levers need to be considered?
 - The project results will feed into policy and stakeholder discussions





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