Natural Antifoam

Ingredients & Flavours – EMEA Region

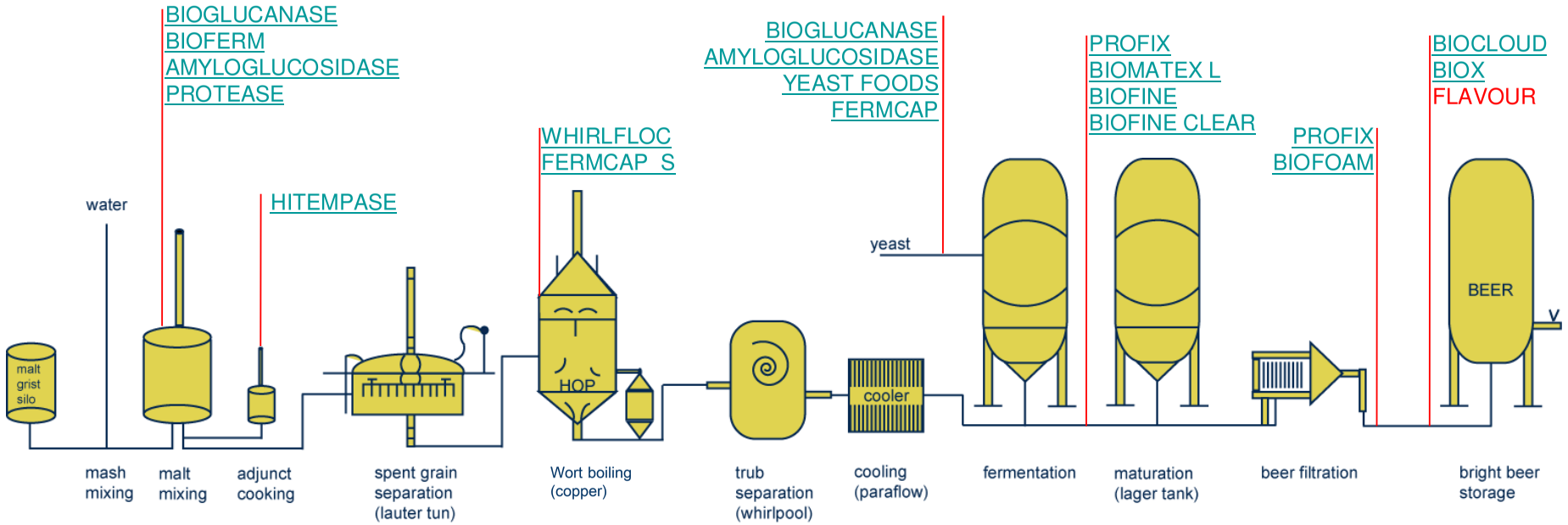
KERRY

Where It All Comes Together

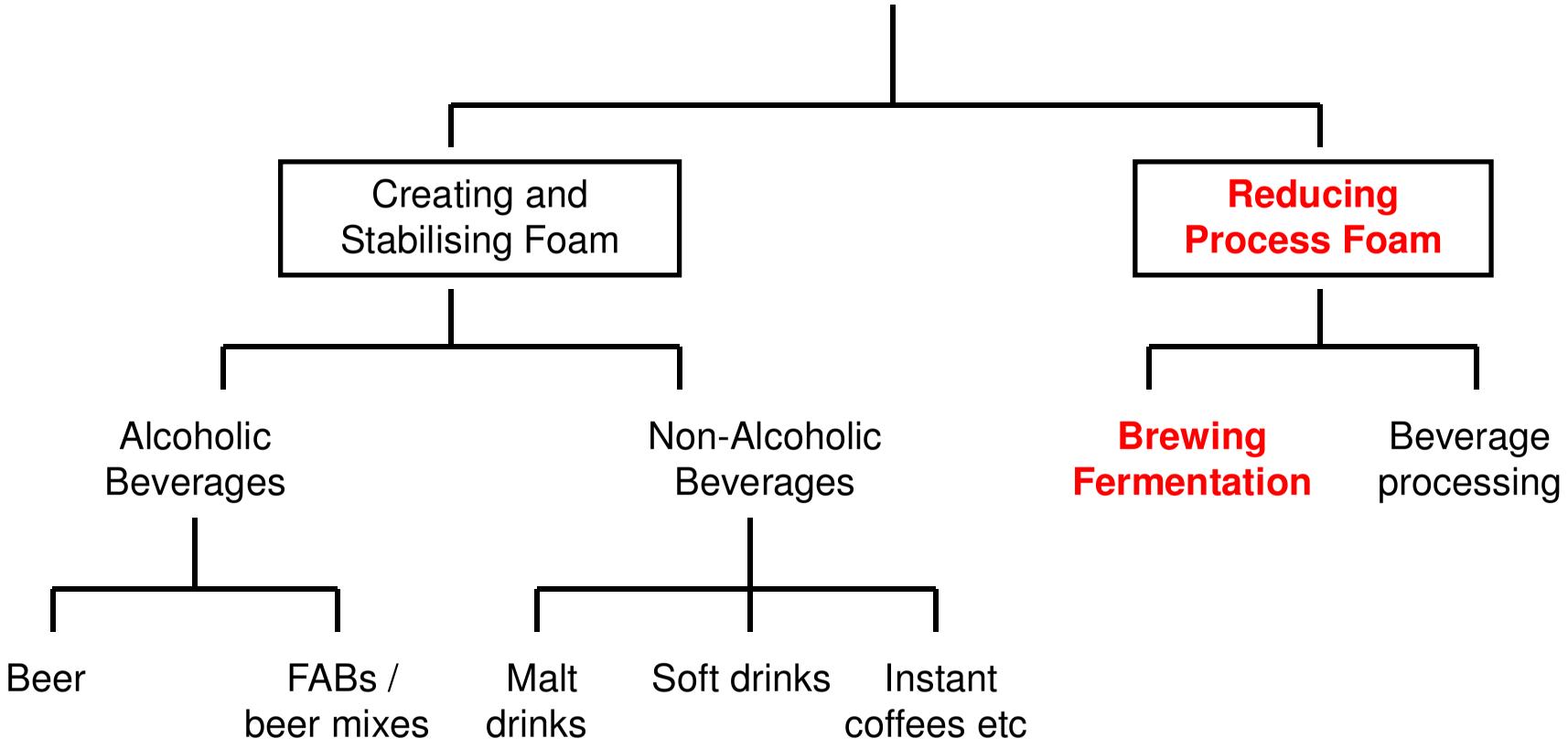
Technical capabilities

Brewing ingredients and process aids

Obtain maximum extract with good run-off	Improved protein sedimentation	Dextrin/glucan degradation	Chill haze stability	Chill haze stability	Flavour stability
Reduced ß-glucan levels	Wort clarity	Low carbohydrate beer	Diacetyl reduction	Foam stability	
Liquefaction/dextrinisation of adjuncts	Reduced foaming	Increased fermentability Reduced foaming	Improved yeast floculation		



Kerry Foam Solutions for Beverages



Main steps of foam formation

1.	Formation of bubbles	Protein Emulsifier Tannins
2.	Stabilisation	Hydrocolloids Emulsifiers Protein
3.	Destabilisation	Lipids Silicon based AF Veg/Cereal Oil based AF

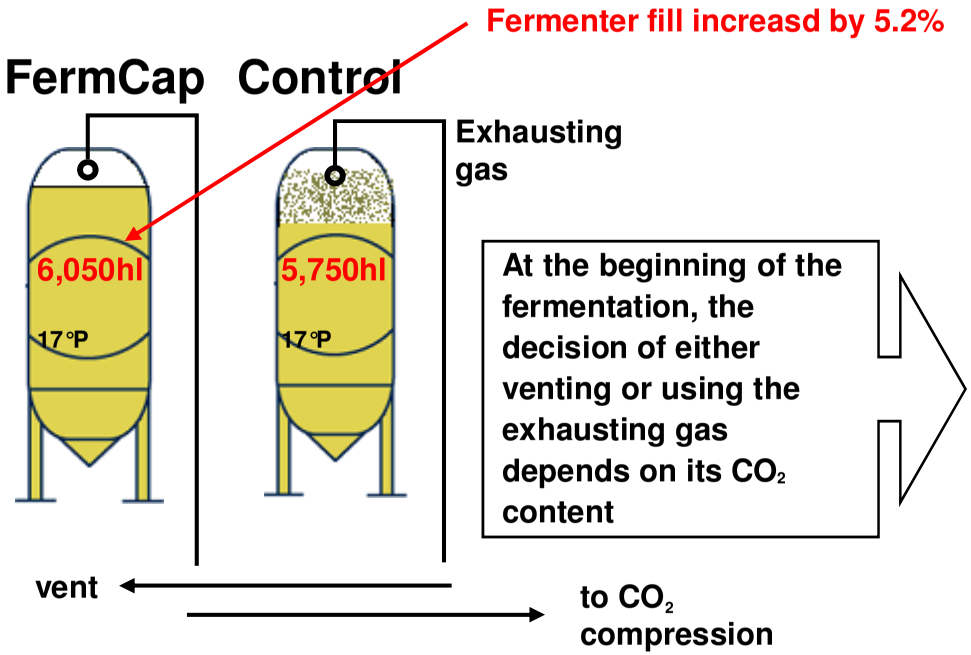
Why foam can be inconvenient

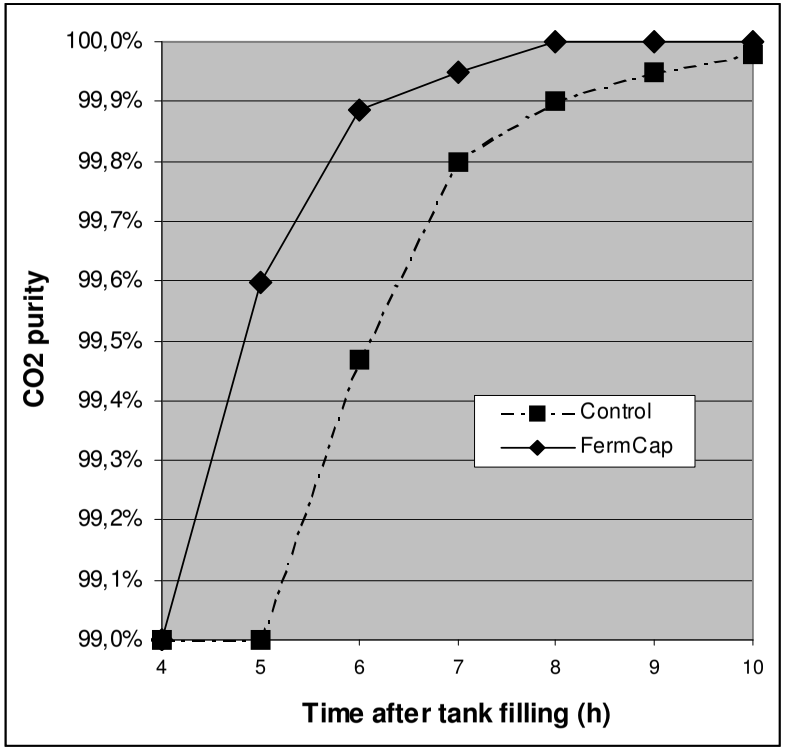
- Overall foam reduces process and cost efficiencies
- Coating of vessels - higher CIP needed
- Excessive foaming during CIP processes can greatly reduce cleaning efficiencies
- Excessive foaming of washing / rinsing liquors can greatly decrease foaming efficiency.
- Inaccurate readings from control and measuring equipment such as temperature, level and density controllers.
- Negative impact on CO_2 purity/recovery

FermCap S –Most recent commercial trials/observations

- Increased FV capacity – up to 7-15%
- Increased hop utilisation – 4%
- Increased speed of fermentation
- Improved beer foam
- Improved CO_2 recovery
- Yeast sediments faster at end of fermentation, better compaction and better filtration performance
- No special cleaning required for cross flow filtration (ceramic) membranes.
- No reduction on flux rates with cross flow filtration (ceramic) membranes.

FermCap benefits: Increased fermenter capacity and earlier CO_2 recovery in high gravity brews





The desired CO_2 purity is reached earlier in the fermentations using FermCap:

- **there is no entrapped air in the foam (because there is virtually no foam !)**
- **the headspace represents a smaller volume and is faster to replace it by the pure CO_2 produced by the yeast**