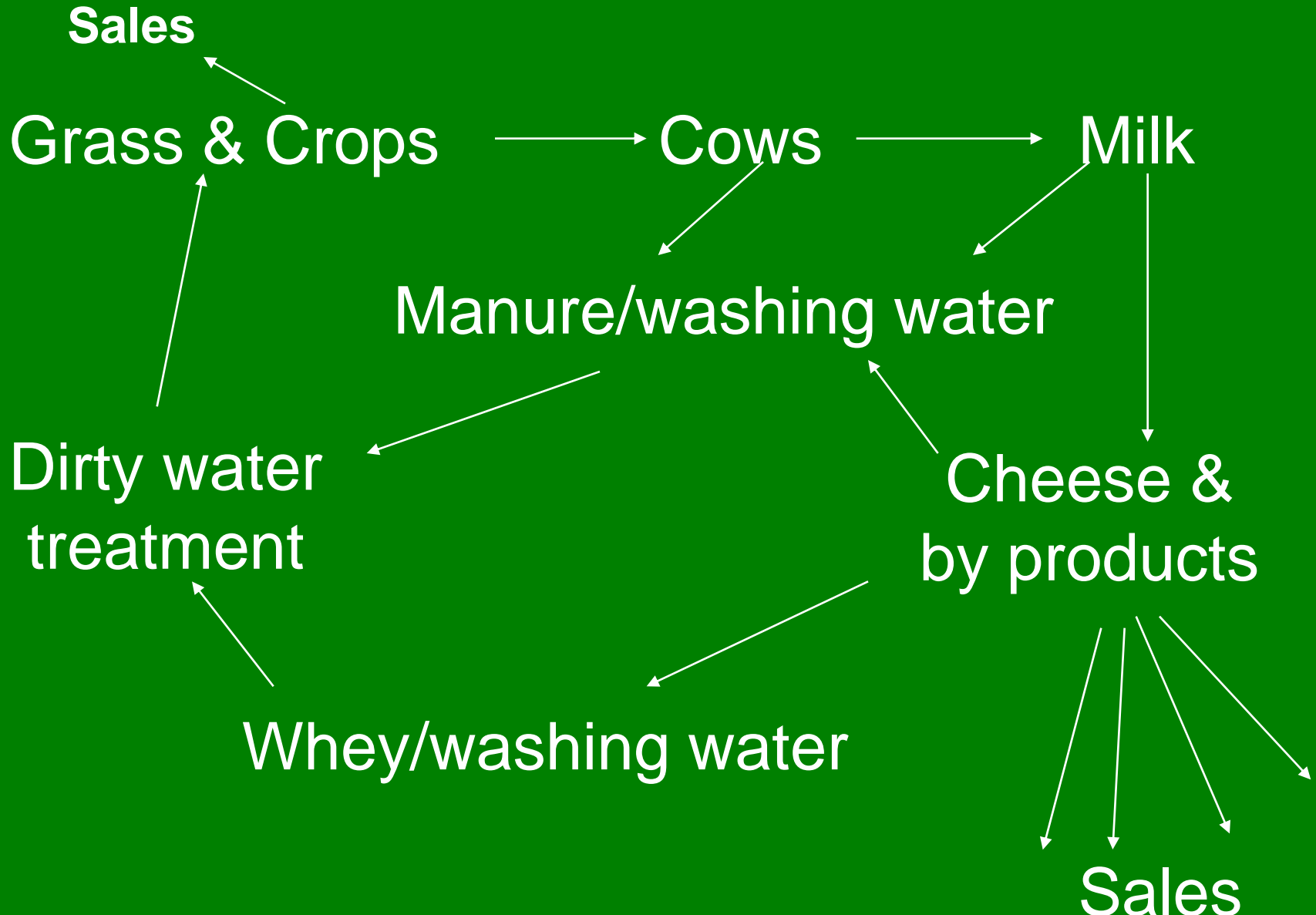


History and technology combine
to produce a world class dairy
product



MARY QUICKER

FARM BUSINESS





WHY SCIENCE AND TECHNOLOGY?

- World class cheese/excellence in farming
- Responsible for my profitability=sustainability
- Other countries do it well
- Regulatory issues, external shocks
- Sustainable intensification - feeding the 10 bn on 1 planet

FARM - COWS

- 500 cows
- New Zealand based grazing system
- Grazing not grain: Lower yields/ cow power
- Stable system - £, people & cow stress
- Benefits us and our customers, not our suppliers
- Technology comes from Ireland/NZ
- Environmental issues

Grazed grass almost all year



bTB

- bTB outbreak
- Single point source of infection arising from outside the herd
- EU audit
- Science and single issue lobbies
- Science of Artisan Cheesemaking
- UK Ag and export



CROPS

- Commodity agriculture
- Breakeven
- Brown rust / global spread of pests/diseases
- Agrochem based agronomists
- How soils work



MAIZE GROWERS ASSOCIATION

- Set up late 80's
- Crop not seen as of value to trade
- Farmer members
- Added treatments to trials, demonstration plots, transferring technology from other places
- Managed LINK project to get useable systems for whole crop cereal silage
- Support of key practical scientists

ENVIRONMENTAL SCHEMES

- One of the largest environmental schemes
- Important part of our farm profits
- Schemes that you can run economically sustainable farming around
- Monoculture in the middle of the fields, diversity around the outsides



CHEESE

- World class cheese
- Milk from own cows
- Traditional manufacture, handmade, clothbound, flavour complex balanced long
- Cheese consultants – Dr Cheese
- Excellence or die
- Science in service of craft – France, US

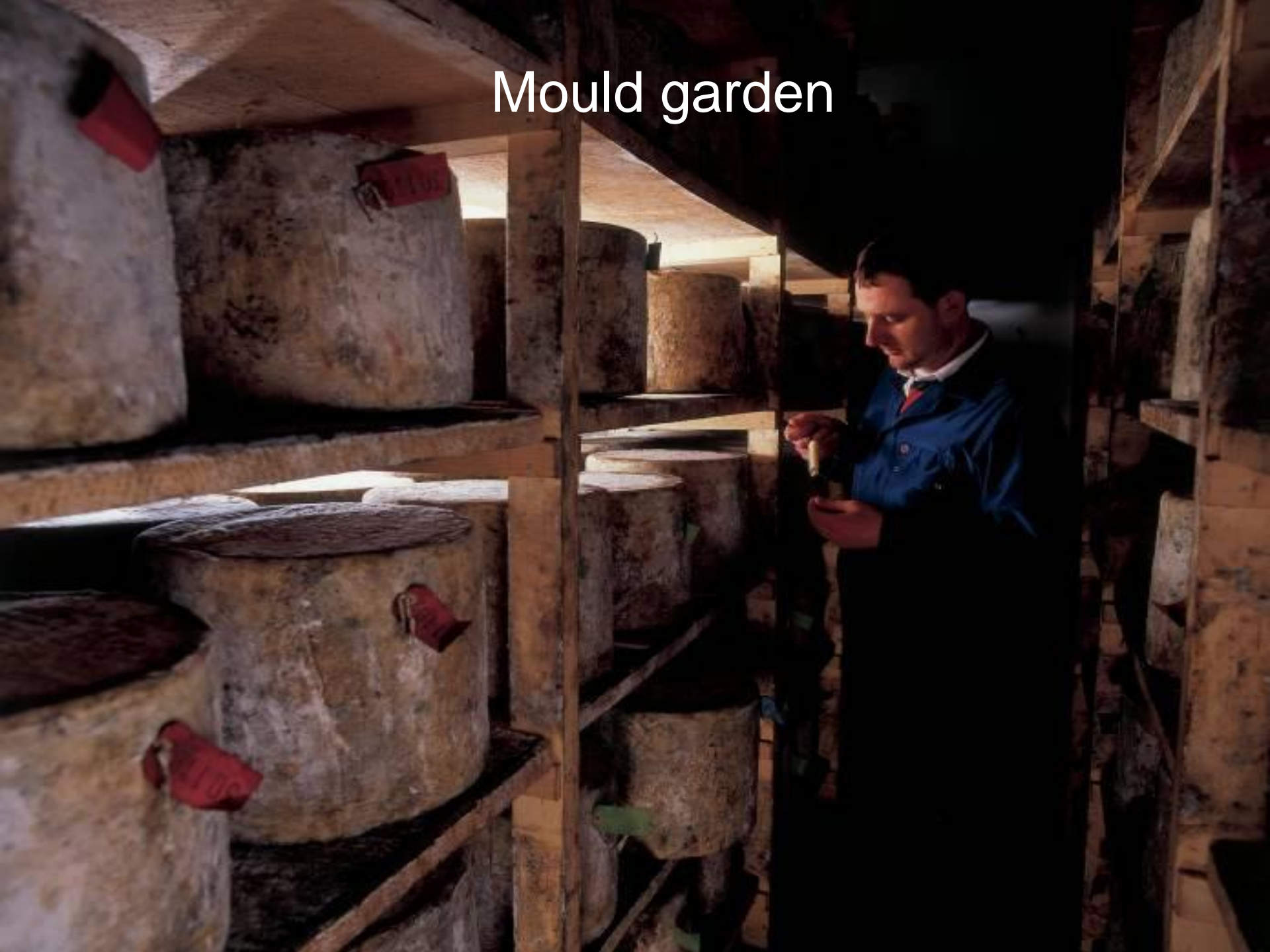
Starters
Beneficial biofilms







Mould garden



Cheese mite

- Legislative change Dec 2006 – fumigant banned with no alternative
- Cost £1/2m over 3 years
- No reservoir of knowledge for us to call on – experts just retired
- Silos separating scientific, technical and practical knowledge

Cheese mite under the cloth



Cheese mite damage



The same cheese cut up



Mite busting



PIGS – CLOSED May 07

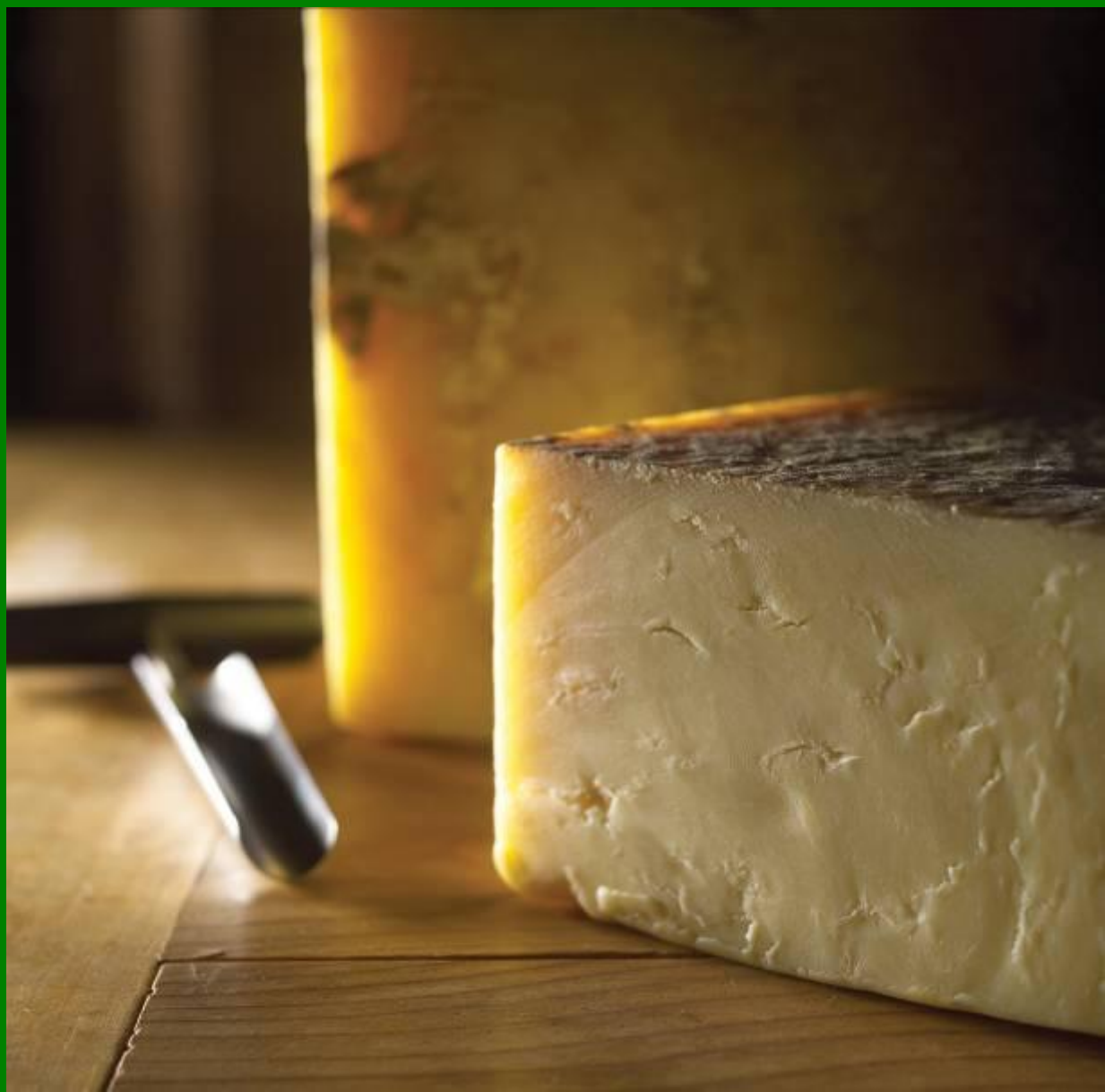
- SUSTAINABLE:
 - Drank whey – saving feed
 - Downhill from whey, uphill of slurry/dirty water
 - Delicious meat (whey fed, breed, hanging)
 - High price into local butcher

UNSUSTAINABLE ENTERPRISE



PIGS

- UNSUSTAINABLE:
 - Gold-plating EU regs, PWMS
 - Financial – breakeven, despite high price
 - Denmark/Holland solved disease quicker
 - UK pigs -40%



CARBON NEGATIVE

- Estate carbon negative
- Farmers control land which captures energy: sun, water, wind, AD
- Part of the climate change solution

Climate variability

- Optimize climate effect of farming – grassland/ methane
- Systems stable against shock
- Crop & animal diseases
- Need people who know how to do stuff

SCIENCE AND FARMING

- Land based science to 80's: production at any cost
- 80's to now: Stop the cost
- Now: Sustainable cost
- Artisan – pursuit of excellence

Suddenly food & farming is where it is....

- The best and brightest into food and farming?
- Inspire the young
- Ag colleges enrolment
- Artisan young & cool
- Commodity

The tide has turned

- Practical science – to stop population movement in the event of climate change
- TSB
- Return of LINK?
- A career worth having in the UK
- How do small industries express the demand they have?

People

- Scientifically knowledgeable, technically competent practically based people – the missing generation
- Universities struggle with practical/ applied
- Practical PhDs will go home, our lot retire
- Who trains the trainers?

Creating practical scientists

- Practical PhDs, supervised in institutions, mentored in industry, develop career paths
- Answer asap before we lose the last of our knowledgeable people
- Knowledge exchange
- Communication
- The gap is the opportunity
- Thank you

