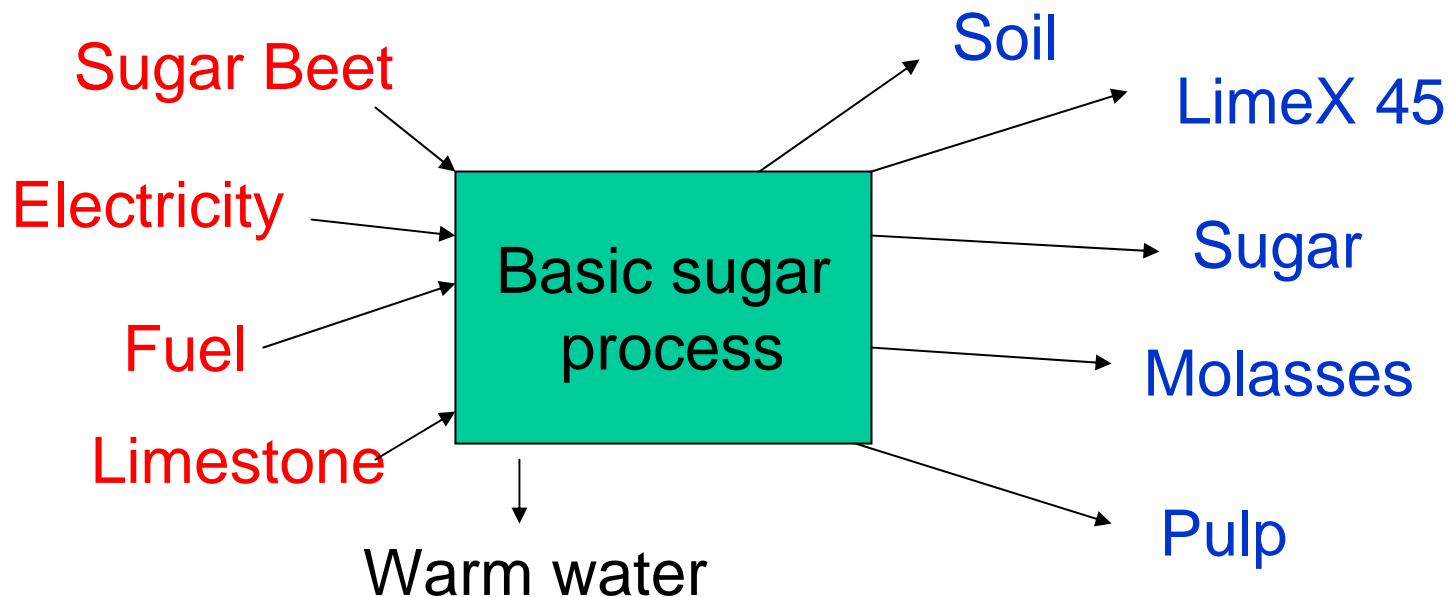


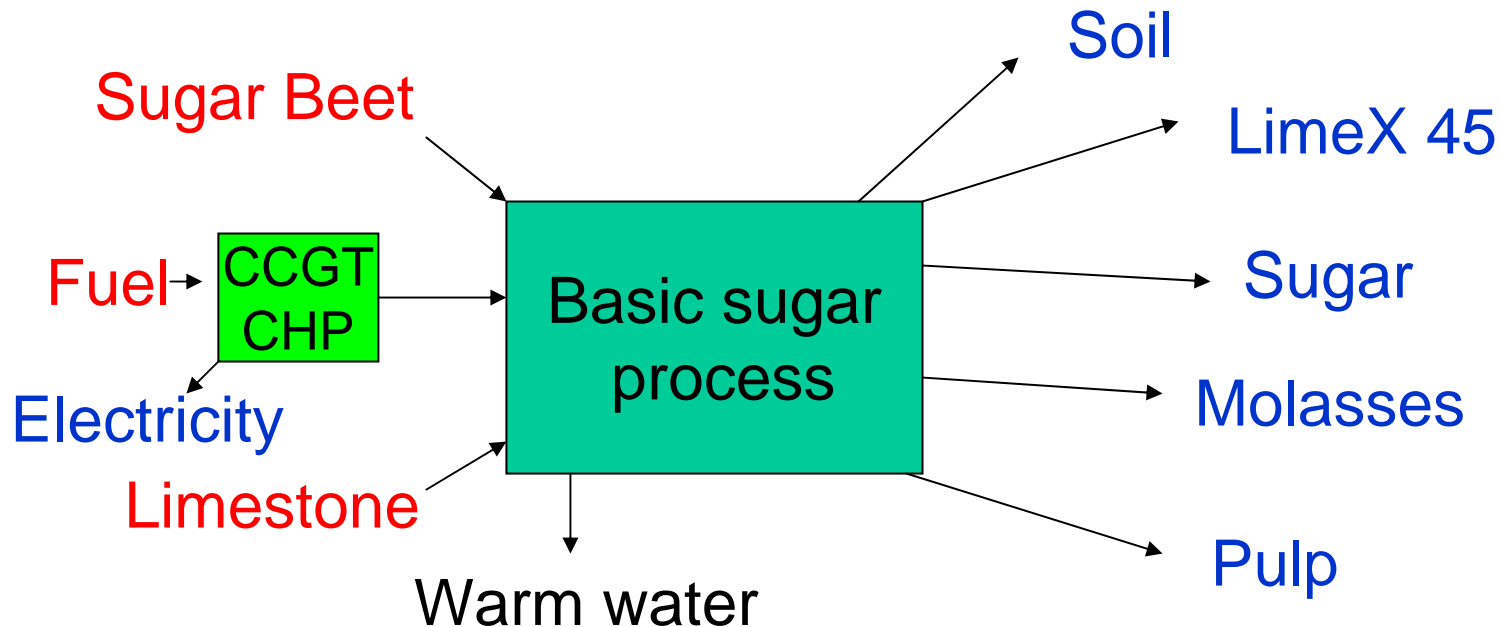
Developing value added bio-refineries in the UK.

- Tony Sidwell
- New Opportunities
Manager
- British Sugar plc.

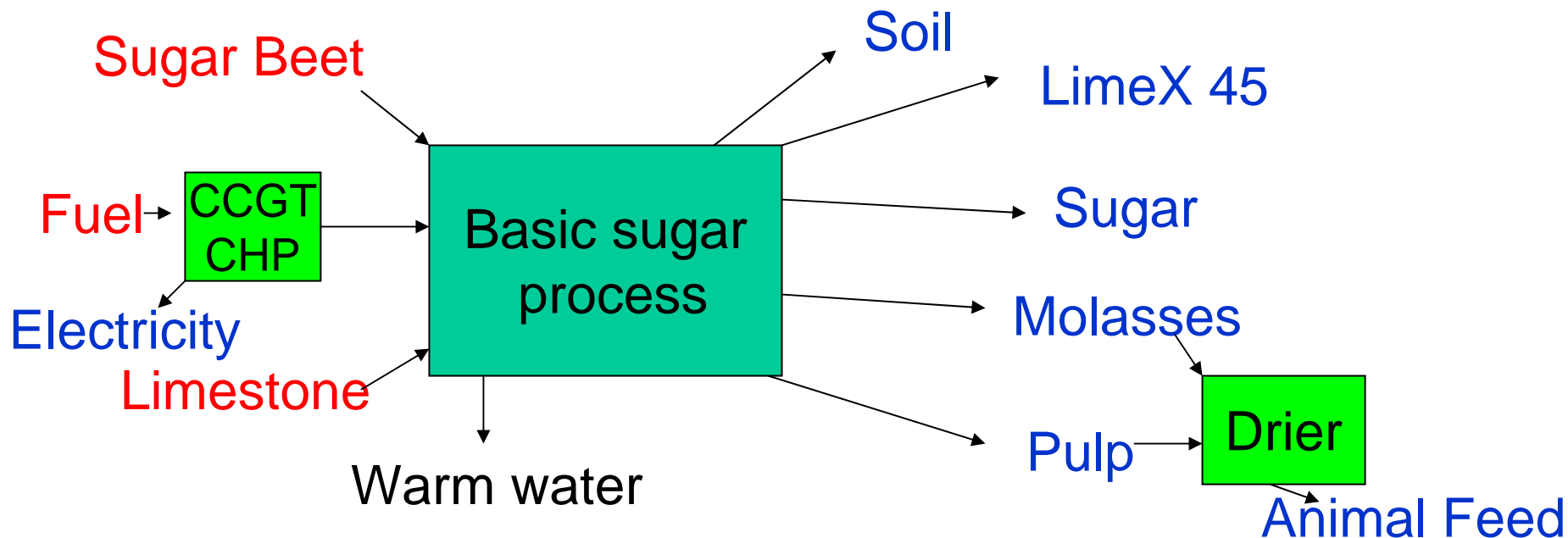
The Development of a UK Bio-Refinery



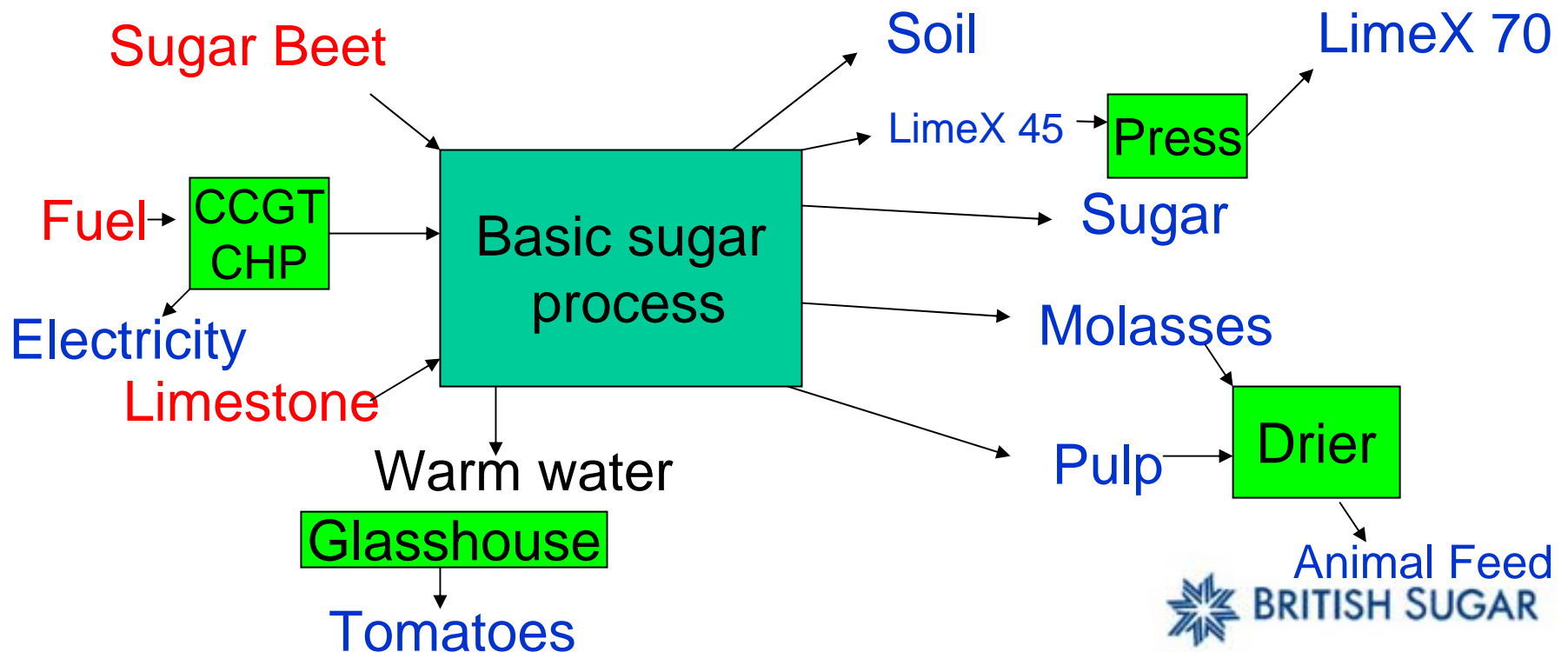
The Development of a UK Bio-Refinery



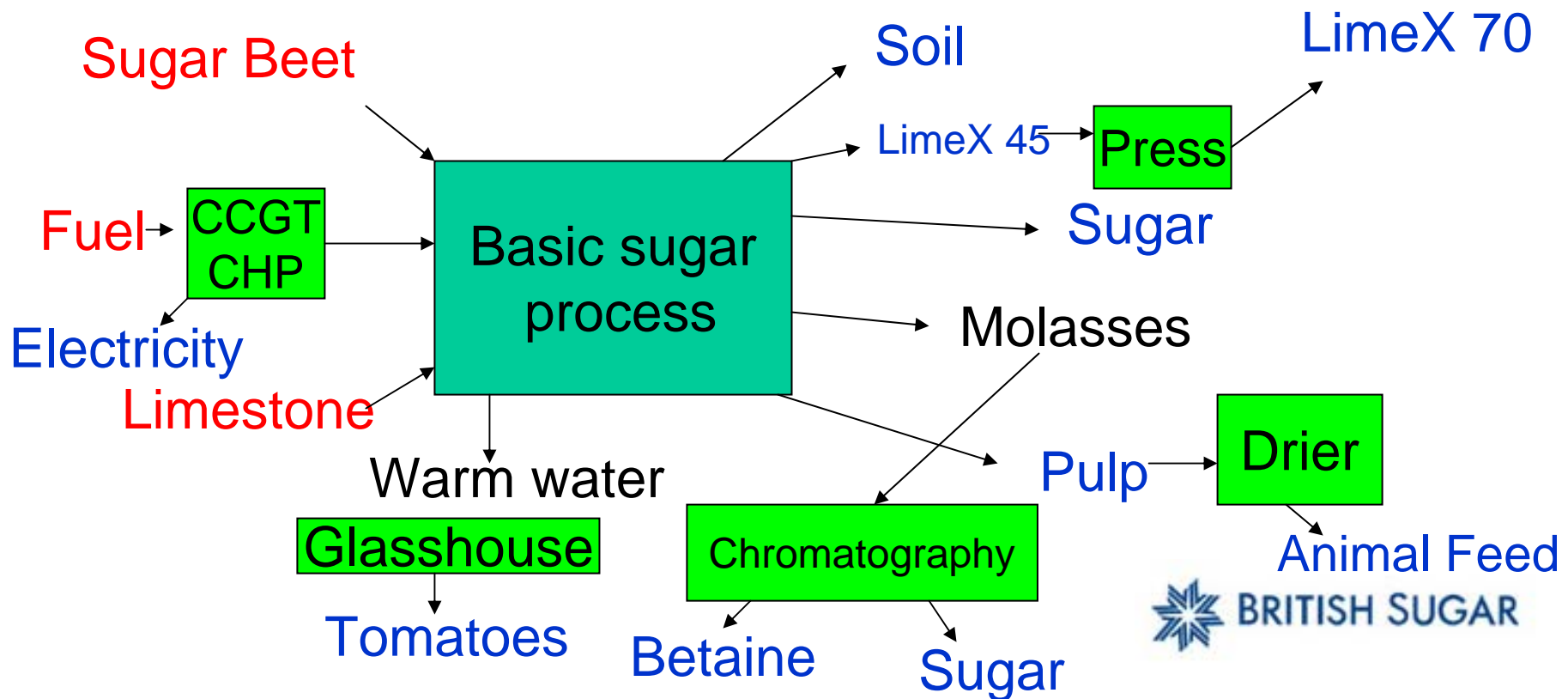
The Development of a UK Bio-Refinery



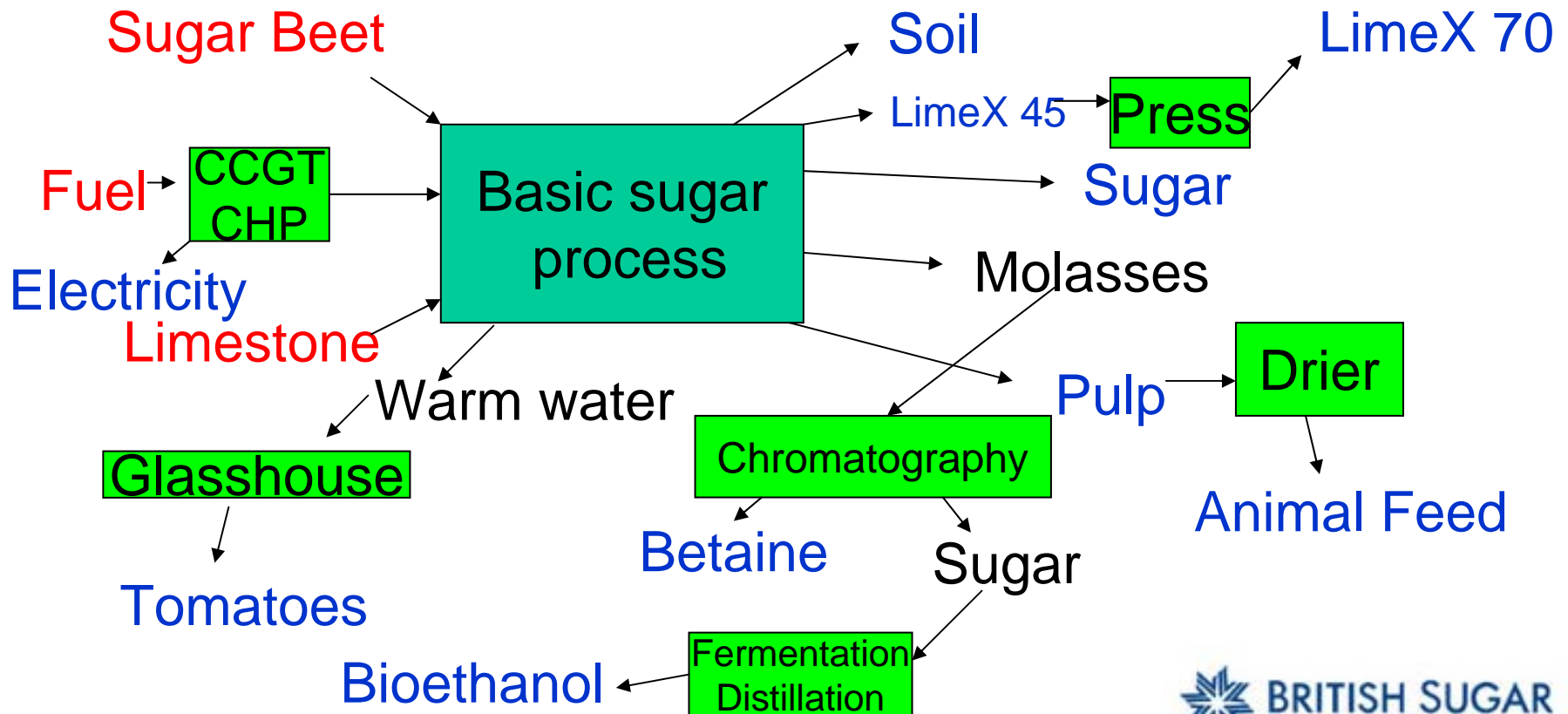
The Development of a UK Bio-Refinery



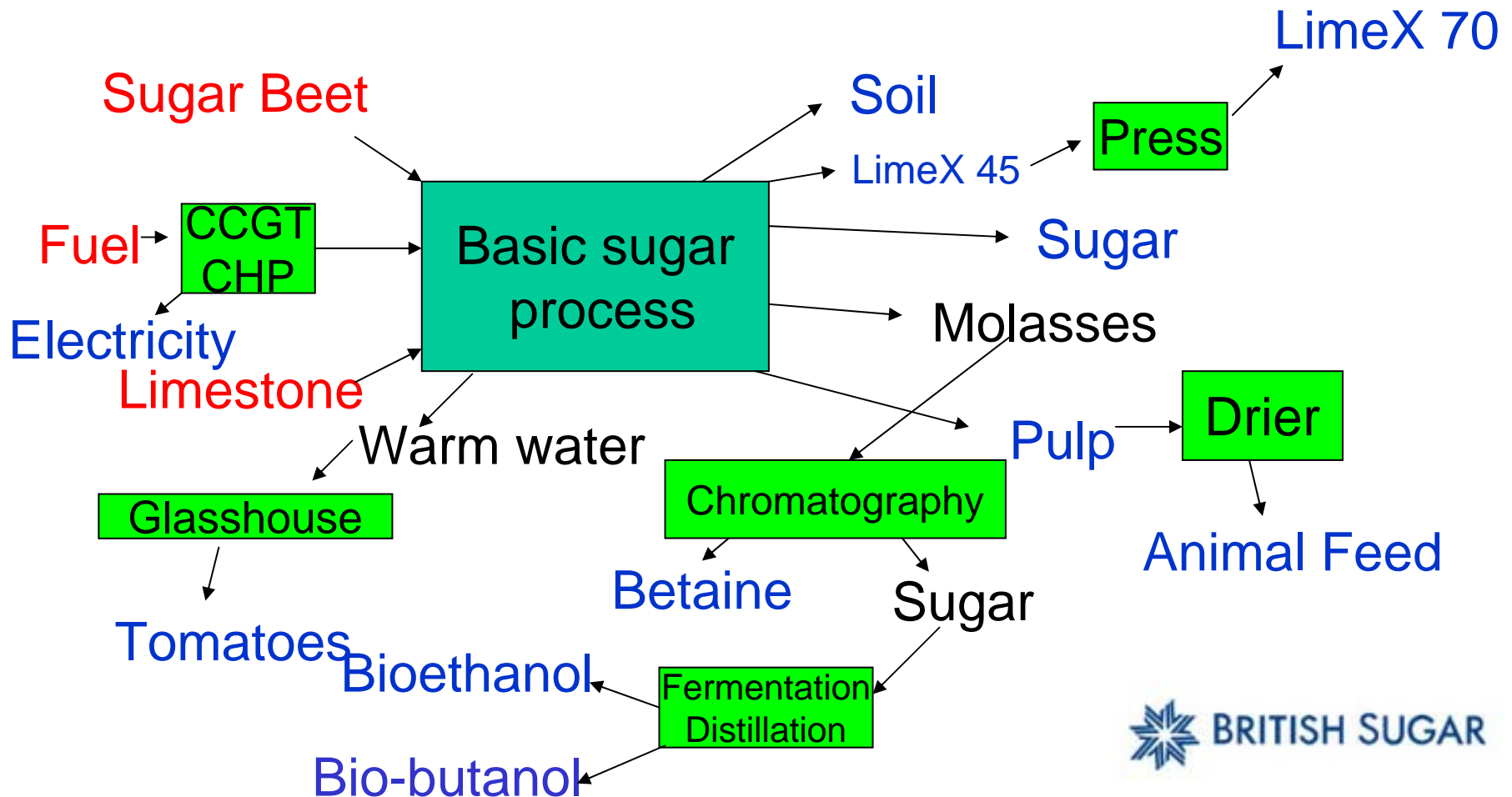
The Development of a UK Bio-Refinery



The Development of a UK Bio-Refinery



The Development of a UK Bio-Refinery



From 2.5 million tonnes sugar beet Wissington produces...

- Sugar
 - Bulk granulated 200kt
 - Bulk liquid 50kt
 - Liquid blends 10kt
 - Granulated bags 100kt
 - Caster bags 40kt
- Co-products
 - Betaine 6kt
 - Tomatoes 3.5kt
 - Animal feed 180kt
 - Electricity 500 GWh
 - *Bioethanol/*
 - *Biobutanol* 55kt
 - LimeX 100kt
 - Topsoil 100kt

Important Lessons?

- Integrated raw material supply chain.
- Use all the raw material – no waste.
- Scale – must be large
- Learn from the food industry
- New biorefinery industry does not have the luxury of time.

Progress.....11 Jan



Progress..... August 3 2006



What Next?

- In June 2006 British Sugar announced that it is working with BP and DuPont to develop a commercial biofuels programme for the UK