



# **Food vs. Fuel Debate: A South West Context**

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# Food vs. Fuel: What is the debate?

Agricultural output has always had competing demands and markets

- Food for human consumption
- Animal feed
- Fibre
- **And now fuel**

**The dilemma** is the diversion of farm land or crops to produce bioenergy to the detriment of the food supply on a global scale.



**Biofuels cause four times  
more carbon emissions**

**The Daily Telegraph**



# Meals per gallon:

The  
impact of industrial biofuels on people and global hunger

**act:onaid**

# Types of Biofuel

## Liquid biofuel **biofuel**

Bioethanol  
Biodiesel  
Biomethanol  
Wood diesel  
Biohydrogen  
Bio-DME (Dimethyl  
Ether)  
Oilgae (oil from algae)



## Gas biofuel **biogas**

Biogas/Methane  
Biopropane  
Syngas  
Biohydrogen



## Solid biofuel **biomass**

Wood  
Charcoal  
Biomass pellets



# Types of Biofuel

In the South  
west?

## Gas biofuel **biogas**

Biogas/Methane  
Biopropane  
Syngas  
Biohydrogen

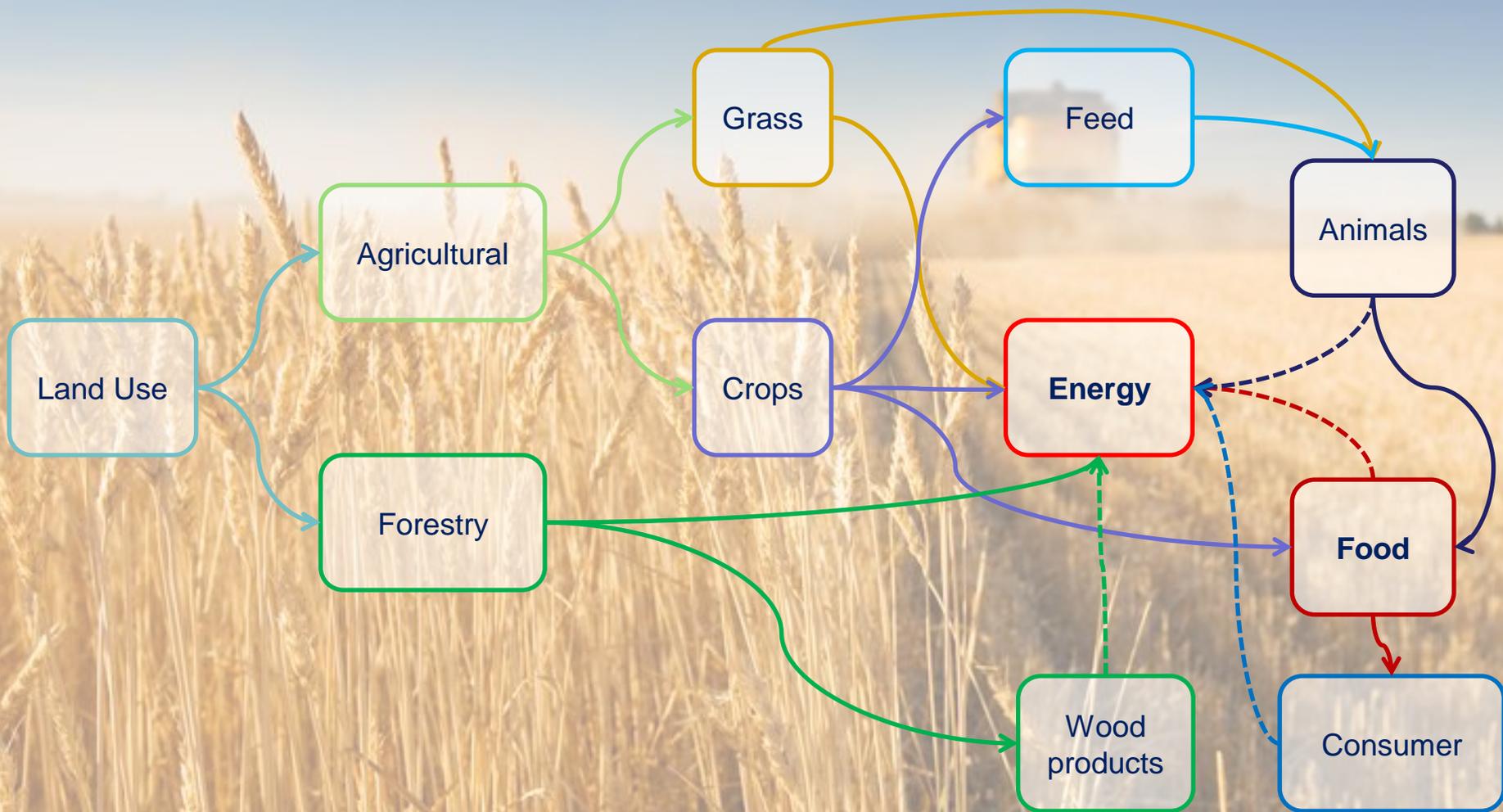


## Solid biofuel **biomass**

Wood  
Charcoal  
Biomass pellets



# Fuel from the land in the South West



# Land use implications of biomass and biogas



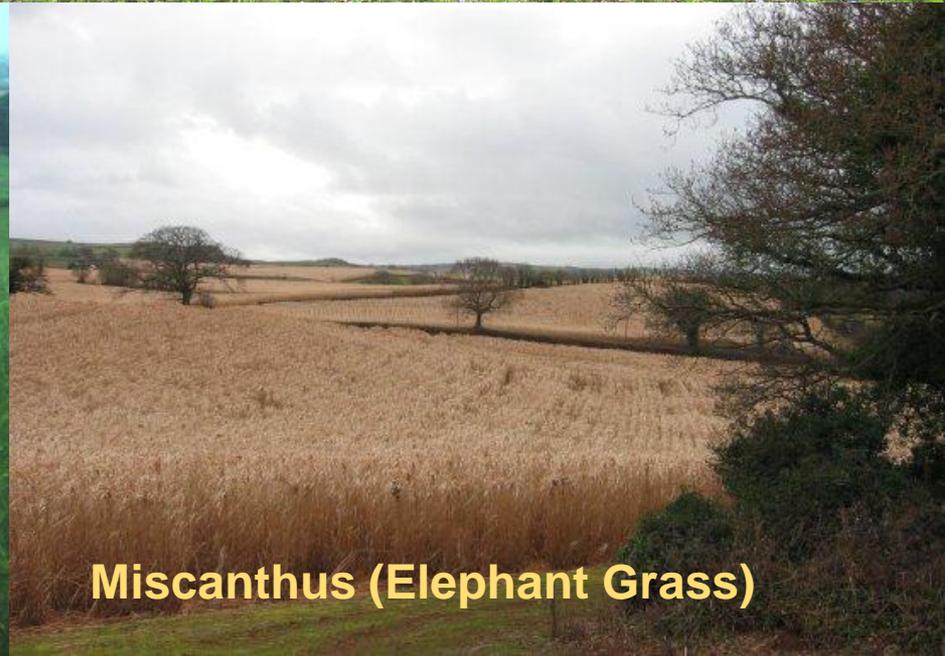
**Silage grass**



**Maize**



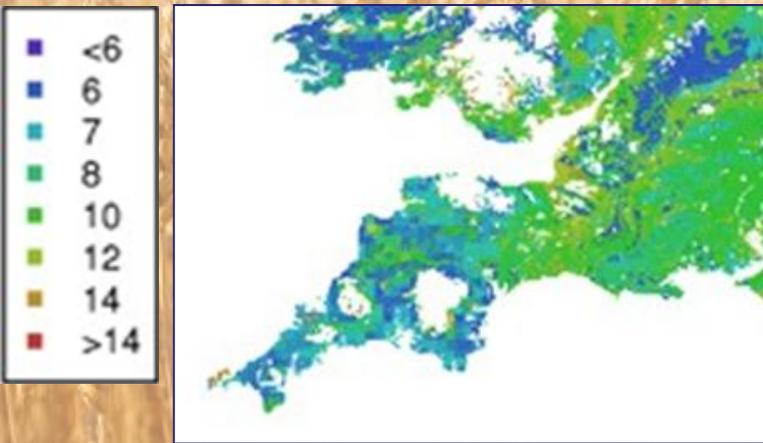
**Short Rotation Coppice (Willow)**



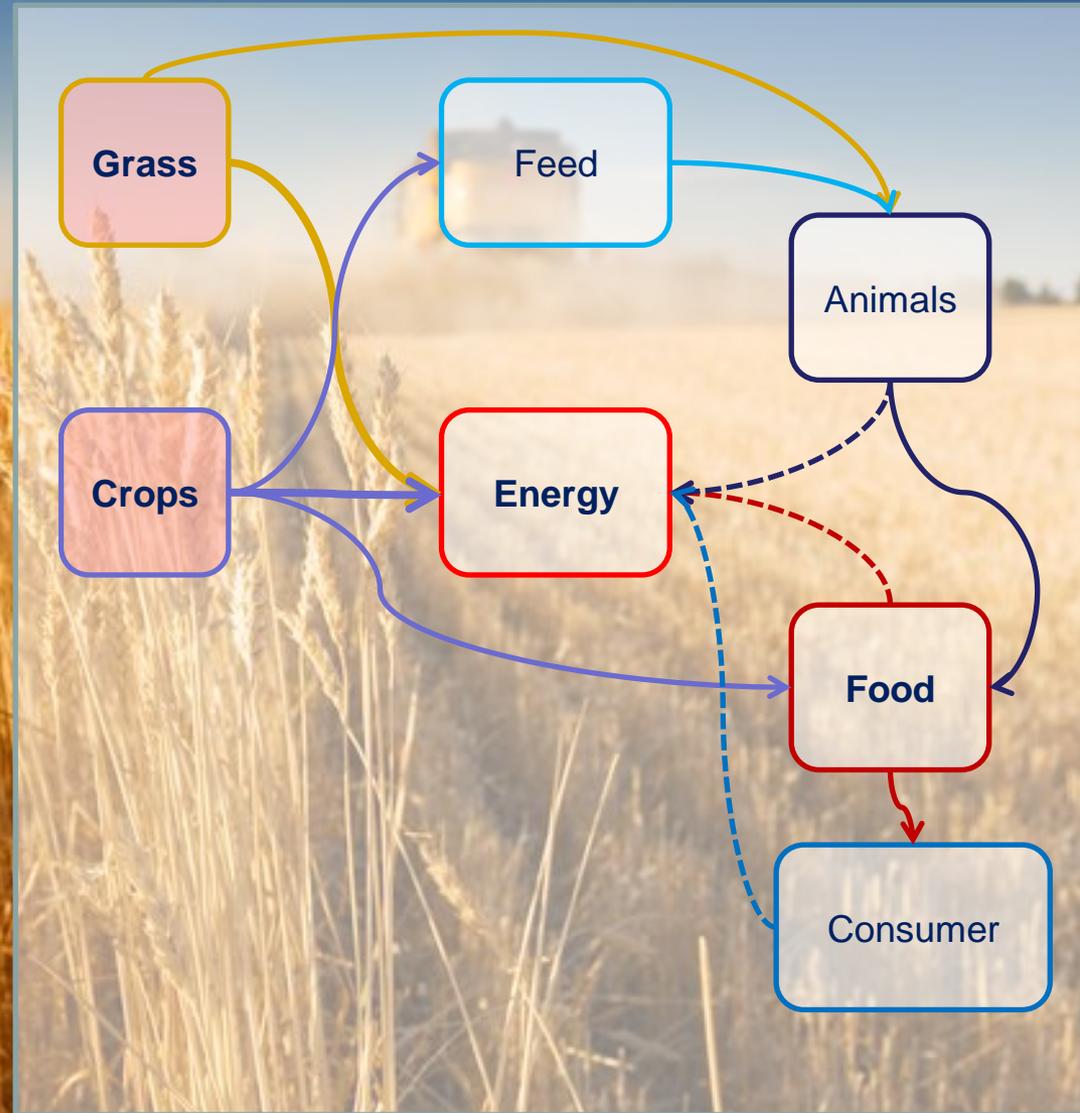
**Miscanthus (Elephant Grass)**

# Potential displacement effects from biomass crops

## Miscanthus

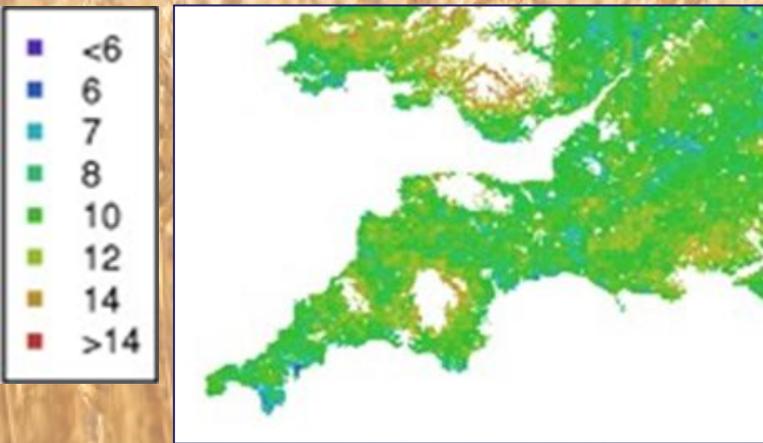


Source: Hillier et al. (2009)

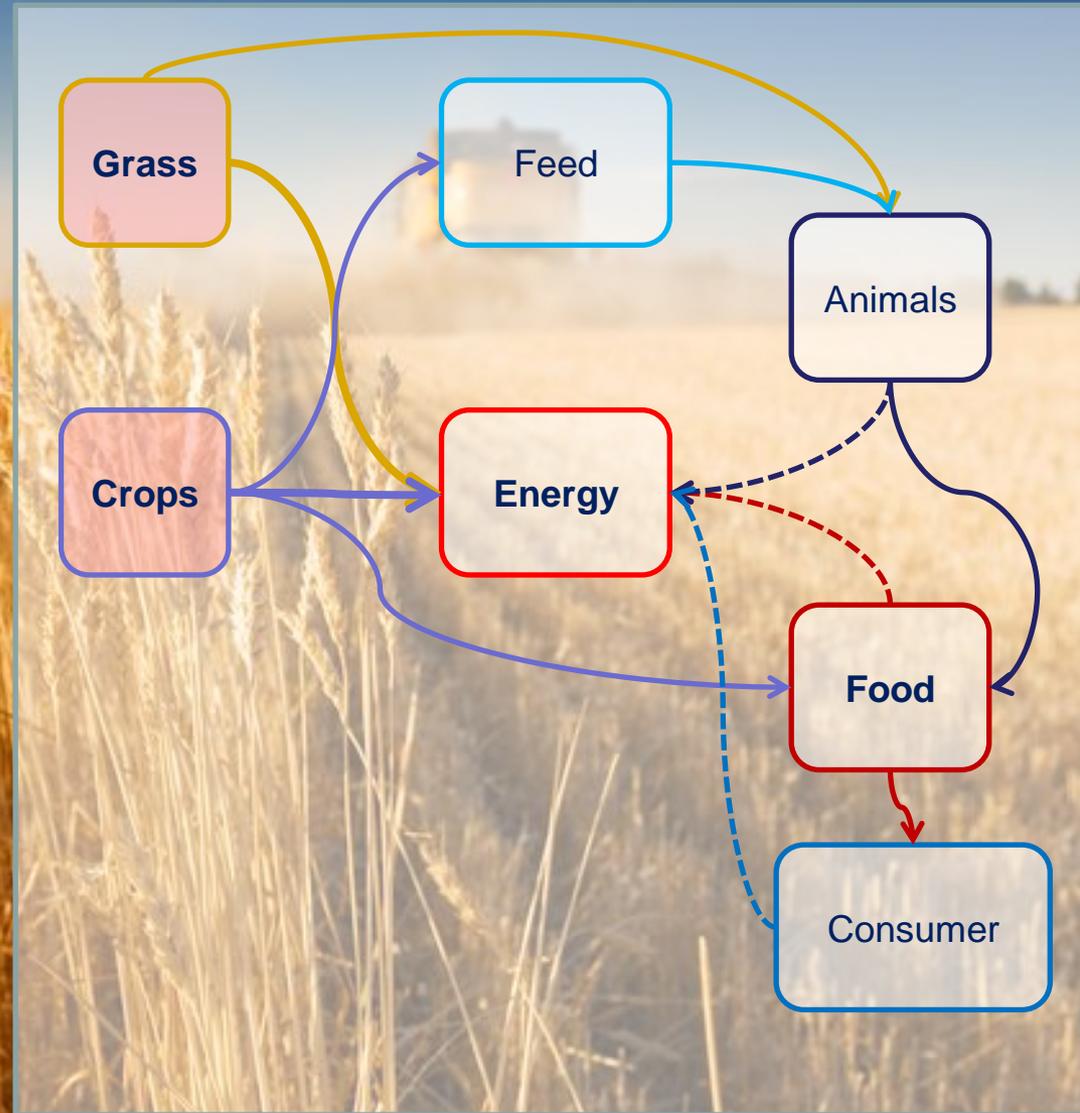


# Potential displacement effects from biomass crops

## Short rotation coppice



Source: Hillier et al. (2009)



# Potential displacement effects from biogas crops

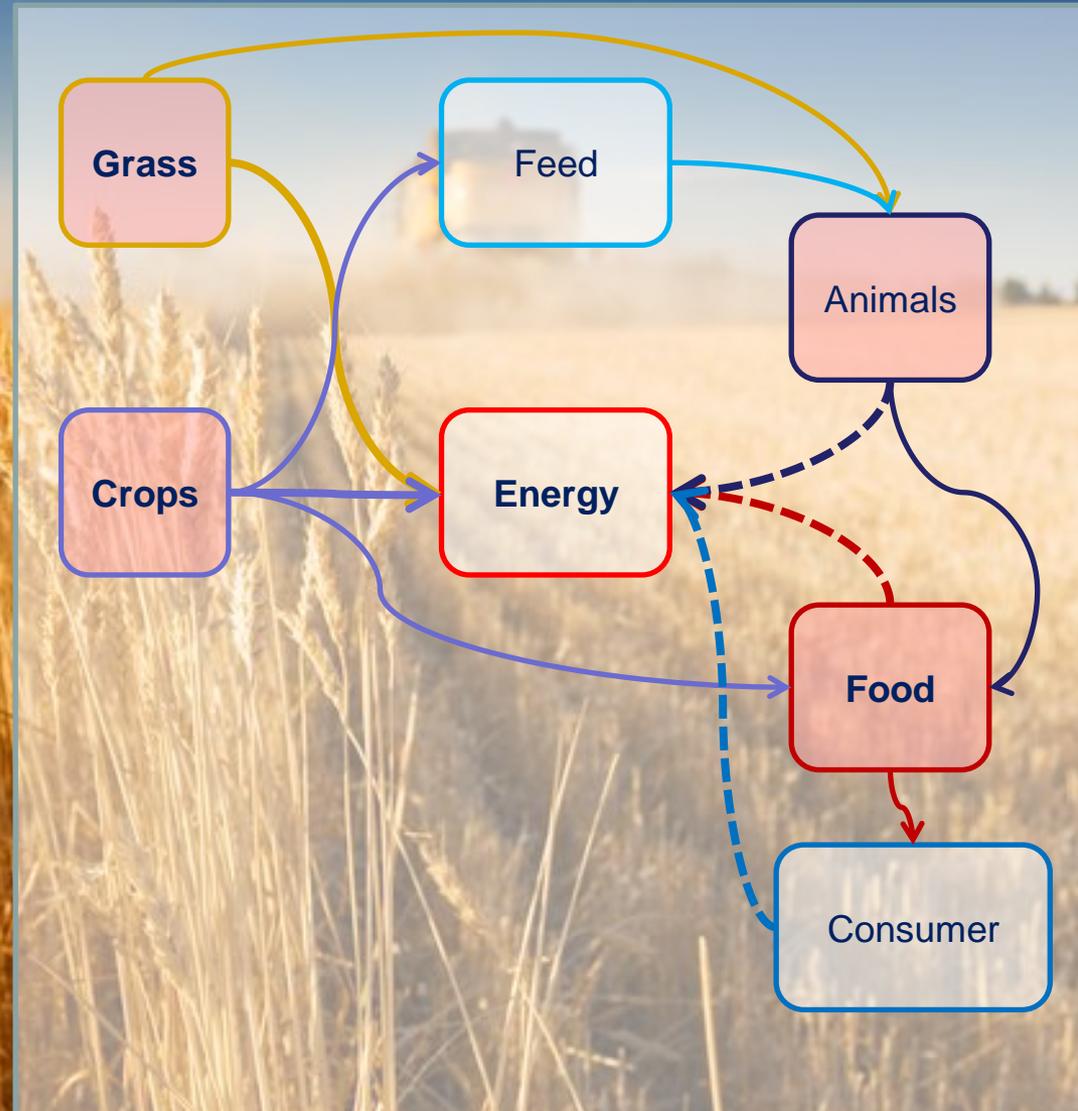
## Anaerobic digestion

Energy crops

- maize, grass

Waste from food chain

- out-grade veg, abattoir detritus, manufacturing, food wastes



# Food vs. fuel: a question of economics?

Global market influence

Response to market signals

Policy signals

Market structure

Market price and marginal economics

“SWBF [South West Biofuels] has ceased trading. This decision was not taken lightly, but was due purely to the expense of the raw material along with the lack of government support”.

**Thank you for listening**

**Any questions?**

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