

A network on High Nature Value farming  
Learning, Innovation, Knowledge



# Dartmoor Learning Area

## Stakeholder workshop 1/8/17

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*This project has received funding from the European Union Horizon 2020 research and innovations program under Grant Agreement No. 696391*

# High Nature Value farming – Learning, Innovation, Knowledge

- *..is a EU-funded Innovation Network to identify and share best practice*
- *..is focussed on the needs of HNV farming systems*

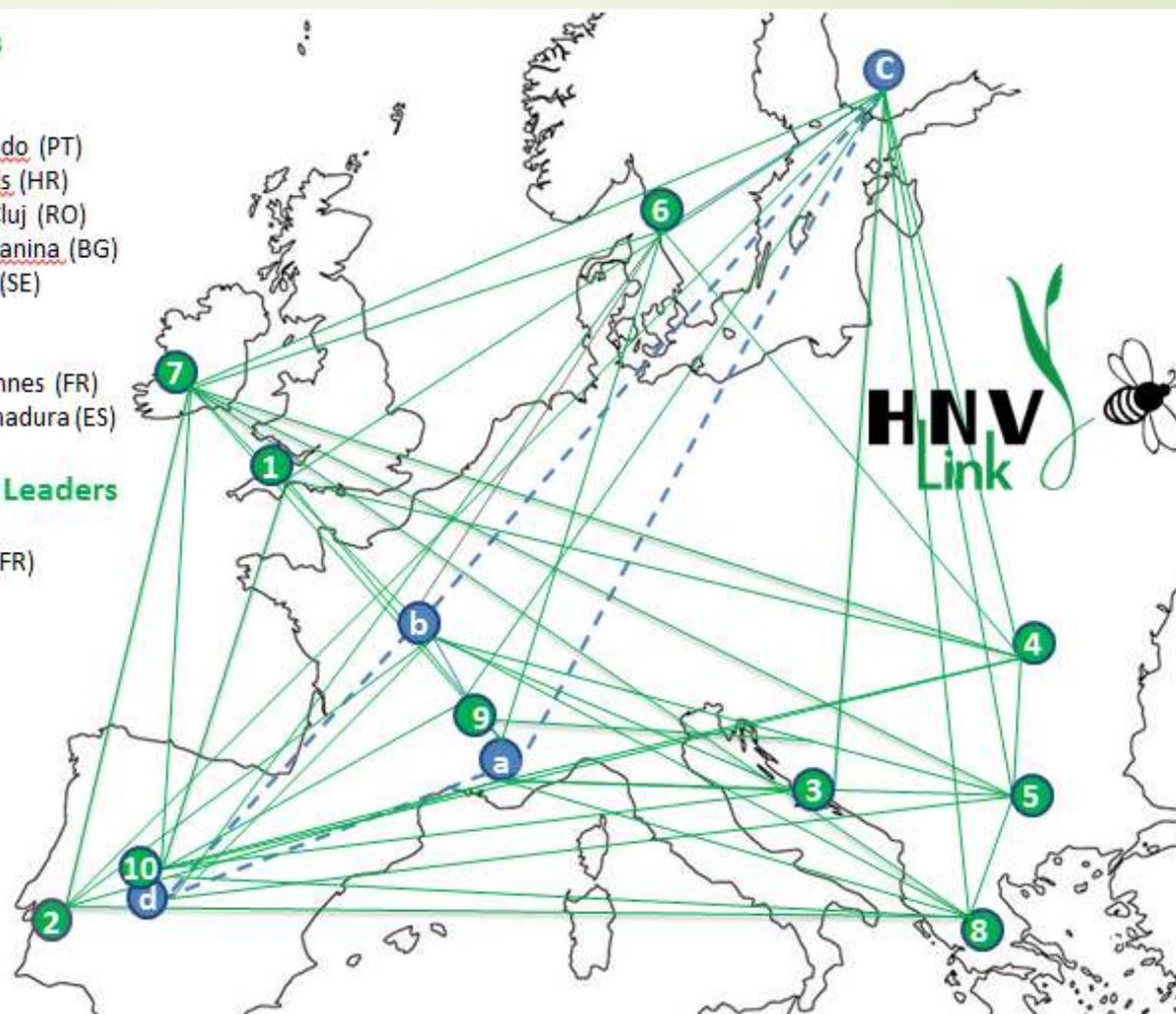
- 11 countries
- 13 partners
- 10 Learning Areas

### Learning Areas

- 1) Dartmoor (UK)
- 2) Sitio de Monfurado (PT)
- 3) Dalmatian Islands (HR)
- 4) Eastern Hills of Cluj (RO)
- 5) Western Stara Planina (BG)
- 6) Västra Götaland (SE)
- 7) The Burren (IE)
- 8) Thessalia (GR)
- 9) Causses et Cévennes (FR)
- 10) La Vera, Extremadura (ES)

### Work Package Leaders

- a) CIHEAM-IAMM (FR)
- b) ASCA (FR)
- c) UH (FI)
- d) EFNCP (ES)



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## High Nature Value farming

- *..is agriculture that supports, or is associated with, a high species and habitat diversity*
- *HNV farmland is usually dominated by semi-natural pastures and meadows*
- *HNV livestock systems are those which are based mainly on feed resources from semi-natural vegetation*

# What is the common challenge?

- ▶ HNV farms are usually economically-small – low gross margins; low return per hour worked
- ▶ **How can socio-economic viability be improved while maintaining or enhancing nature value?**
- ▶ **The HNV Vision: Economically and socially viable HNV systems**

# Farmed biodiversity-rich landscapes: the Dartmoor Vision for 2030

- The agreed vision for 2030 already exists and was meant to guide delivery, especially AE agreements and resolve potential conflicts over what was to be delivered on each area.
- Includes:
  - Selected Habitats & geology
  - Water
  - Carbon
  - Archaeology
  - Landscape and access
- It describes a farmed landscape, delivered through active, viable farming systems producing food.
- Endorsed by all the relevant Government agencies and Dartmoor Commoners' Council representing the farmers.



# The project

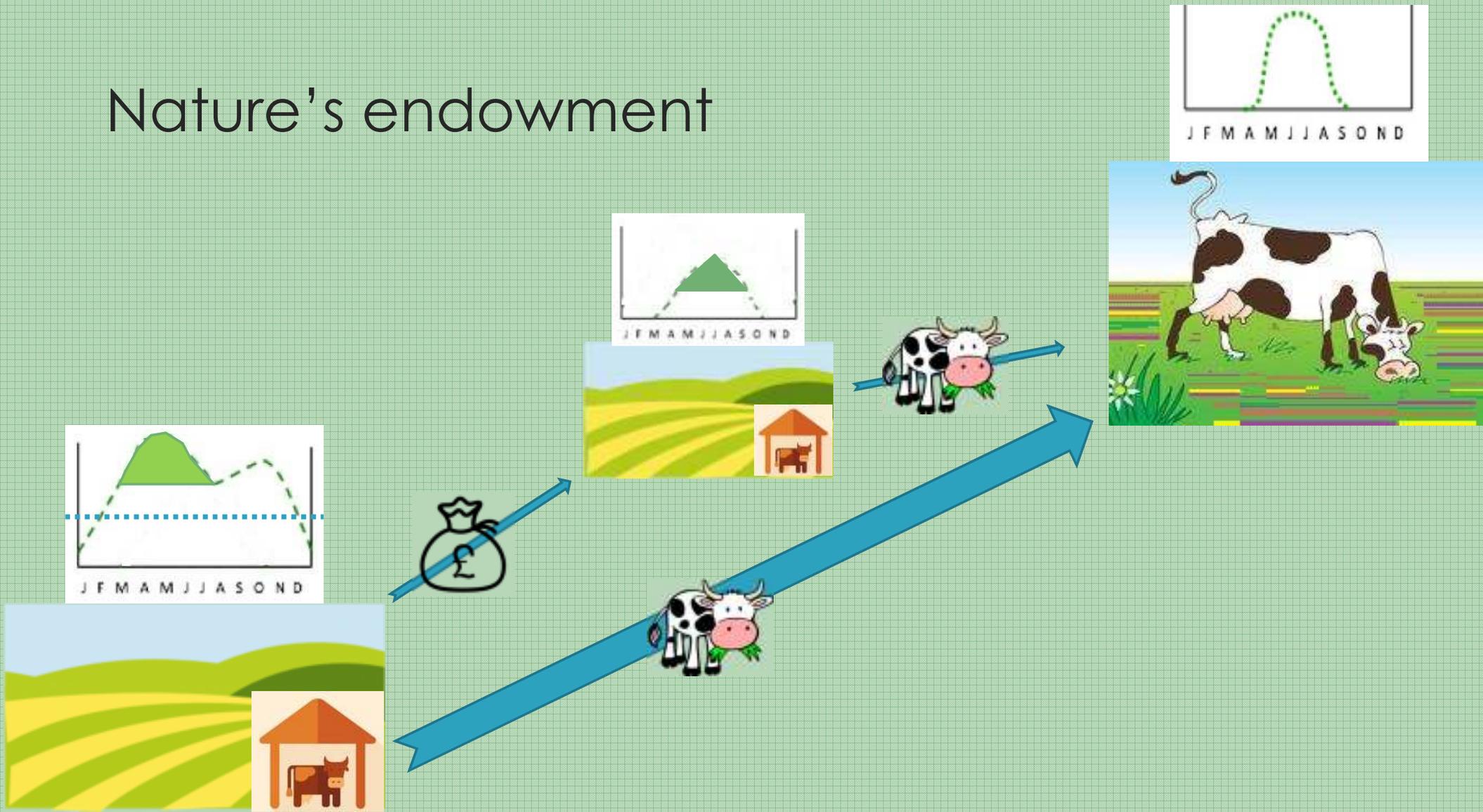
- ▶ Is looking at/for innovation in 4 areas
  - ▶ Techniques and technologies
  - ▶ Products and marketing
  - ▶ Social and institutional
  - ▶ Regulatory and support

# The project

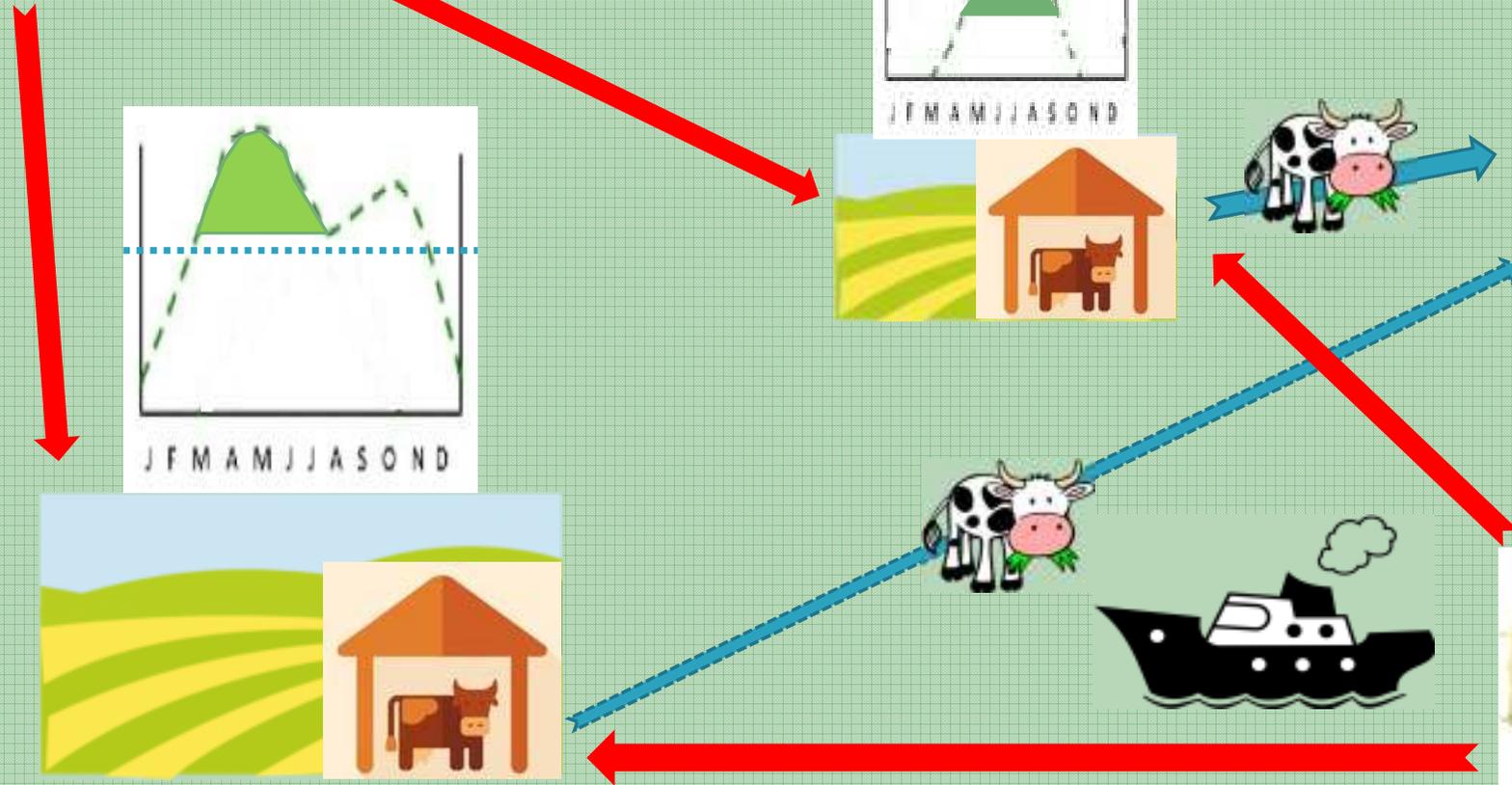
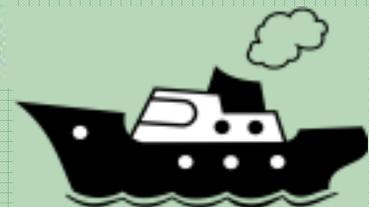
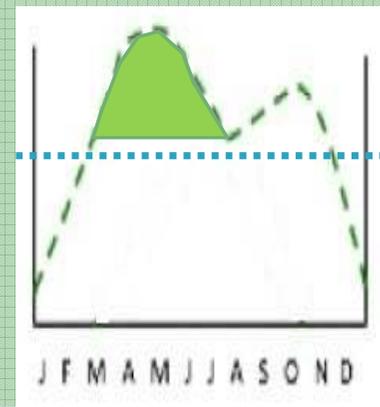
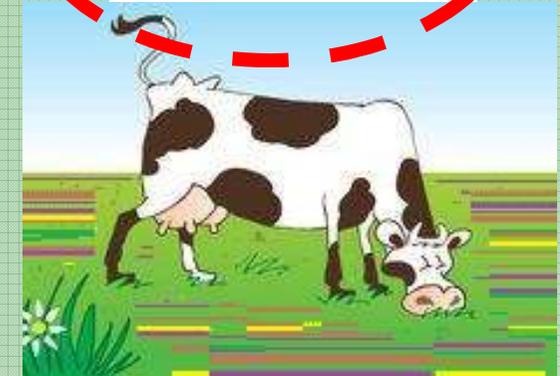
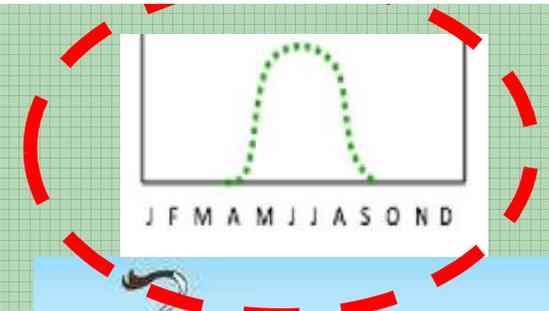
- Baseline assessment – a description of the Learning Area and the challenges facing HNV farming systems, including innovation needs
- A set of fiches describing relevant innovations in the Learning Area and in its Member State
- Sharing innovation between Learning Areas
- Disseminating innovation within the Member States and in the wider EU

What's the situation of HNV systems on Dartmoor just now?

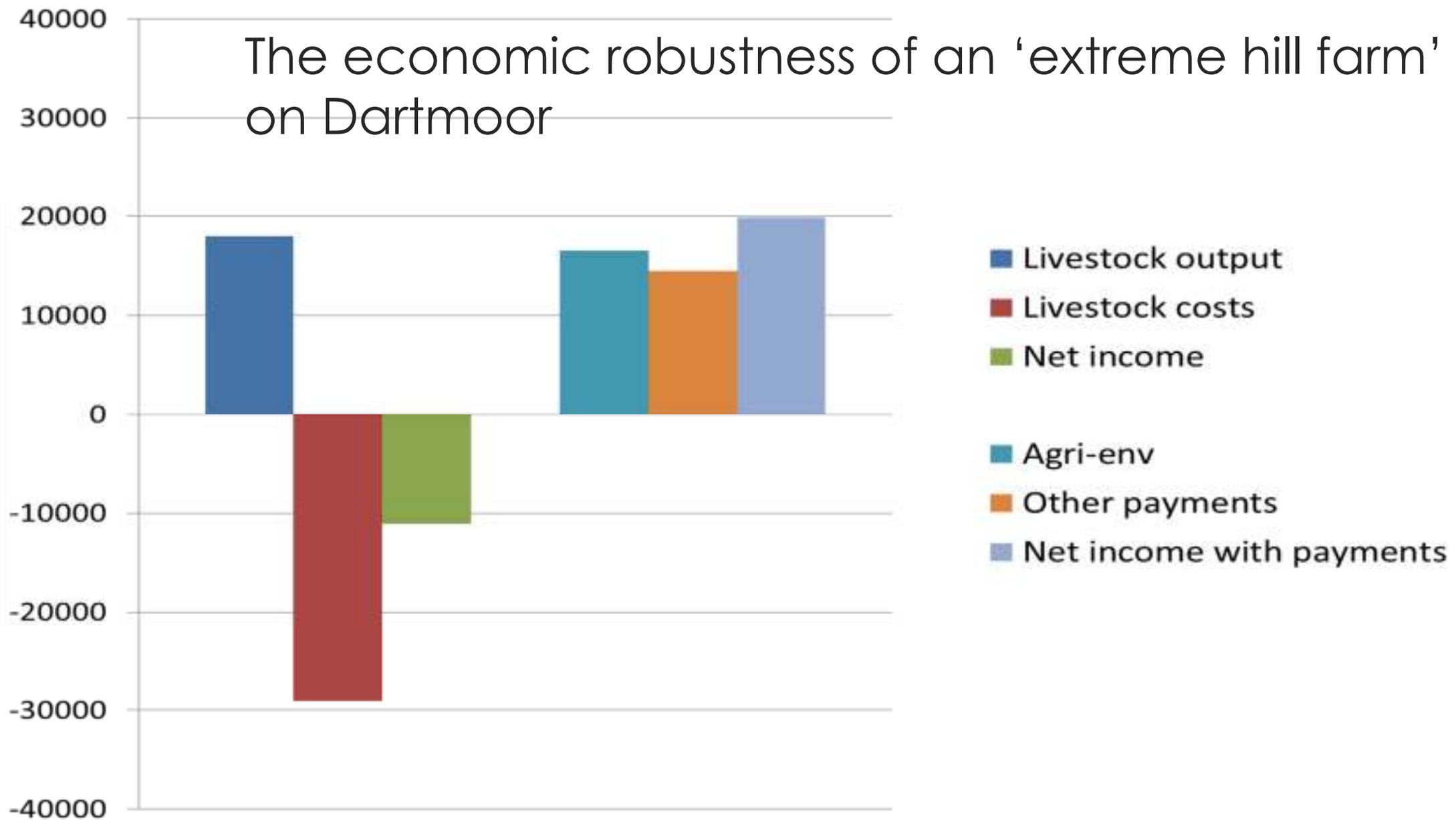
# Nature's endowment



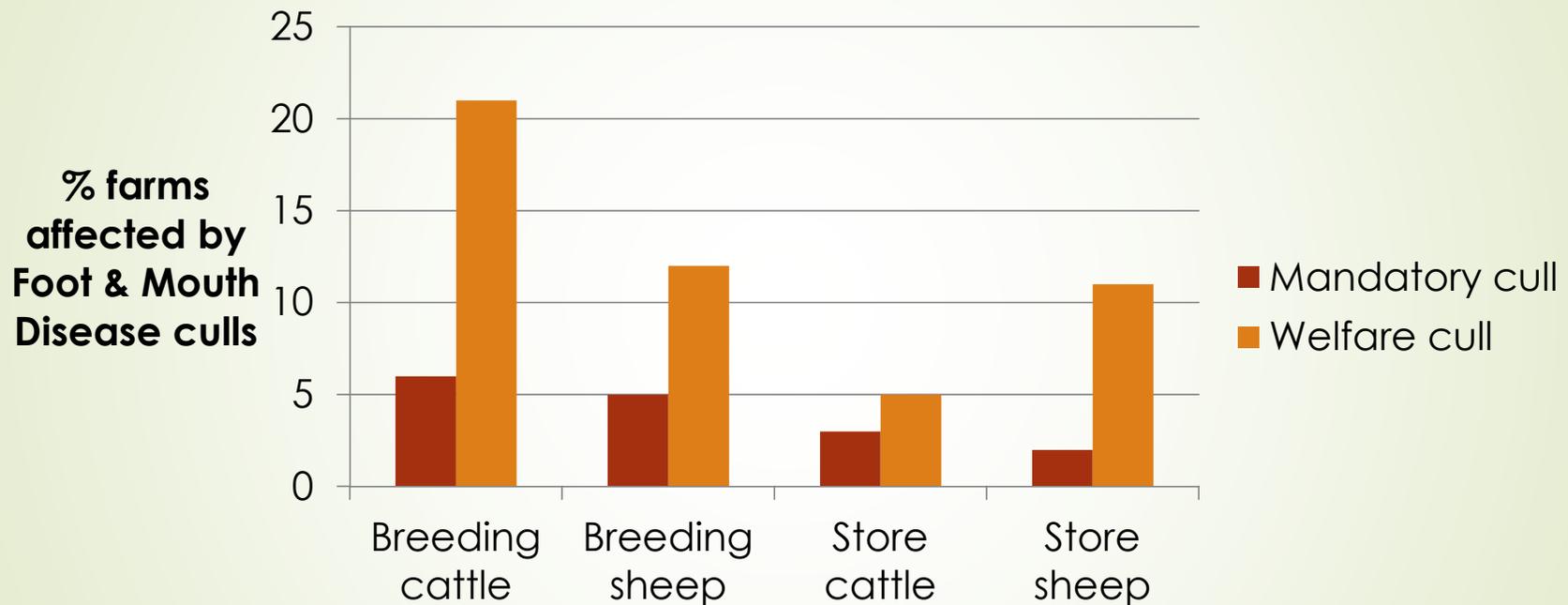
....as amended by science



# The economic robustness of an 'extreme hill farm' on Dartmoor



# Impact of livestock diseases



**“TB is the biggest threat [at least to cattle grazing] – not so much the disease, but the controls”**

# Livestock numbers on the moor today



- ▶ Cattle: Late summer peak number = 5100  
Few (c.50) winter on the moor (10,000 in 1985)



- ▶ Sheep: Mid summer peak number = 26,000  
Wintering number approx. = 10,000.  
(51,188 in 1985)



- ▶ Ponies: Present all year = 1200. (2,250 in 1985)

# Farming systems on hill farms – back to the future?

- ▶ Yes, but....?
- ▶ Use of the moor much more seasonal than in early 20<sup>th</sup> century, as it was before the 19<sup>th</sup> innovations
- ▶ Significant differences:
  - ▶ Extremely low sheep numbers, but ewes not wethers, geared to lambs not wool and still dominated by the 'new' hardy breeds
  - ▶ Extremely low cattle numbers, but breeding cows not drystock, with a higher proportion of hardy breeds
  - ▶ Almost certainly the lowest numbers of ponies ever
- ▶ To the extent to which the moorland has a separate system, it competes with the inbye system for resources
- ▶ There is a substantial inheritance of buildings and other capital investments from the last 40 years which still influence decision making
- ▶ High dependency on subsidies

# Implications for moorland habitats



- The very significant destocking of the moor has led to an increase in the growth of vigorous, dominating species including purple moor-grass *Molinia caerulea*, western gorse *Ulex gallii* and bracken *Pteridium aquilinum*,
- This is potentially inconsistent with achieving a Favourable Conservation Status for Dartmoor's designated habitats
- It could also create a vicious spiral of decline and underuse for hill farming, especially if the economics of using the moorland are unattractive

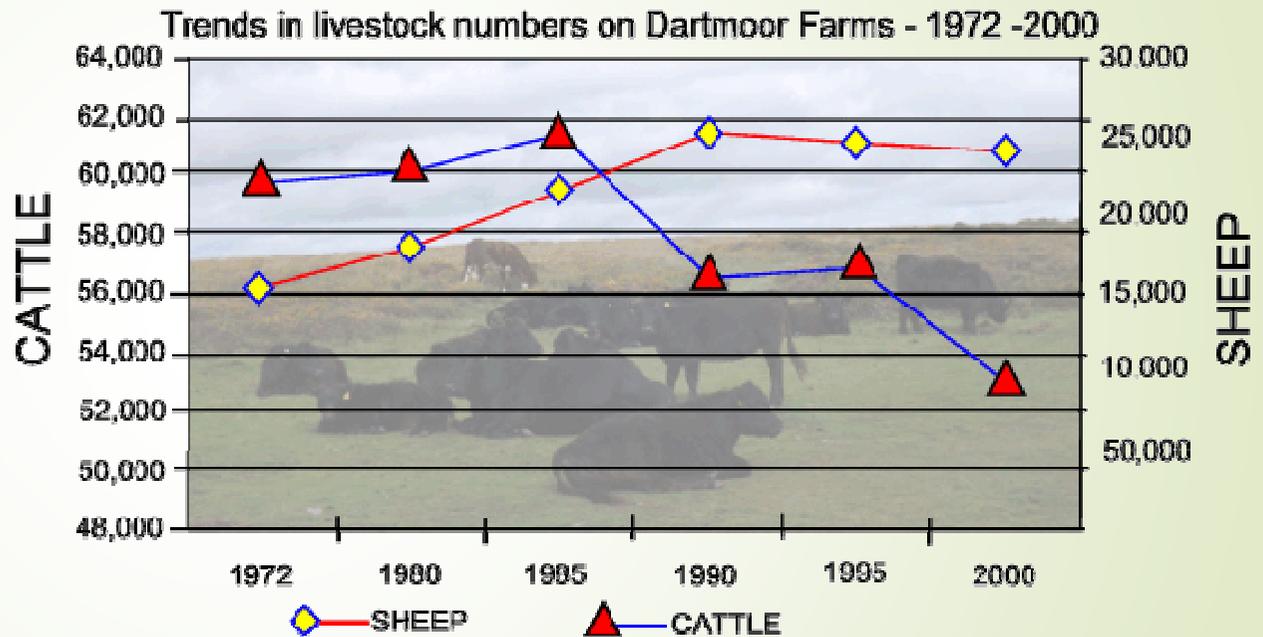
Picture: rank *Molinia* on wet heath

# Future scenarios – Business As Usual and Brexit

(unlikely)

# The business as usual scenario

- High reliance on support
- Fewer grazing animals on the moorland, and possibly fewer active graziers
- Significant changes (adverse) to the moorland's vegetation and biodiversity
- Further intensification of home farm and enclosed land where feasible, but few areas left where this is possible



Data from 'The State of Farming on Dartmoor 2002 - The University of Exeter

Brexit means change is inevitable...

# The immediate crisis – what world post-Brexit?



- Possibility of tariff and non-tariff barriers to trade with the EU
- Possibility of lower tariff and non-tariff barriers to trade with global competitors, particularly New Zealand lamb
- High probability of loss of direct payments
- All ongoing financial supports potentially put into agri-environment
- Agri-environment itself likely to be 'targeted', possibly so tightly as to exclude even inbye on hill farms

# Consequences for farm economy?

- ▶ Assuming Business as Usual before Brexit:
  - ▶ Relief but not easy or comfortable
- ▶ Assuming Brexit leads to substantial change in agricultural support:
  - ▶ Scary, especially if everything else remains constant
- ▶ Assuming Brexit also causes huge disruption to trade, esp. of sheep meat:
  - ▶ Nightmare – something would have to change! Wouldn't it....?

# Consequences for land-use and biodiversity?

- ▶ Rewilding/abandonment unlikely
- ▶ 'Rational' stocking rate on moorland far from clear – could depend on TB rules as much as anything
- ▶ Lot depends on what AE measures are available and how well they work
- ▶ High possibility that vegetation change will continue otherwise – perhaps towards polarisation
- ▶ Very unclear on implications for inbye, but unlikely to have any marked positive for biodiversity given low starting point and not clear whether inbye changes would impact on moor

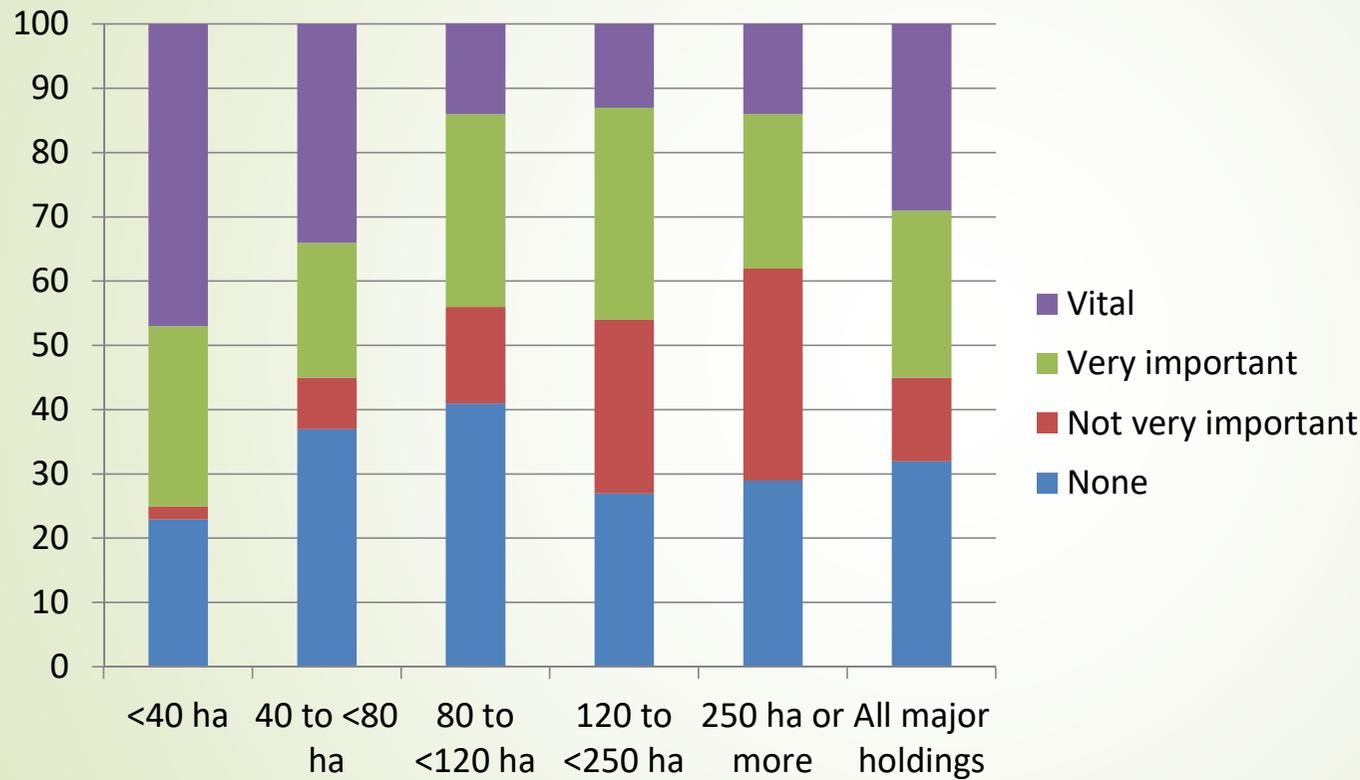
Looking behind the figures

# The social and rural development driving forces



- ▶ Continuing high desirability of living and retiring in Devon and of commuting from rural villages to work in the towns and of rural homes with 'paddocks' – affordability continues to drop
- ▶ Continuing growth in rural tourism but with minimal benefit to farming on the moor
- ▶ Society getting richer and spending relatively less on food

# Agriculture: non-farming income



Importance of non-farm income on a sample of major holdings c.2005

| Principal farmer(s) and spouse(s) – nature of work | % of 100 FTE |
|--|--------------|
| Full time farming                                  | 58           |
| Part-time farming                                  | 26           |
| On farm, non-farming, FT                           | 2            |
| On farm, non-farming, PT                           | 3            |
| Off farm, FT                                       | 4            |
| Off farm, PT                                       | 6            |

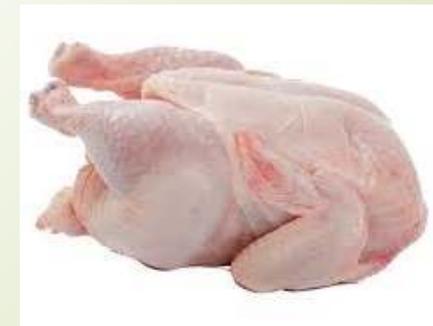
Reported employment situation in same sample

# The economic driving forces: food chains and markets

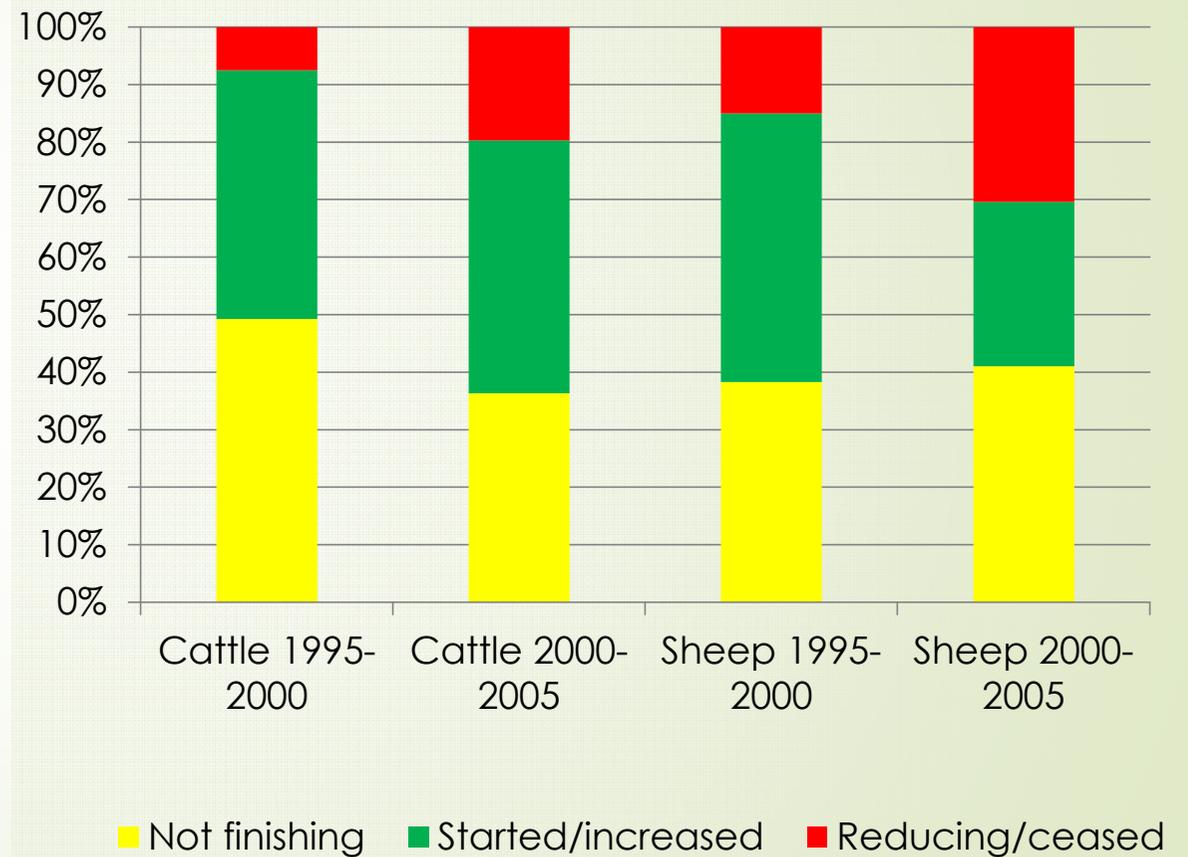


- ▶ Continuing reduction in consumption of red meat (esp. lamb) in favour of white meat
- ▶ Lack of differentiation of product produced locally and especially of meat produced extensively
- ▶ Continuing domination of agri-food business in meat food chain; low impact of farmer groups

| <u>Conformation score</u> | <u>Fat class</u> |             |             |             | <u>Overall</u> |
|---------------------------|------------------|-------------|-------------|-------------|----------------|
|                           | <u>2</u>         | <u>3</u>    | <u>4L</u>   | <u>4H</u>   |                |
| <u>U-</u>                 | <u>76.5</u>      | <u>73.8</u> | <u>71.7</u> | <u>70.4</u> | <u>73.1</u>    |
| <u>R</u>                  | <u>74.8</u>      | <u>72.1</u> | <u>70.0</u> | <u>68.7</u> | <u>71.4</u>    |
| <u>O+</u>                 | <u>73.1</u>      | <u>70.4</u> | <u>68.3</u> | <u>67.0</u> | <u>69.7</u>    |
| <u>O-</u>                 | <u>71.7</u>      | <u>69.0</u> | <u>66.9</u> | <u>65.6</u> | <u>68.3</u>    |
| <u>P</u>                  | <u>70.8</u>      | <u>68.1</u> | <u>66.1</u> | <u>64.7</u> | <u>67.4</u>    |
| <u>Overall</u>            | <u>74.1</u>      | <u>71.4</u> | <u>69.4</u> | <u>68.0</u> | <u>70.7</u>    |



# Agriculture: fattening / adding value



# The (lack of) economic driving forces: public goods and farming



- A range of ecosystem services at least partly provided by appropriate farming remain public goods including:
- Clean reliable drinking water; flood prevention; carbon storage; cultural landscape

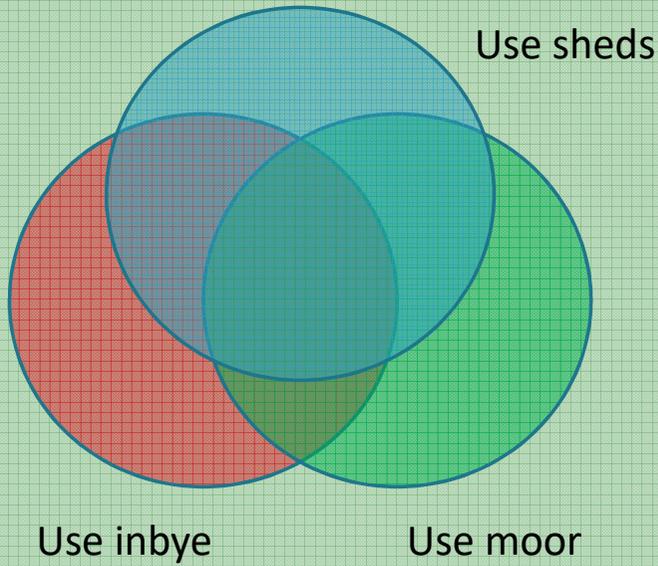
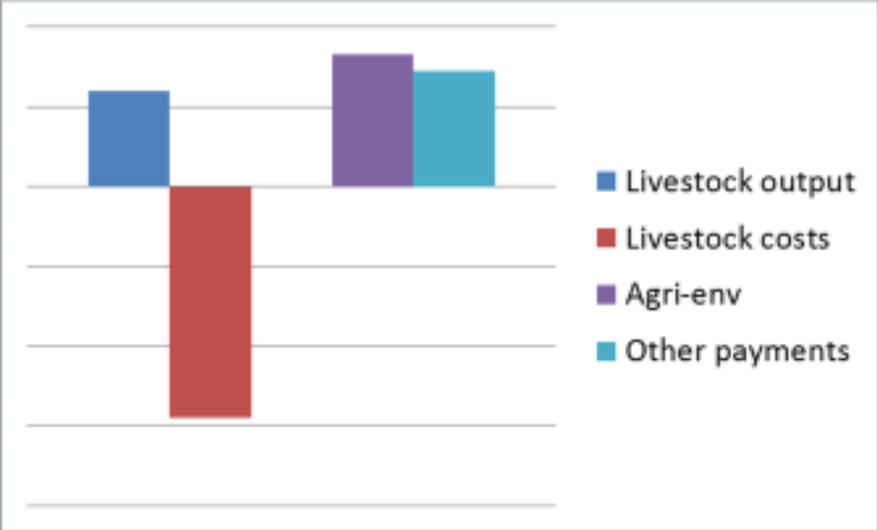


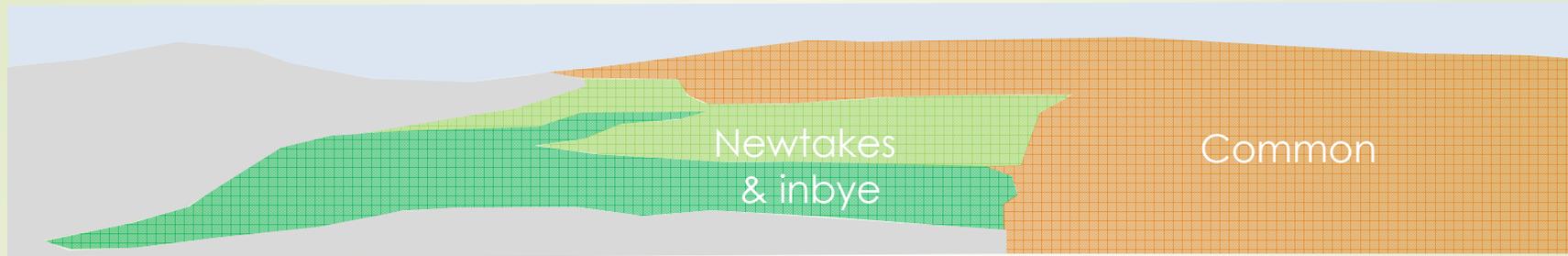
# The policies and political driving forces



- Lack of political interest in rural issues and farming.
- Some appreciation within Government that upland farmers (including hill farmers on Dartmoor) provide an array of public benefits alongside their farming activity that may lead to some continuation of support (though at reduced levels).
- Animal diseases, especially TB, may drive cattle farmers from the moorland unless the regulations are more sympathetic to extensive grazing systems.
- Delivering good condition of Natura 2000 sites and UK designated wildlife sites requires land management delivered by farmers. This is poorly reflected in policy and Government action.

Getting inside the farmer's head



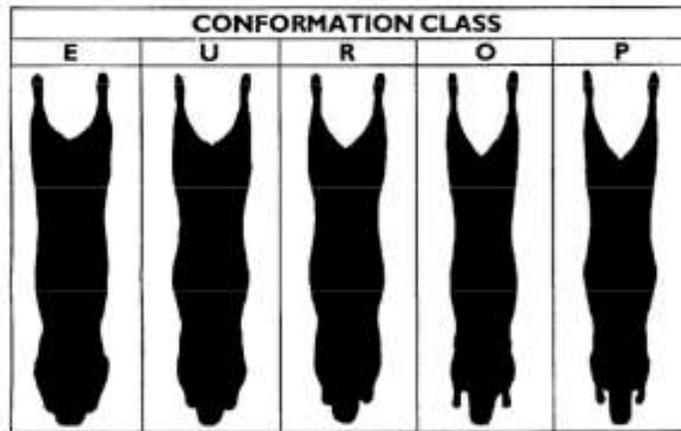


|                                      | Common | Newtakes | Inbye |
|--------------------------------------|--------|----------|-------|
| Area ha                              | 150    | 75       | 75    |
| Stocking (LU)                        | 60     | 135      |       |
| Est. BPS                             | 8925   | 4462     | 15555 |
| Est. Agri-env.                       | 9000   | 3000     |       |
| Livestock & misc. output             | 60900  |          |       |
| Livestock & misc. costs              | -80850 |          |       |
| Livestock net profit                 | -19950 |          |       |
| Livestock net profit allocated by LU | -6138  | -13811   |       |
| Overall net income split             | 11786  | 9205     |       |

Agriculture: an attempt at allocating output and costs

# The farming narrative as a driving force

## Carcase conformation

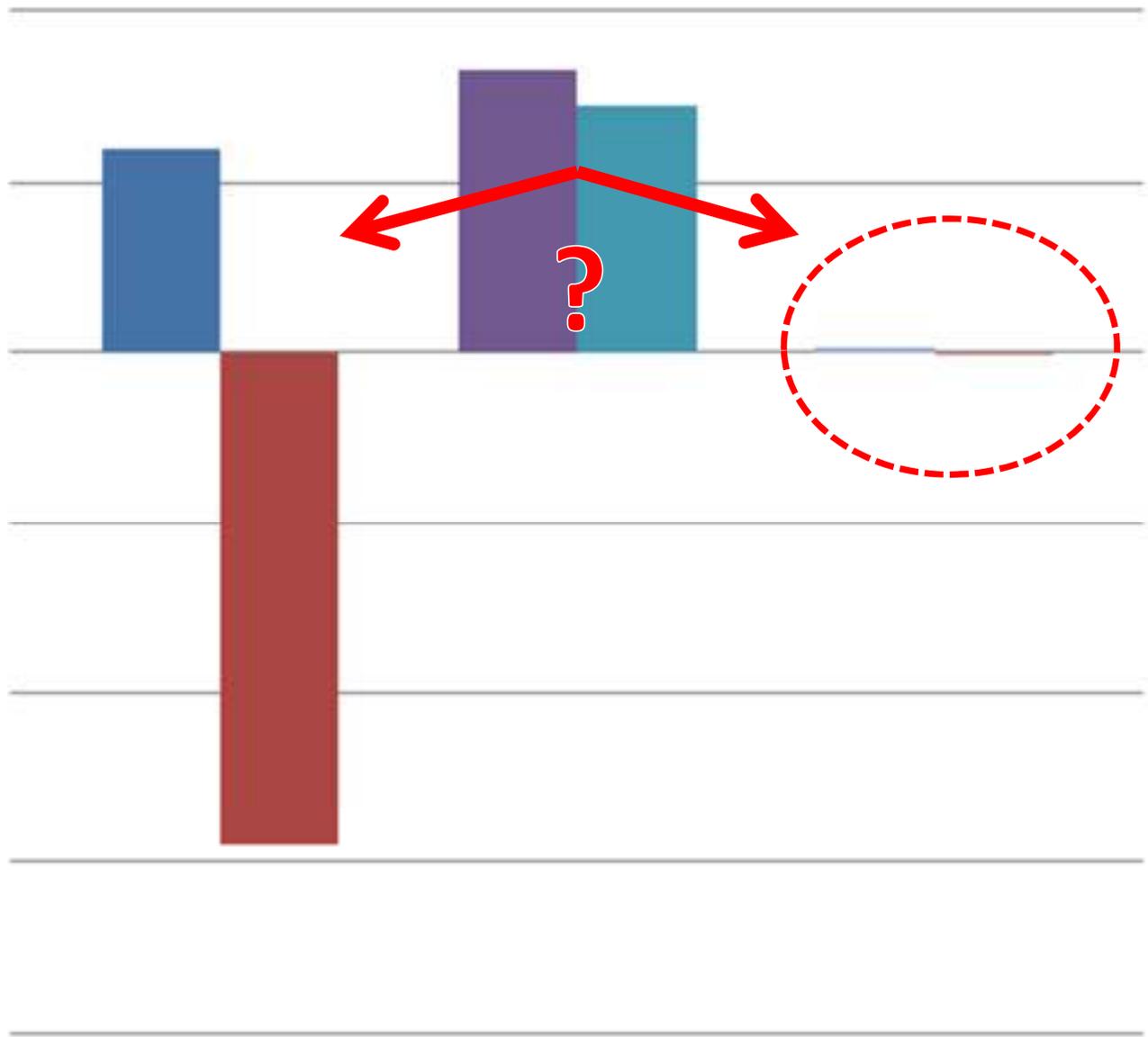


- Received wisdom of what 'good farming' is continues to glorify the intensive lowland farm, its products, its inputs, its machinery
- This continues to be the message given by the agricultural press, agricultural education and training; agricultural shows; Young Farmers' Clubs etc.

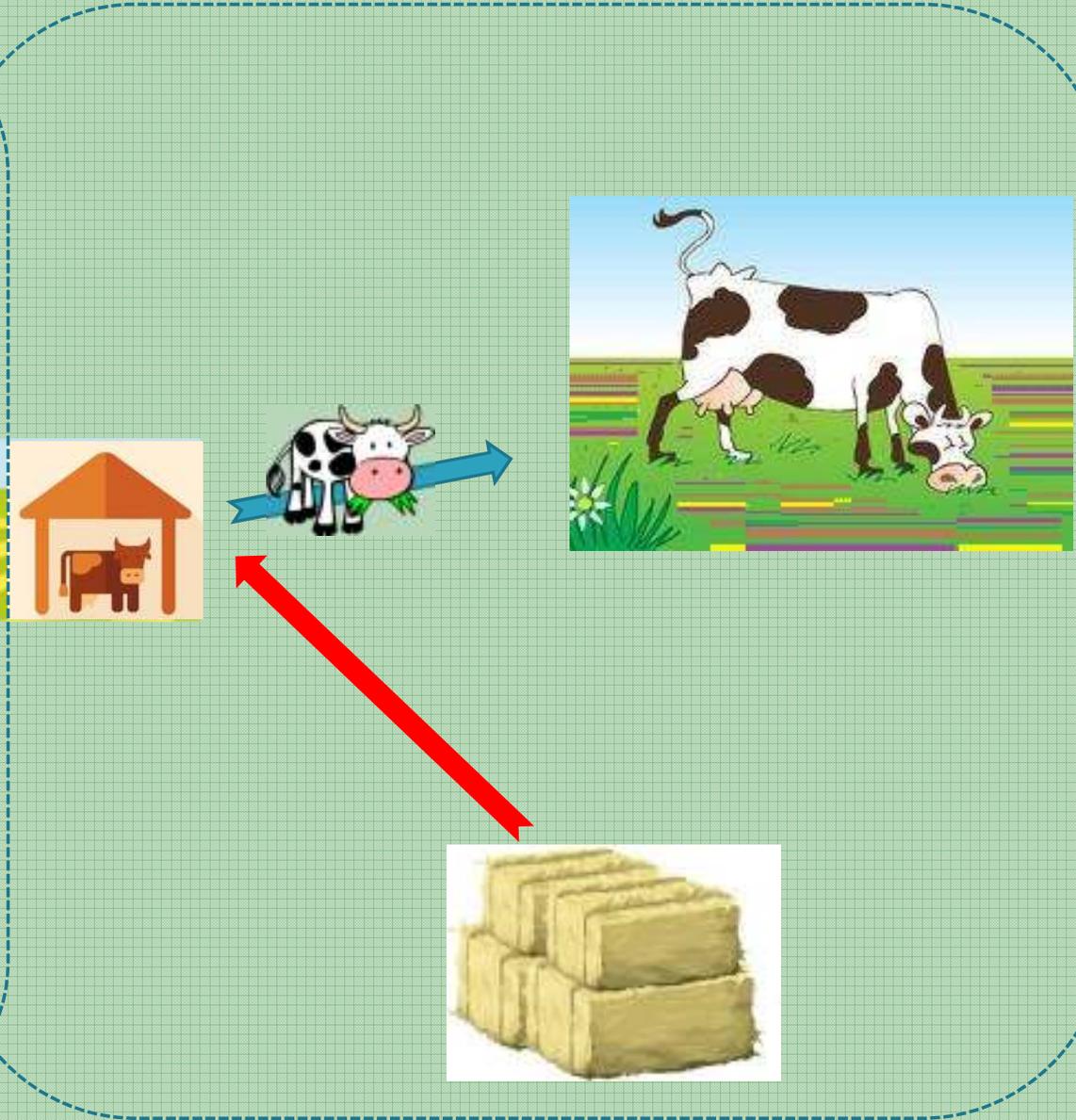
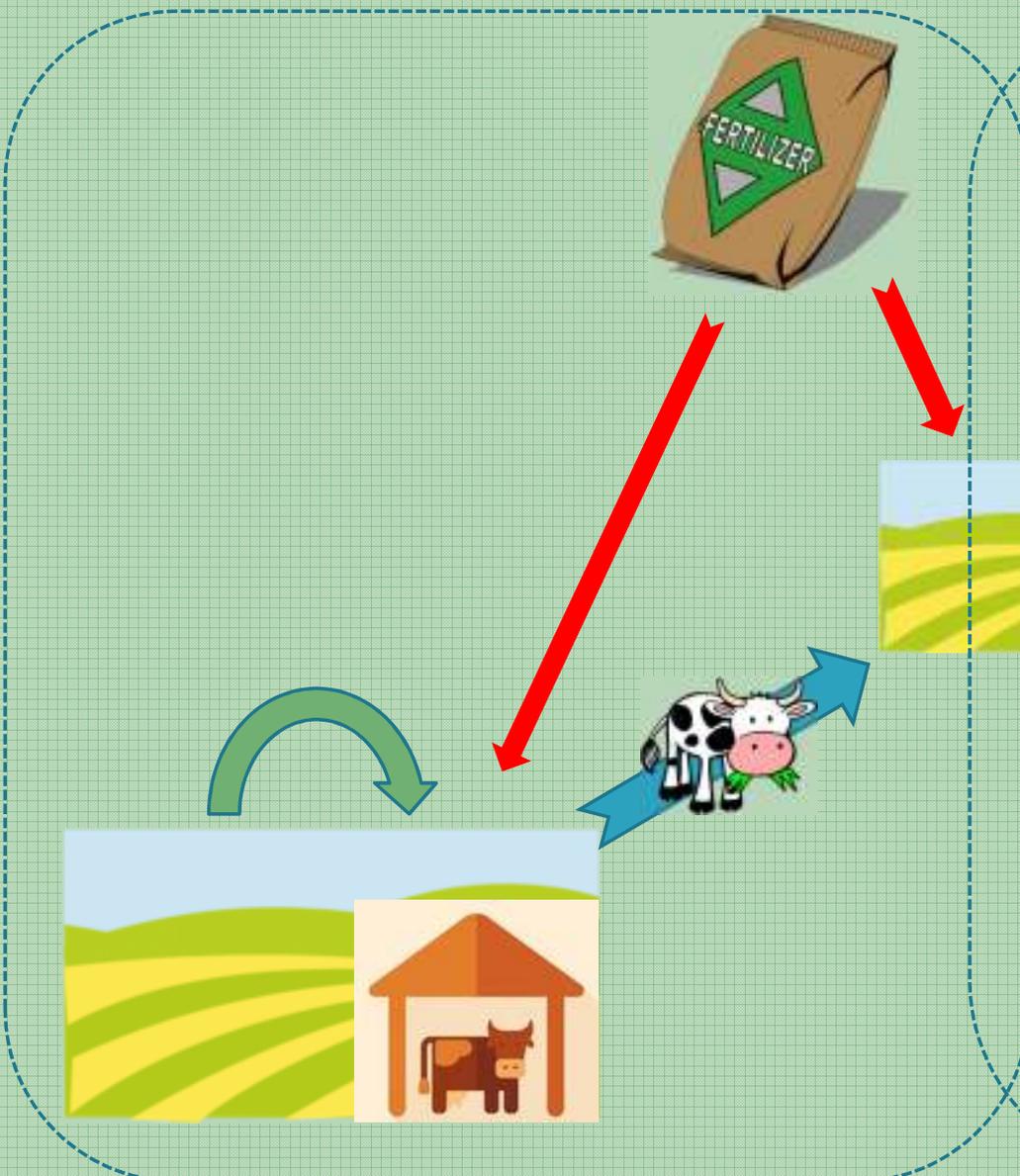
# *Financial* The ~~Economic~~ Man (or Woman)?

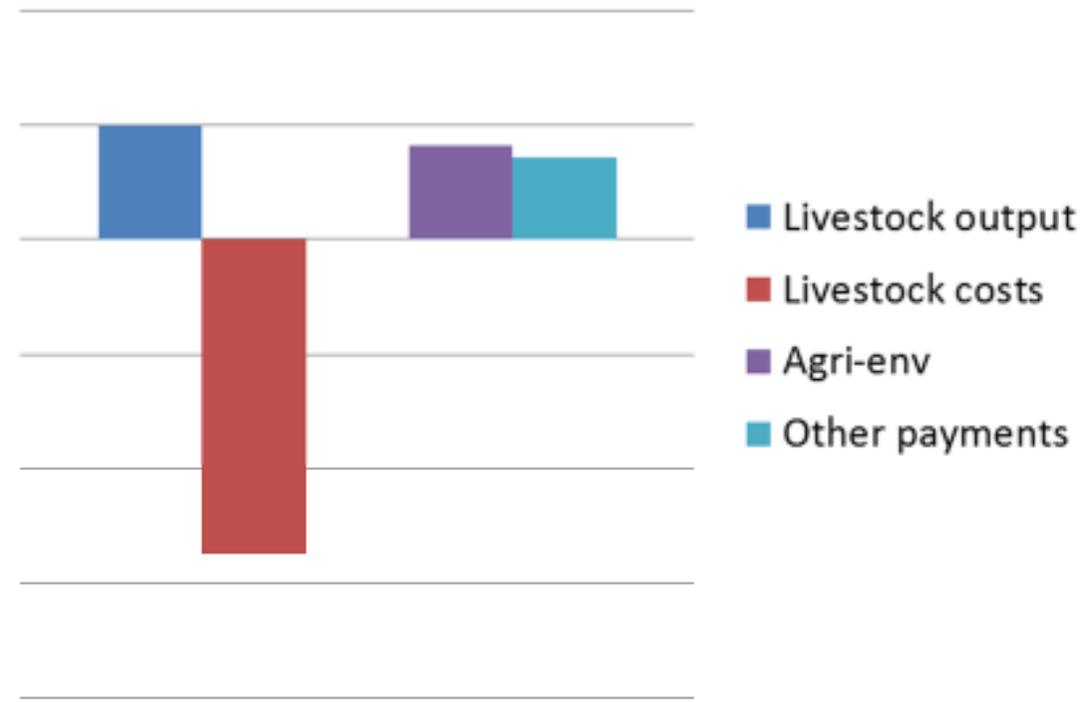
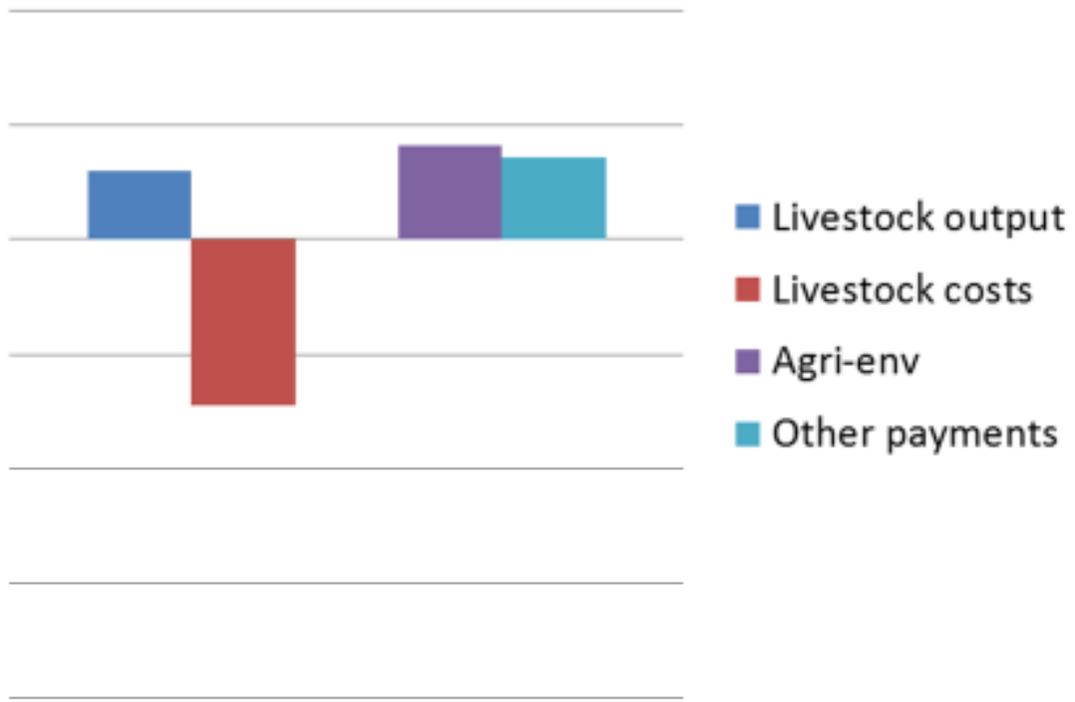
- ▶ Minimising risk, e.g. From TB regime, but including over-dependency on subsidy
- ▶ Maximising total returns, e.g. to be full-time
- ▶ Building up the balance sheet
- ▶ Preparing for retirement/succession
- ▶ 'Not going backwards' especially by reducing livestock numbers
- ▶ Keeping the land in good heart
- ▶ Using all the land properly
- ▶ Having good livestock in the ring
- ▶ Liking to see wildflowers





- Livestock output
- Livestock costs
- Agri-env
- Other payments
  
- Pony output
- Pony costs





Subsidies 72% of output

Net farm income £14,000

Subsidies 61% of output

Net farm income -£4,000

# What *some* farmers told us:

- ▶ Losing the subsidies wouldn't be a bad thing
  - ▶ Would be a crisis which stimulates and rewards innovation
  - ▶ Opportunity to cut back possibly unnecessary costs – outside labour, bought-in feed etc.
  - ▶ Innovation seen in very individualistic terms, and focussing on technology and techniques
- 
- ▶ What we thought:
    - ▶ Wow!
    - ▶ Is there really £20000 worth of savings to be had? Surely net impact on farm profits will be negative?
    - ▶ If more cost-effective system exists, why not implement it now AND claim subsidies?
    - ▶ Could it be that subsidies are paying for the non-financial things farmers value??

What innovations did we find?

# The chosen innovations:

- ▶ Dartmoor Vision
  - ▶ Dartmoor Farming Futures
  - ▶ TB control plans
  - ▶ Fire management plans
  - ▶ Dartmoor Commoners' Council
- 
- ▶ Meat marketing initiatives
  - ▶ Moor Skills
  - ▶ Hill Farm Project
  - ▶ Hill Farm Training
  - ▶ .....?

What are the challenges demanding innovation?

# What needs to be addressed? Markets and their underpinning

- Increased returns from truly HNV systems are a key factor in their survival, development and blossoming (farmers thinking more about supply side, it seems)
- Increasing demand for properly and meaningfully differentiated products is vital, but does that mean selling to the consumer?
- Non-farming or ancillary products, including the internalisation of positive externalities into the farm economy, should be encouraged where consistent with wider policy goals
- The internalisation of negative externalities into farming systems in general is a necessary complementary measure in the long term
- Positive experiences very limited thus far

# What needs to be addressed? Schemes and regulations

- ▶ Is innovation in this area considered a priority by farmers?
- ▶ Maximum clarity of vision, integrating objectives on a local scale and with reference to real farms and their social and economic circumstances
- ▶ Risk-based regulatory environment, internalising former negative externalities but not imposing pointless burdens
- ▶ Less atomised approach to policy needs (e.g. Integrating not just agriculture and environment, but advice, education, research and other activity of the wider state in the locale)
- ▶ Encouragement using a variety of mechanisms for the internalisation of positive externalities, especially where they have a real financial benefit to society and are delivered at a real financial cost to farmers
- ▶ Net aim is to ensure farmers are adequately rewarded for the achievement of biodiversity and other 'public good' objectives, so payments 'fill the gap' where and for as long as above steps are inadequate

# What needs to be addressed?

## Social and institutional

- Only seen as important by farmers when pressed – they are used to not having a well-functioning system, but also maybe in reality don't see the value for them?
- Some farming advice is provided by the DHFP but this resource is vulnerable and does not address all issues
- Education suitable for hill farmers and potential hill farmers is very limited. Research into farming in the uplands is almost non-existent.
- In the recent past Dartmoor farmers have used existing organisations (NFU & CLA) and new locally formed groups (SWUF) to lobby politicians and Government for appropriate policies. The DNPA and the Dartmoor Commoners Council may have a role in the future.

# What needs to be addressed?

## Techniques and technologies

- ▶ This has *not* been the focus of innovation in recent years but
  - ▶ Is seen as central to the next few years by farmers
  - ▶ Fits in well with their narrative of individuality and determination, and of 'every farm is different'
- ▶ Appropriate technologies and techniques appropriately applied need to be developed, disseminated and nurtured
- ▶ 'Appropriate' means enhancing the economic and social viability of systems using semi-natural vegetation, maximising their positive ecological impacts while minimising any negative impacts
- ▶ To what extent is the limited application of new technology and techniques a reflection of the needs of the system and to what extent the limitations of R&D focus etc.?
- ▶ Need to have a clear and strong link to idea development and knowledge transfer structures