

Woodland creation and the farm business



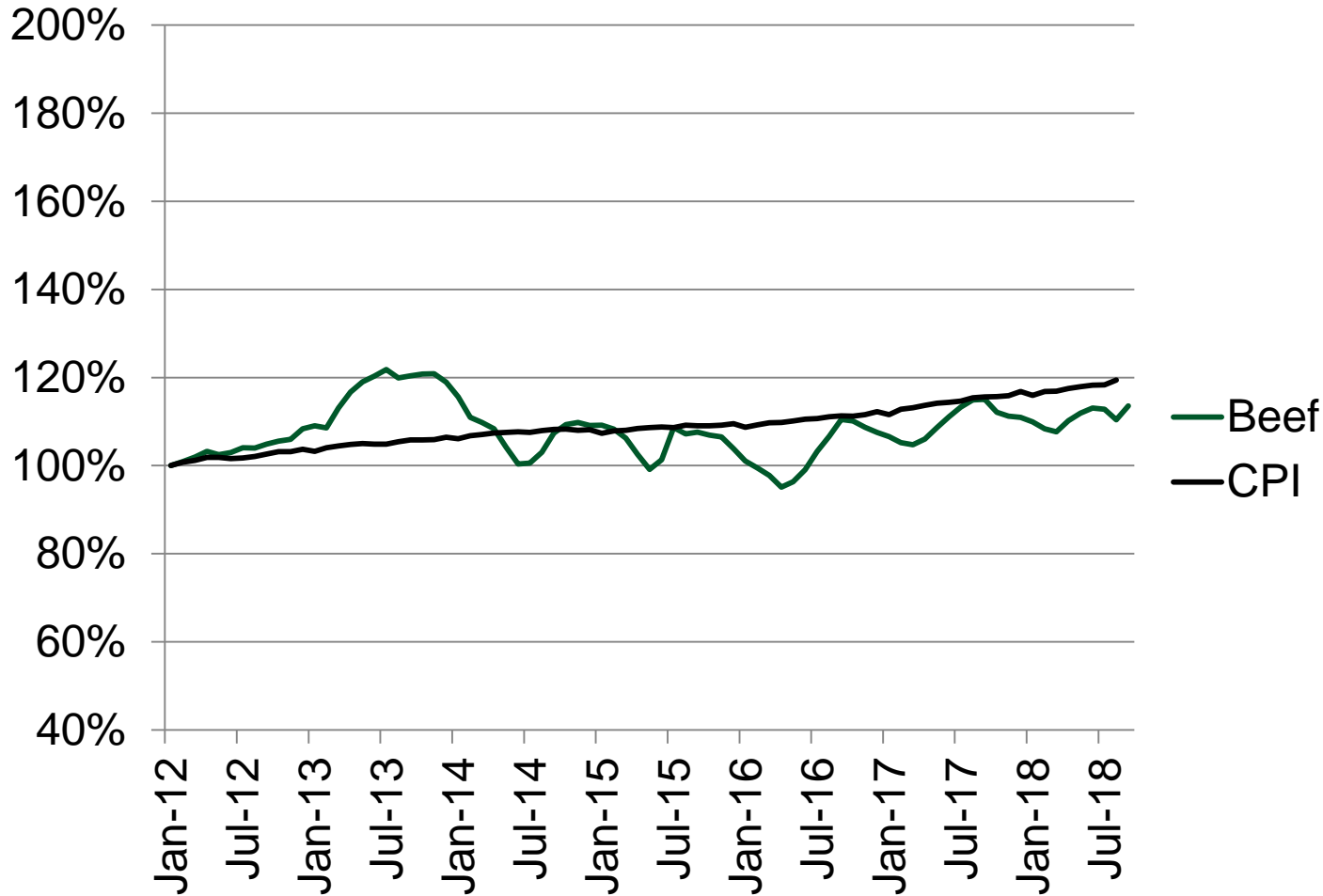
**Julian Bell,
Senior Rural Business Consultant,
SAC Consulting**

Farm forestry

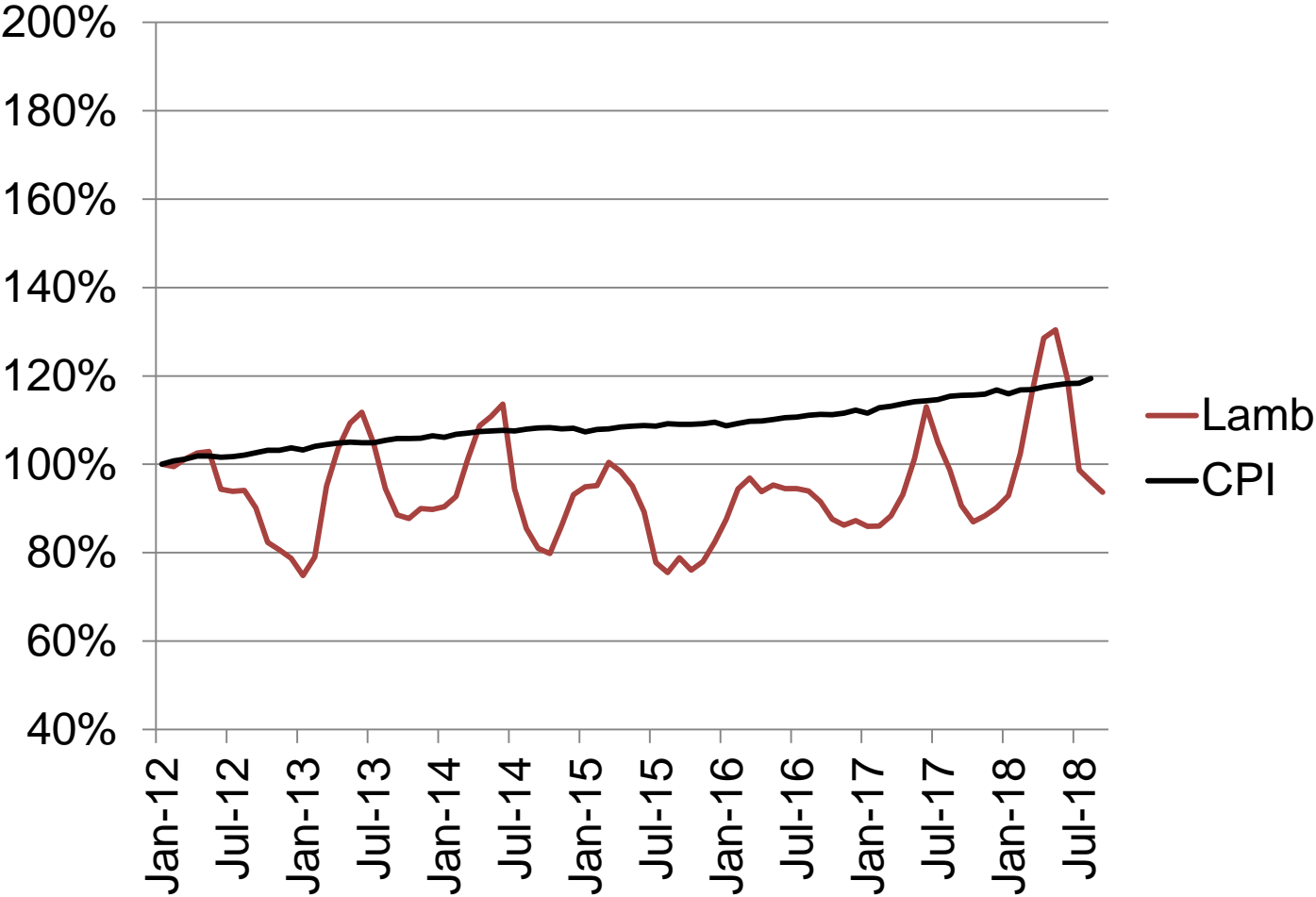


- How do farming and forestry compare financially?
- What other factors affect planting decision?
- Who will drive woodland creation – farmers or investors?

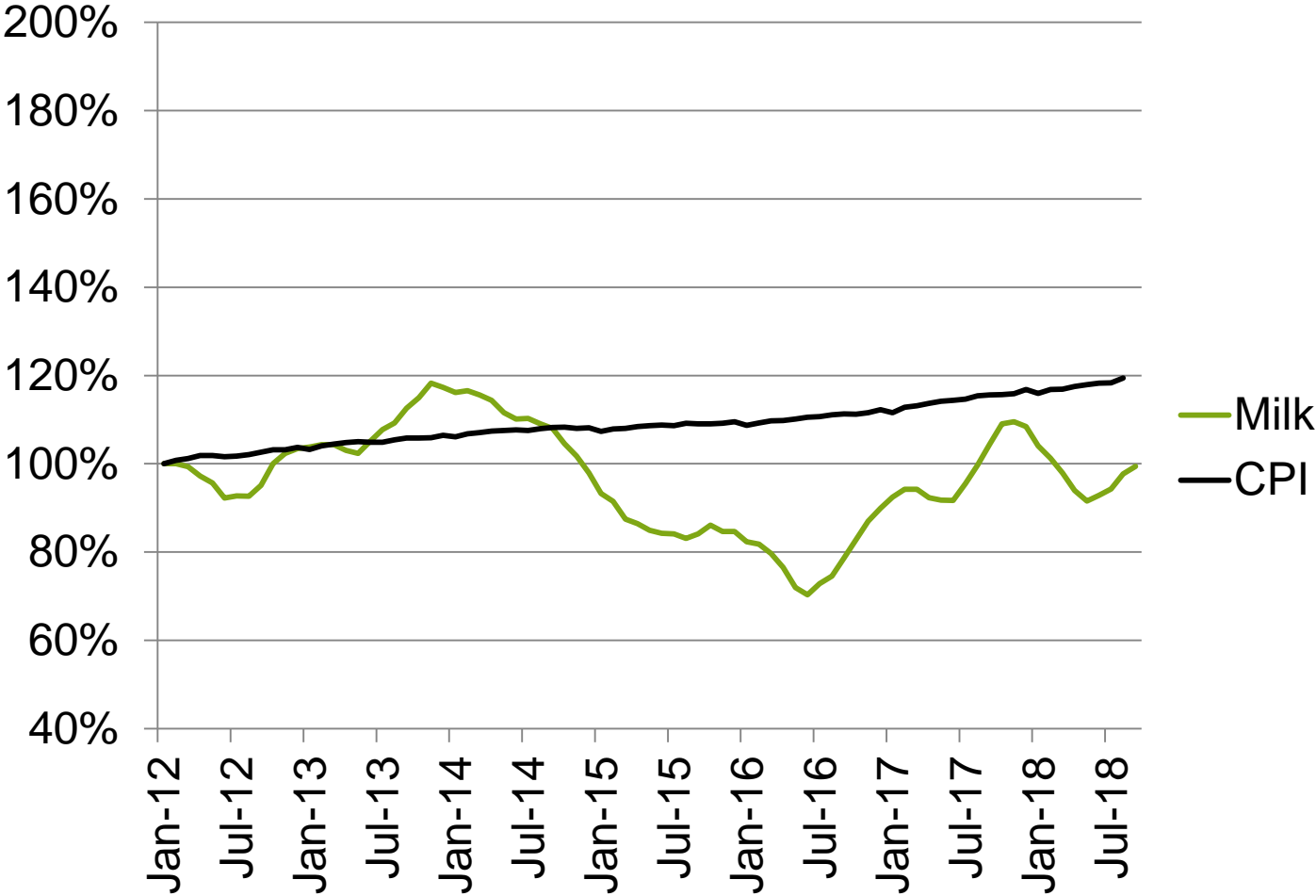
Commodity prices and inflation - Beef



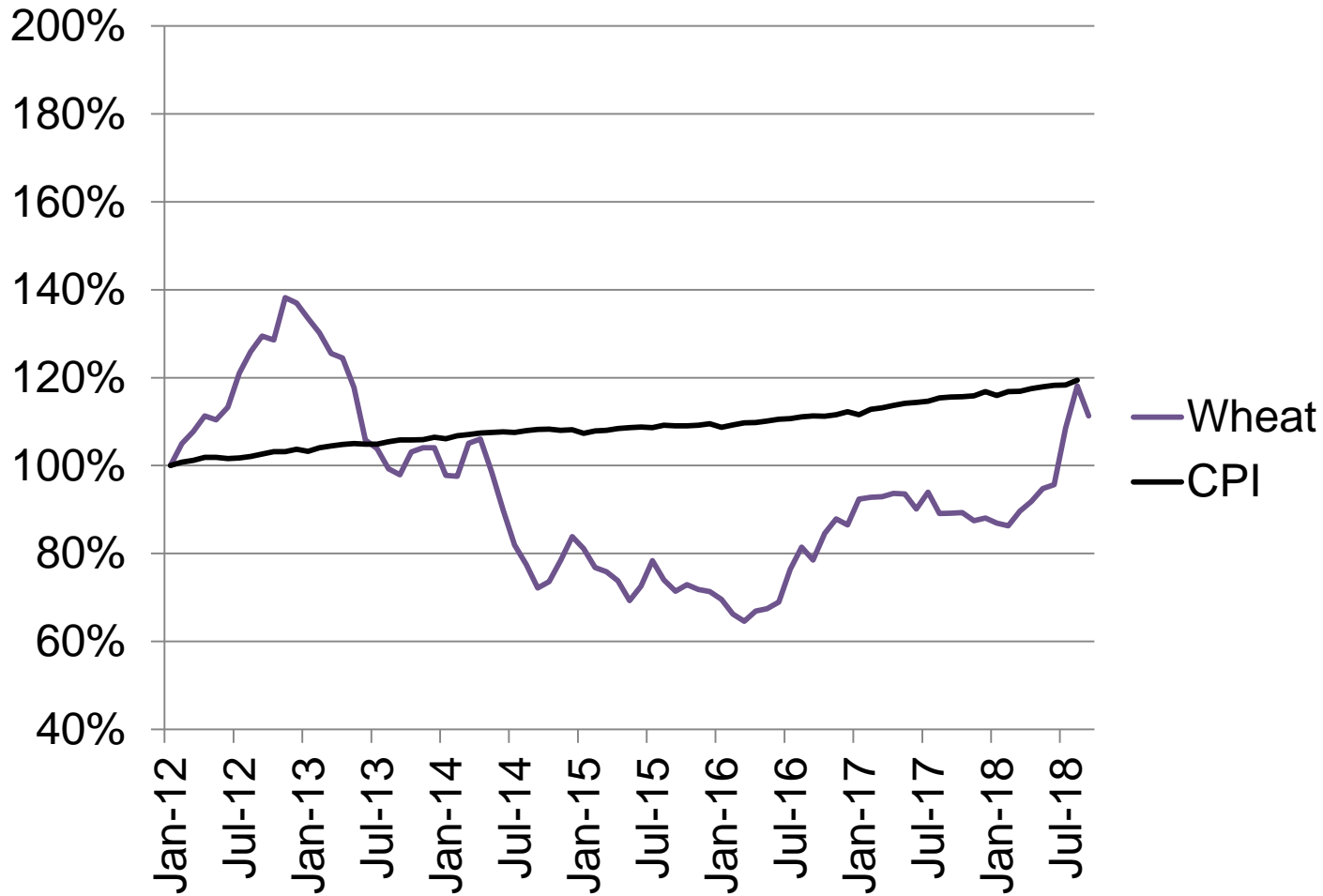
Lamb



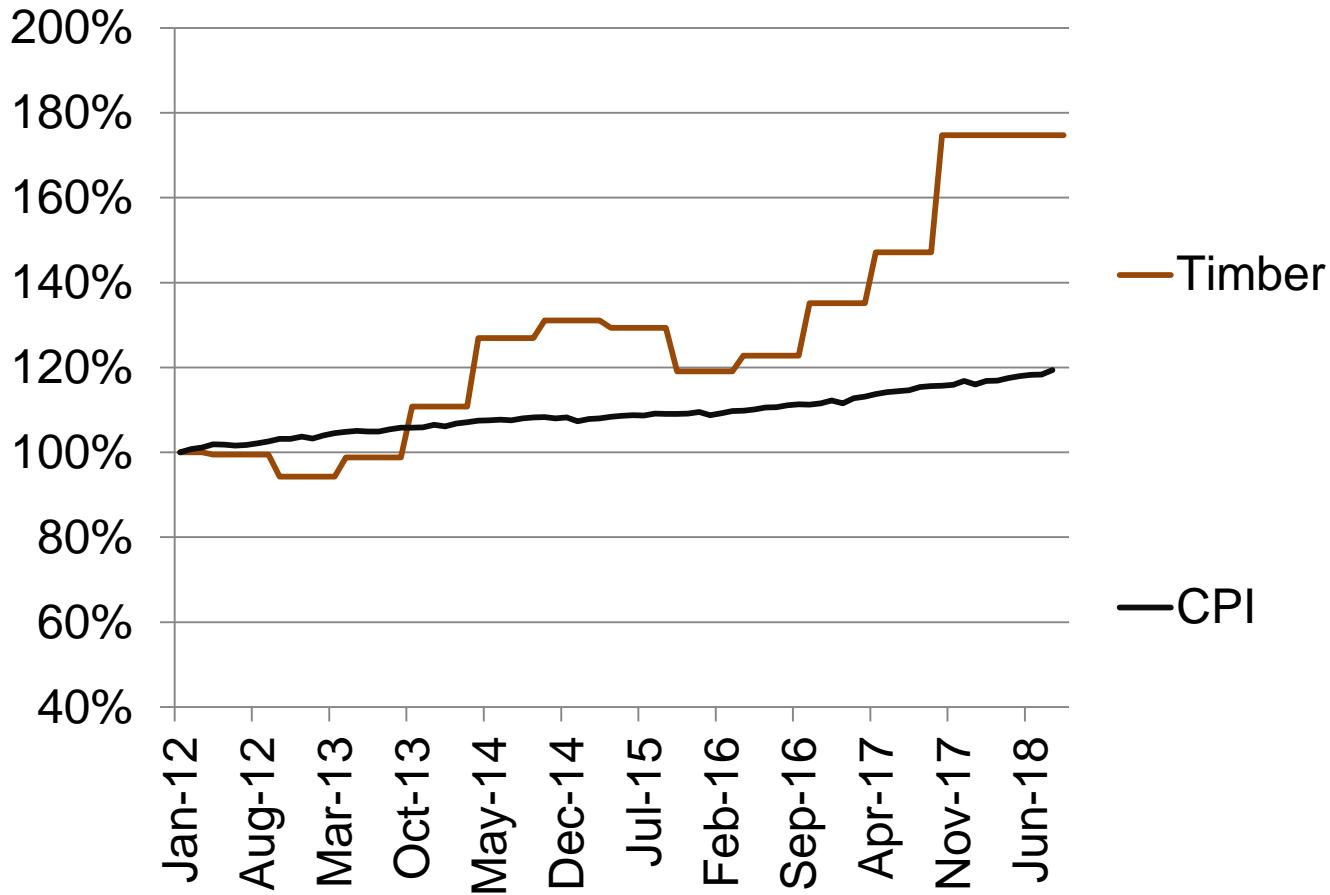
Milk



Wheat



Timber

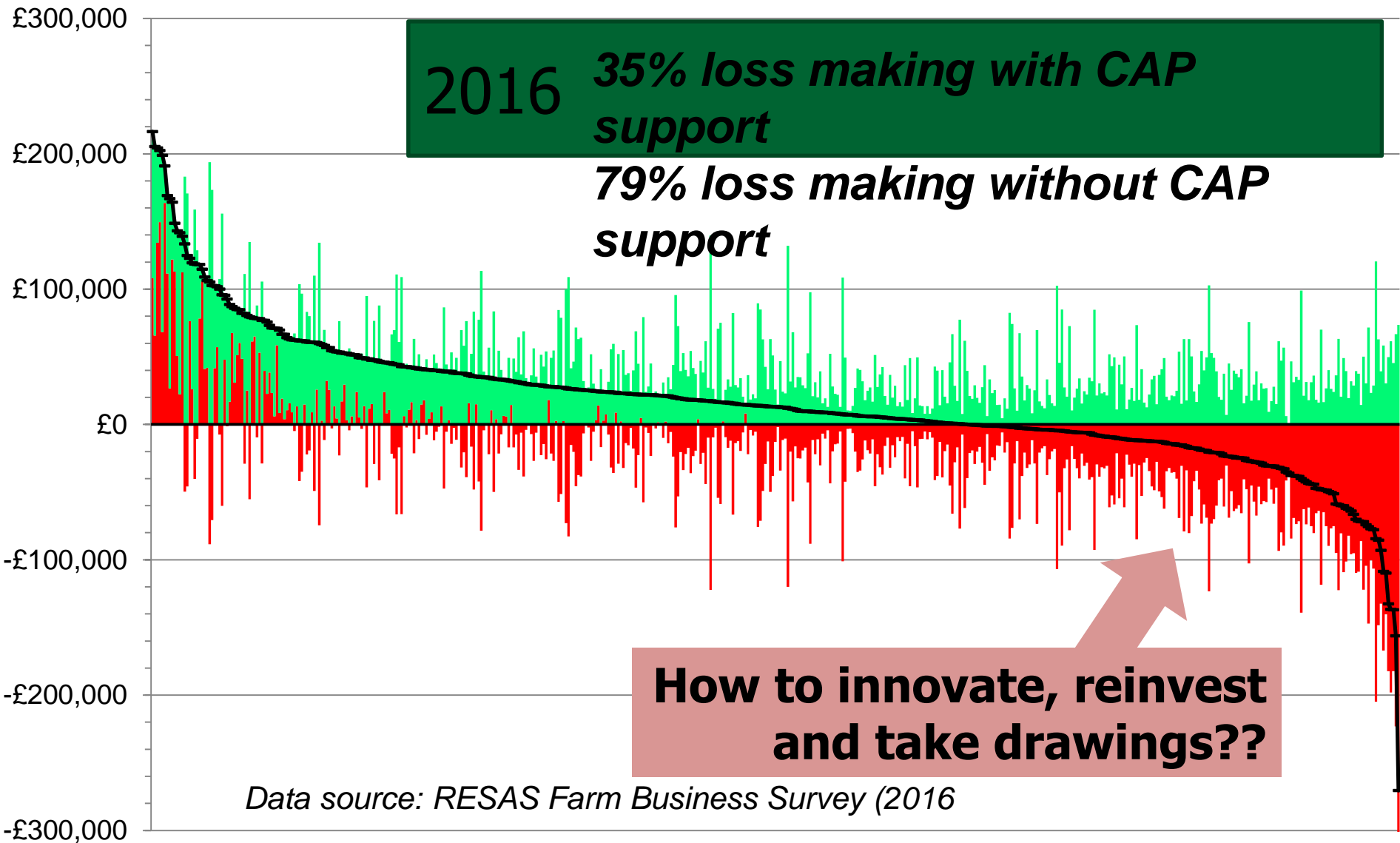


Timber prices keeping ahead of inflation – consistently, lower volatility

Importance of CAP to Scottish Agriculture



■ CAP Support



Brexit - agricultural support in the Transition Period



- Guaranteed agricultural budget till 2022 and expects BPS transition till 2025



- In CAP until 1st Jan 2021
 - BPS until???

Monitor & Implement EU Laws



- What budget is guaranteed?
 - Rural Development Brexit commitments
 - LFASS (*de facto* Pillar1?)
 - Request to EU for extended transition period

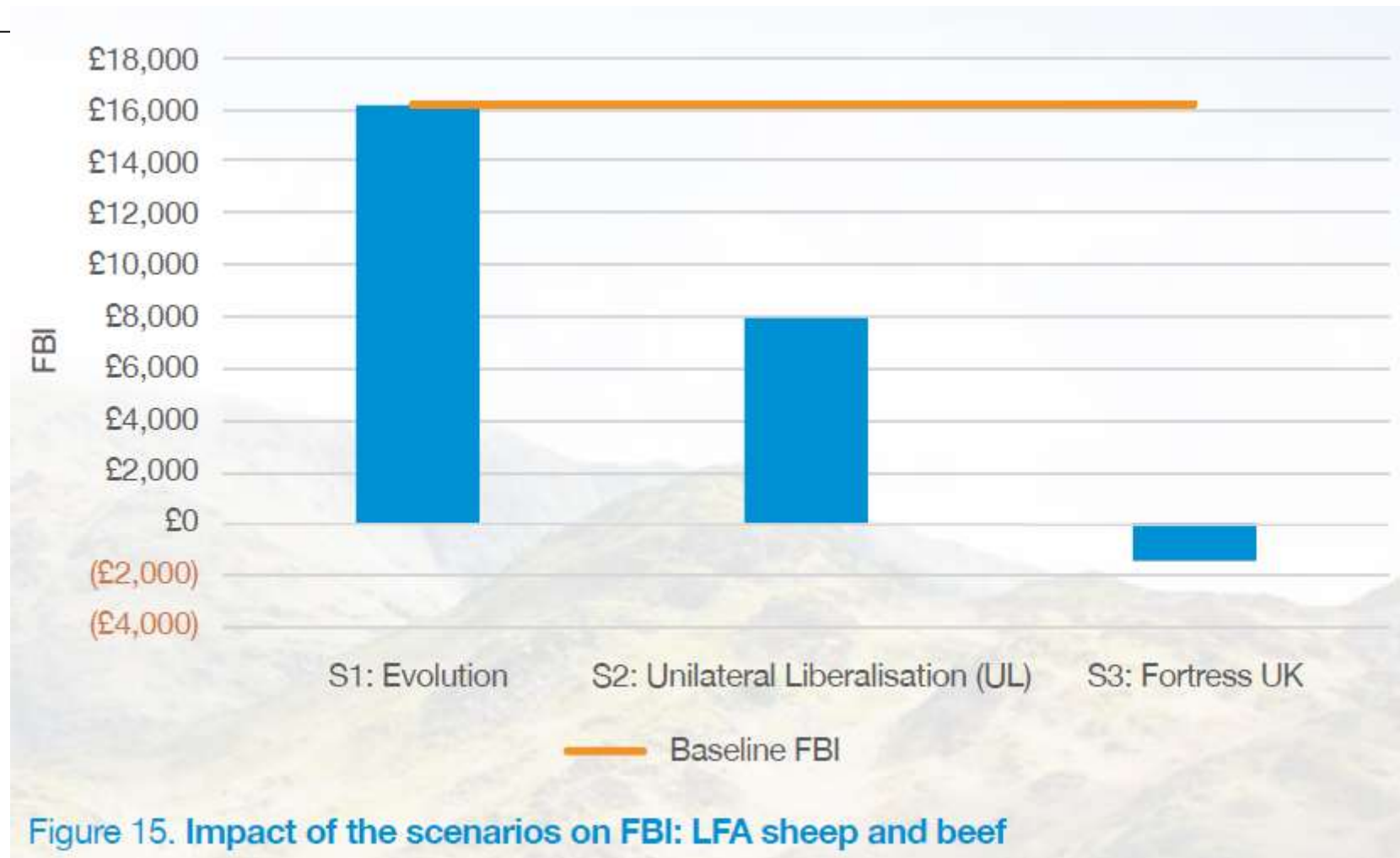
BPS until 2022
Pillar II?

FULL BREXIT
2025



AHDB Brexit Scenarios – LFA

livestock lower income expected



Scotland agricultural land area

– large increase in woodlands planned –
can only come from farmland!

	2009	2050	Change	Change
	('000's ha)	('000's ha)	('000's ha)	(%)
Grass	1,364	1,184	-180	-13%
Crops	587	574	-40	-7%
Rough grazing	3,429	3,009	-420	-12%
Built-up area			-10	
Woodland area	1,341	1,991	+650	+48%

Source: Scottish Government

Financial impact on agricultural business of planting trees – Agricultural income foregone



- The decision to plant agricultural land with trees has financial impacts on the farm business including;
- Negative
- loss of agricultural income
- loss of “coupled” agricultural subsidies – LFASS, headage payments (beef, sheep)
- Retention of other fixed costs which result in a higher burden for the remaining land in agricultural production
- Positive
- reduction in variable costs
- reduction in some fixed costs – mainly labour & machinery
- Free up labour

General assumptions – farm woodland establishment - INCOME



OVERVIEW

50ha productive conifer, 80% conifer,

i) Average growth rate, fell at 40yrs

ii) High growth rate, fell at 36yrs, higher final sale price, greater share of sawlogs

INCOME at Initial Establishment

- FGS – Woodland Creation
- Maintenance
- Retention of BPS

INCOME at Restocking - nil

Not included in model - requires separate consideration

- Carbon, other benefits (e.g. shelter etc)

General assumptions – woodland establishment – COSTS



COSTS

- Use of SAC Consulting costs
- Design:
- Fencing:
- Mounding:
- Planting
- Losses
- Open ground:
- Professional Fees / Supervision fees:

TIMBER INCOME

i) Average farm woodland

– commercial conifers, ~ 40 ha



Year	THIN					FELL	Total
	20	25	30	35		40	
Timber area (ha)	39.60	39.60	39.60	39.60		39.60	39.60
Timber volume (t/ ha)	30.62	54.86	54.86	57.74		351.83	550
Timber volume (t)	1,213	2,172	2,172	2,287		13,932	21,776
Timber price (£/t)	10.25	11.00	13.90	20.60		31.38	
Factor							
Timber income (£/ha)	314	603	763	1,189		11,040	13,910
Timber income (£)	12,429	23,897	30,197	47,102		437,202	550,826

TIMBER INCOME

ii) High yield, accessible farm woodlands, SW Scotland

– commercial conifers, ~ 40 ha



Year	20	25	THIN 30			FELL 36	Total
Timber area (ha)	39.60	39.60	39.60			39.60	39.60
Timber volume (t/ ha)	30.62	54.86	54.86			450.00	590
Timber volume (t)	1,213	2,172	2,172			17,820	23,377
Timber price (£/t)	10.25	11.00	16.30			41.70	
Factor							
Timber income (£/ha)	314	603	894			18,765	20,577
Timber income (£)	12,429	23,897	35,411			743,093	814,830

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Financial returns

Farm woodland establishment – 50 ha



i) Average farm woodlands – 40yr rotn.*

Results	Total	Per ha
Net Present Value	£201,881	£4,232
Annuity factor	4.1%	
EAE (margin) total annual	£8,234	£172.62

ii) High yield, accessible, farm woodlands 36yr rotn.*

Results	Total	Per ha
Net Present Value	£306,299	£6,421
Annuity factor	4.1%	
EAE (margin) total annual	£12,492	£261.90

* Note – includes costs of restocking at year 42 / year 38 respectively

Rental equivalents from forestry

- becoming competitive with agricultural leases *in theory*



Land use or lease type	£/ha/yr
Short term barley lets	207
Short term grass lets – impr past.	262 / 188
Short term grass lets – perm past.	176/102
Short term lets – rough grazing	54/37
Short Ltd Duration Tenancy – all#	114
All tenancies - LFA cattle & sheep#	44
Forestry - i) conifers av. farm	172
Forestry – ii) conifers high yield	261

*less cost of grass lets

- Fencing £56/ha/yr
 - or £17/ha/yr rough g.
 - Lime £18/ha/yr
- Total £74/ha/yr**

No BPS on Tenanted Land – must be an active farmer

Basic Payment Scheme

- Region 1 - £208/ha/yr
- Region 2 - £35/ha/yr
- Region 3 - £11/ha/yr

Source: SAC Consulting

Rental equivalents from forestry



- ~~becoming competitive with agricultural leases in some situations~~

Land use or lease type	£/ha/yr
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Source: SAC Consulting

No such thing as long term leases for forestry in the UK!
So forestry currently can't offer a cashflow equivalent to leasing out land.

Case study – to inform policy development in NE Scotland

SAC Consulting for John Nott, FCS

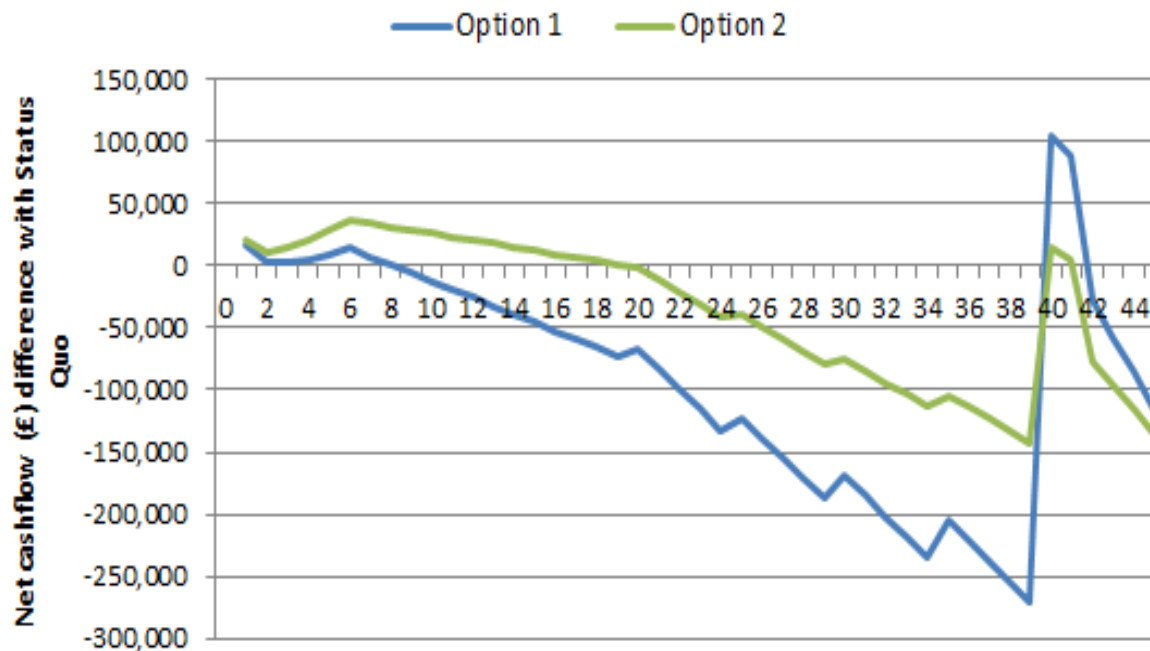


Case study – cash flow impact of 50ha tree planting on 175 ha beef/arable farm



Cumulative net cash flow in current values of two woodland options versus status quo agricultural activity

Just one example – will vary widely by farm and situation



Case study – capital impact of tree planting on farm value



Change in farm capital value under different planting options

	Year 0	Year 1	Year 20	Year 40
Difference vs status quo				£
Option 1		-90,097	3,014	73,479
Option 2		-73,178	-31,290	-10,821

Case study – estimated labour impact



Estimated labour requirement of different options

(hours)	Status quo	Option 1	Option 2
Cereals	1,100	906	992
Grassland	331	216	242
Rough grazing	2	2	2
Beef <u>cattle</u>	3900	2470	2860
Total	5,333	3,594	4,096
Labour units FTE*	2.81	1.89	2.16
NB - * at 1,900 hrs per FTE			

Farm forestry

- How do farming and forestry compare financially?
 - Forestry is an increasingly good investment
 - But cashflow challenges remain
- What other factors affect farmer's planting decision?
 - Future of subsidies, market situation uncertain
 - Labour shortages, work off-farm
- Who will drive woodland creation – farmers or investors?
 - Farmer interest growing strongly but selling land for others to plant remains the most likely outcome at scale

Questions?



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Timber ahead of inflation, less volatile

