



**Geography (and Politics), Amory Building,
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***Farmers feeding the nation:
processes of technical change and
agricultural innovation in south west
England (1937-1985)***

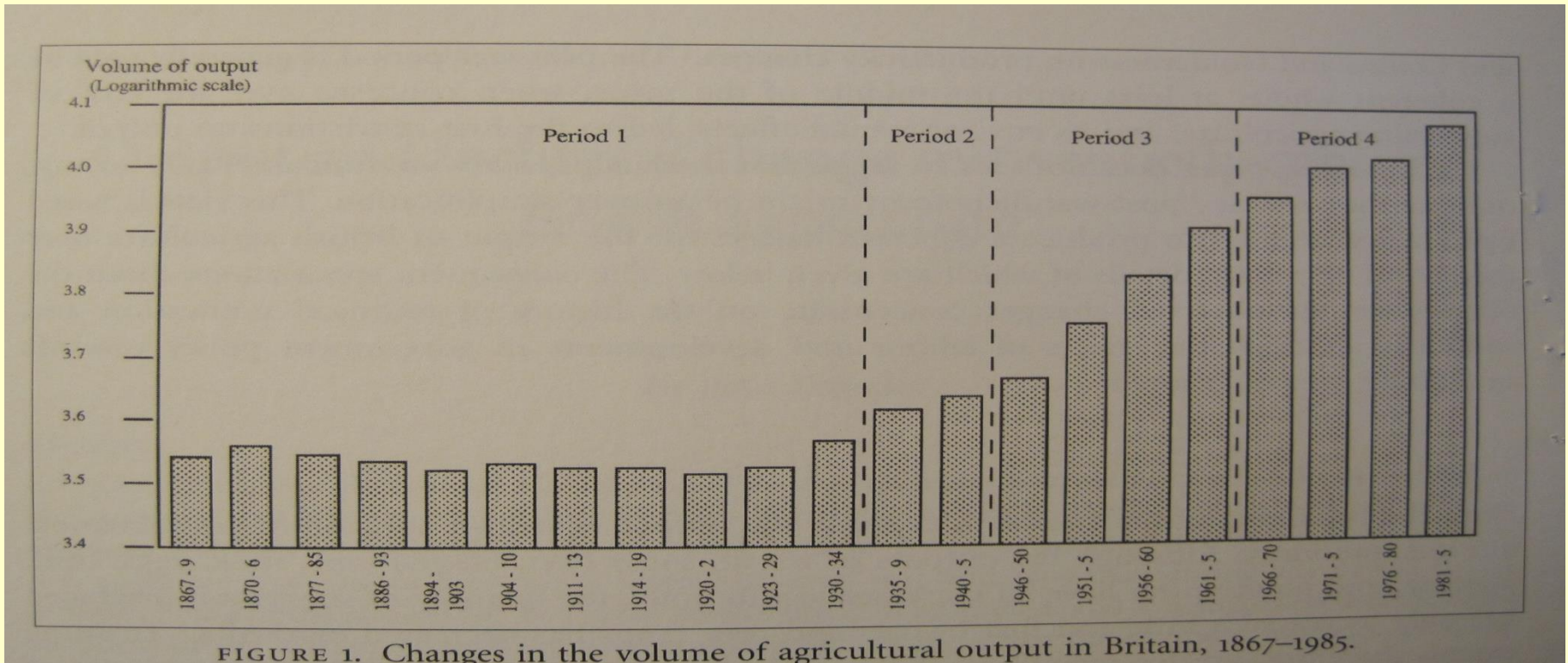
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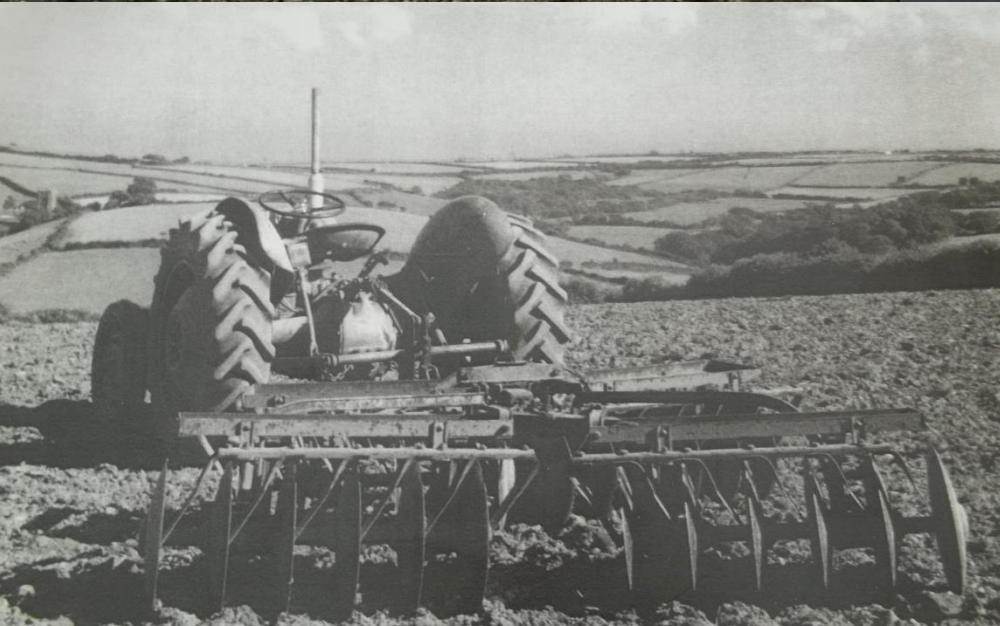
Paul Brassley, Mike Winter and Matt Lobley



Volume of UK agricultural output



Growth rate peaked 1945-65



Agric output: England and Wales

	<i>1940</i>	<i>1960</i>	<i>1979</i>
Cereals (m.tons)	5.5	7.9	16.9
S. beet (m.tons)	2.7	7.3	7.7
Cattle (millions)	7.0	8.8	9.7
Sheep (millions)	17.7	18.4	21.6
Pigs (millions)	3.4	4.3	6.6
Poultry (millions)	51.8	82.7	108.6
Milk (billion litres)	8.1	11.9	15.4

The Farm Management Survey (FMS)

- Established 1937
(now the FBS)
- A farm-level dataset
- Information on:
 - *Outputs*
 - *Inputs*
 - *Labour*
 - *Capital*

PURCHASES			SALES		
	No.	Value £		No.	Value £
1. Cows... ..			38. Cows, Breeding ...	6	174
2. Heifers-in-calf ...			39. " Culled or Cast, Fat	50	55
3. Bulls... ..			40. " Others		
4. Total ...			41. Bulls		
5. Stores, 2 years and over			42. Total ...	9	179
6. " Yearling ...	1	9	43. Fat Cows		
7. " Calves ...	4	19	44. Fat Bullocks and Heifers		
8. Store Cows ...			45. Beef Subsidy		
9.			46. Heifers-in-calf		
10.			47. Stores		
11.			48.		
12. Total ...	5	28	49.		
13. Total Cattle	5	28	50.		
14. Breeding Sheep ...	18	37	51. Calves, Veal	3	7
15. Store Lambs ...			52. " Other		
16. Others			53. Total ...	3	7
17.			54. Total Cattle	12	186
18.			55. Fat Lambs		
19.			56. Fat Sheep		
20.			57. Breeding Rams and Ewes	28	83
21. Total Sheep	18	37	58. Store Lambs	33	61
22. Pigs, Breeding ...			59.		
23. " Stores ...			60.		
24.			61.		
25.			62. Total Sheep	61	111
26. Total Pigs...			63. Breeding Pigs		
27.			64. Fat, Baconers	7	31-4-0
28.			65. " Porkers		
29.			66. " Other		
30.			67. Stores		
31. Total Poultry			68. Total Pigs...	7	31
32. Work Horses ...	1	51	69.		
33. Young Work Horses			70.	12	17
34. Other Horses ...			71.	120	12
35.			72.	132	29
36. Total Horses	1	51	73. Total Poultry		
37. TOTAL LIVESTOCK		116	74. Work Horses		
			75. Young Work Horses ...		
			76. Other Horses		
			77.		
			78. Total Horses		
			79. TOTAL LIVESTOCK		359 370

Machinery and Equipment		
Description	Original cost	
	£	
	1	
TRACTORS INTERNATIONAL	4	4743
MF 365	2	6715
	3	6840
	4	
	5	
CAR	6	1202
	7	525
	8	
	9	
	10	
GRAIN DRIER	11	363
BALER	12	1959
HARVESTING EQPT	13	
ORAGE HARVESTER	14	

The Farm Management Survey (FMS)

For each farm



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graph TD; A[For each farm] --- B[Analyse accounts]; A --- C[Farm history]; A --- D[Oral history (for survivors)];
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Analyse accounts

Farm history

Oral history (for survivors)

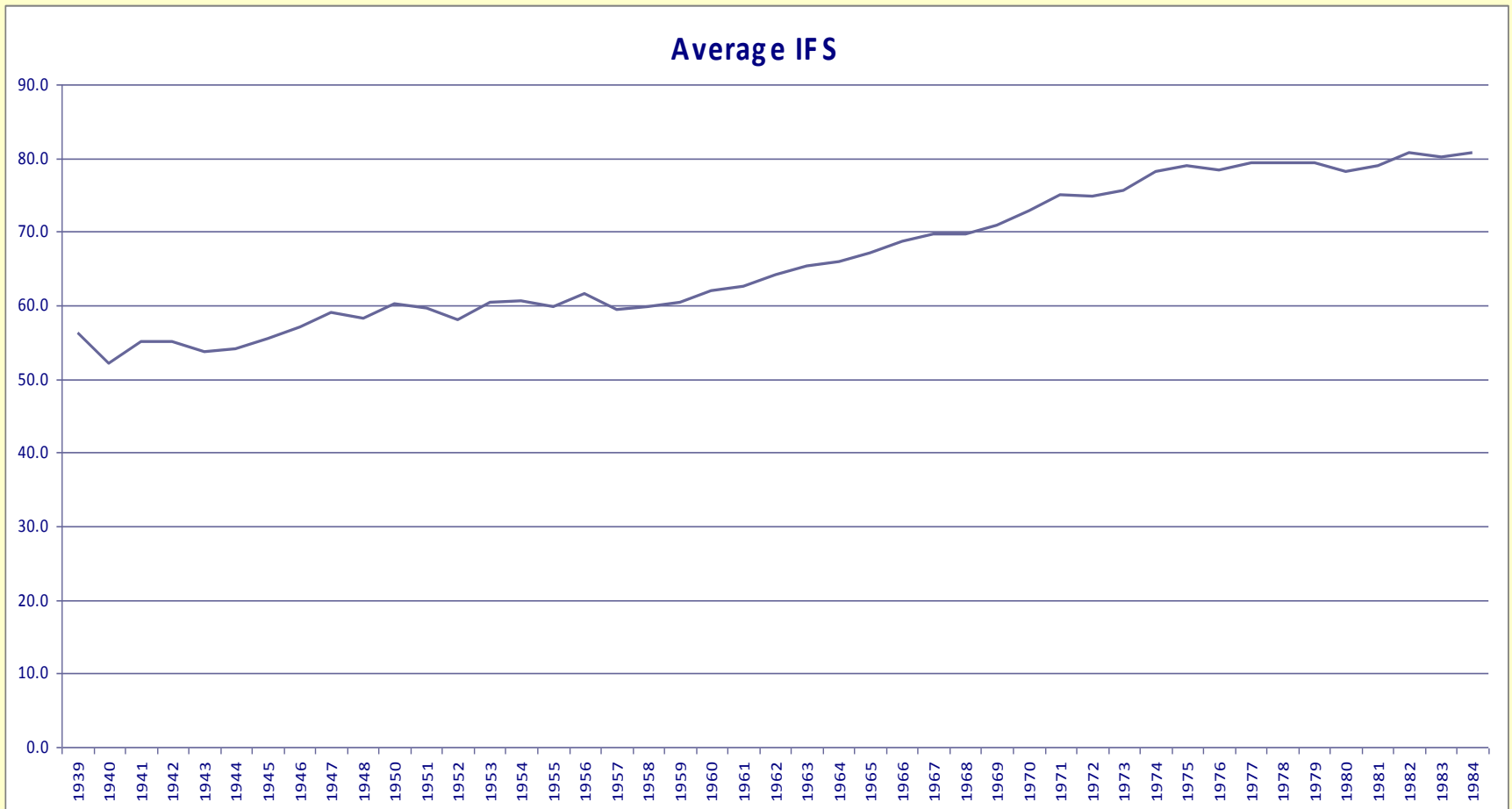
The Farm Management Survey (FMS)

Analysing the accounts

- Index of Farm Specialisation
- Output per £100 labour
- Output per £100 capital
- Real output per grazing acre
- Animal output per £100 concentrates
- Output per £100 total inputs

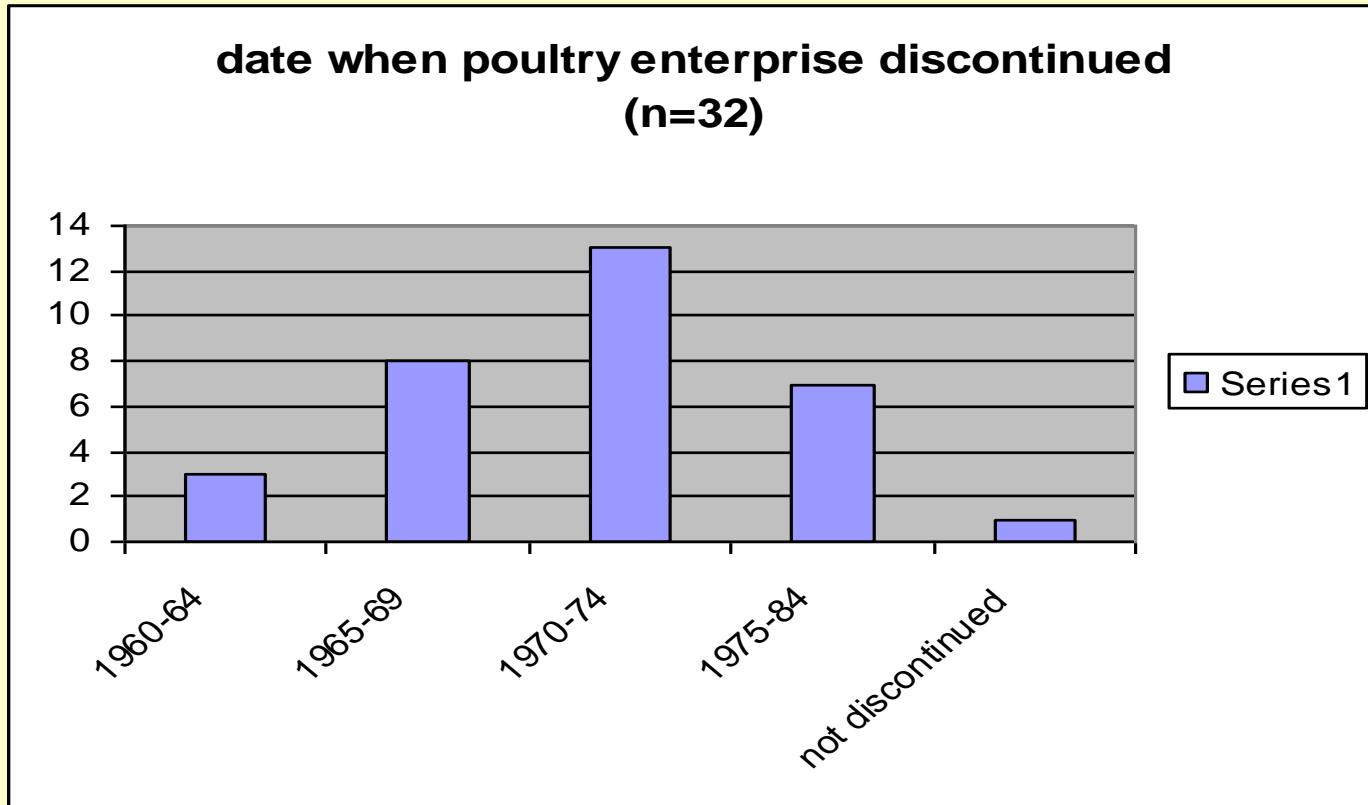
Index of Farm Specialisation

$$\text{IFS} = [(E1/O1) \times 100] + 1/n [(O1-E1)/O1 \times 100]$$



Farm Specialisation

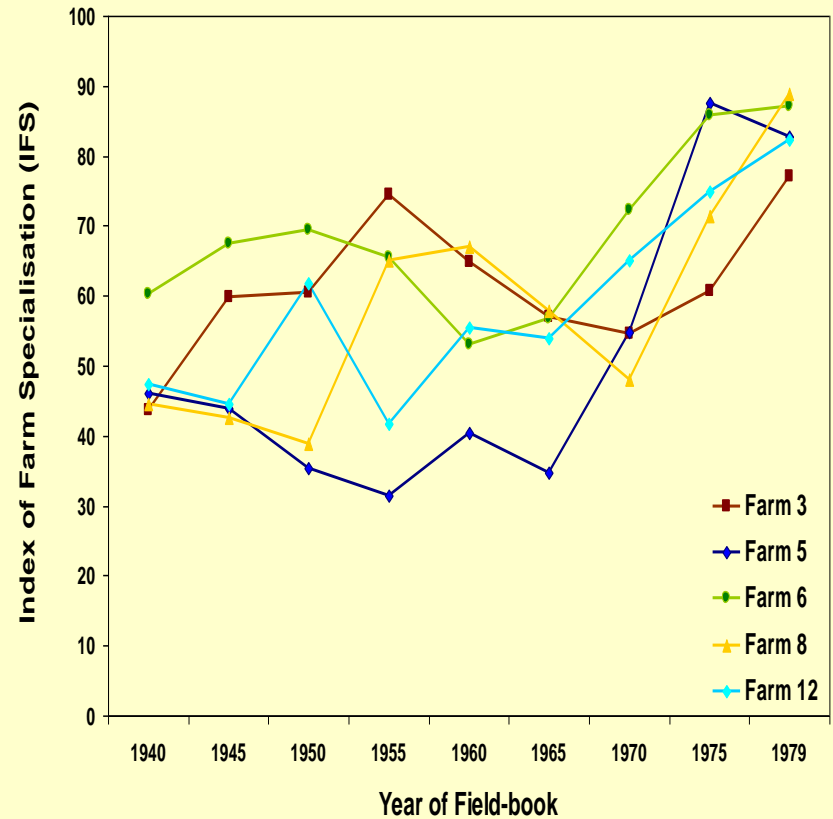
Disappearing Chickens



Preliminary analysis of a sample of farms

Output per acre indices for sample

Farm	1940	1960	1979
101	100	216	304
115	100	135	177
192	100	186	378
209	100	162	87
466	100	173	184
515	100	228	472
524	100	230	442
106	100	224	400
469	100	136	115
497	100	156	214
162	100	349	422
324	100	307	420

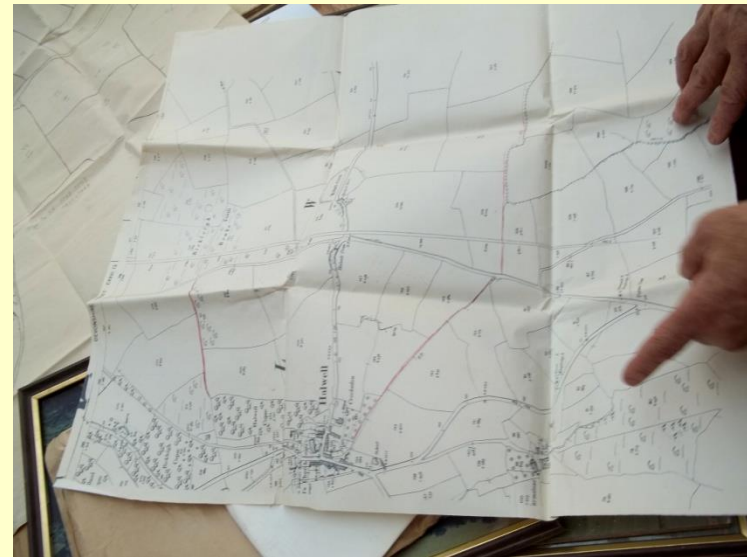


The Oral Histories

Questions:

- About the farm (land-holding etc.)
- About technical change and practices
- About significant changes in output/input
- Decision making (specialisation etc.)
- Education
- Sources of information
- Attitudes (to risk, lifestyle etc.)

The Oral Histories



The Oral Histories

A flavour of the different stories.....

- On SPECIALISATION
- On INVESTMENT (factors and attitudes)
- On PRACTICES and INNOVATIONS
- On FAMILY and AMBITION

Stories of Specialisation....

Farm ID 101: “That’s when we got out of eggs, we just weren’t big enough, that’s the trouble with supermarkets, you’ve got to be so big”

Farm ID 139: “as things got more specialised there wasn’t the market for it. When I was younger we had a few pigs and ewes as well, but they’ve gone and we’ve concentrated on the core parts of the business”

Farm ID 272: “I thought we should expand the dairy herd, we had 29 cows then and I could see that we needed 65-70 cows to make a viable unit. When I came home there were sheep, Mum had some poultry, a small amount of potatoes, beef from the dairy herd. We took several years to build up the herd”

Farm ID 209: “The pig system was pretty labour consuming, far too labour consuming. We had to buy in the feed for the pigs and chickens, apart from a bit of grain for the poultry, so getting rid of them was an easier decision. It was so obvious that the dairy herd was the thing to concentrate on”

Stories of Specialisation....

Farm ID 243: “We got rid of the pigs in 1975 when my father died, and the poultry at about the same time. The pigs took so much time to look after, and I increased the cows and kept a bit of beef because they weren’t so labour intensive as the pigs were”

Farm ID 2-7: “....we had 30 sows at one time, and it took too much of my time, so it was about concentrating on what we could do best”

“....From my point of view it was about trying to do two jobs – all morning with the dairy cows, and then in the afternoon you’ve got two hours to do the spraying. I felt that we were doing two jobs badly, so we should pick one and try to do that as best we can. And I wasn’t overly-enamoured of cows”

Stories of Specialisation....

Farm ID 2-21: “There was quite a bit of labour put into mixing food, so we were going for an easier life. I think we gave up cereal production for the same reason that we gave up other enterprises: because I recognized that we hadn’t the facilities or the skills or the land to keep pace with the rate at which others were moving forward”

Farm ID 2-7: “the chap who was milking the cows up at Bartons Hill tried to commit suicide, and that opened my eyes to the fact that it was a very isolated spot up there, so that was the reason we closed Bartons Hill, which is why the cow numbers [went down]”

Farm ID 139: “Specialisation depends on your mentality. Farming isn’t just about making money, it’s also a way of life, and if you enjoy having pigs around, it wasn’t a big enterprise, and [I] enjoyed seeing them there”
“If we went to 300 cows, rather than being a mixed farm we would be a specialist dairy farm, and I have this concern that it’s putting all your eggs in one basket. It’s a different set of management skills. A mixed set up suits my expertise”

Stories of Specialisation....

Farm ID 787: “My father, his life was horses”

Farm ID 2-21: “Pigs well, that was ...passed like ships in the night, David our younger son was here for a year or two before he went off to do forestry, so it was a recognition of my younger son’s wish to keep pigs, we kept them for a few years”

Farm ID 162: “as a small child I was a bit interested in milking cows, as I was showing a bit of interest father bought 2 Ayrshires and 2 Friesians as well. It wouldn’t have been much more than a churn – 10 gallons a day”

Farm ID 101: “my son hates sheep, we had about 3 or 400 sheep , sold in 94, went on to beef, kept all the calves from the dairy herd”

Farm ID 243: “you’ve got to spend time with them, especially when they’re little pigs. I’ve always liked pigs. And sheep. But I can’t stand poultry”

Farm ID 836: “the breed of sheep changed; we were on greyfaced Dartmoors and I hated the things”

Stories of Specialisation....

Farm ID 139: “We’ve always had Friesians when I was here, and then the Holstein blood’s gradually come in. I remember when my father first saw Holsteins he said ‘little hat racks’, but they’ve certainly pushed yields, from about the mid-80s some Holstein blood was coming in, before that it would be straight Friesian”

Farm ID 2-7: “I think I went down the wrong road there because I stayed with the British Friesian Cattle Society when Holsteins were coming along, and he regarded Holsteins as looking ugly, but they give a lot more milk, but I never went into them. With hindsight I should have done”

Stories of Investment....

Farm ID 243: “we borrowed a bit from the bank, no trouble at all. Right up until the mid-1990s you could borrow whatever you wanted. I would go in Cullompton and say I want to borrow £20,000 and he’d say ‘Right, you can have it’, quick as that, no problem. They made a profit out of you. They knew the farmers, you can’t run away from a farm, you can’t hide. So they always had the security of the land. I’ve never known it go down in price”

Farm ID 2-7: “it’s inflation that has saved the bacon of a lot of farmers, to see the price of farm land go up from £500 an acre to £5,000 in the space of 30 or 40 years. And you could borrow in expensive pounds and pay it back in cheap. An overdraft of a quarter of a million now is nothing in relation to how many million the farm is worth”

Stories of Investment....

Farm ID 836: “The funny thing was, with father, so much as he liked progress within the farming, he didn’t really like the progress that this encouraged He was a great believer in the idea that you should never have anything unless you can pay for it. If I stuck to that, I wouldn’t be where I am now, because, I had to borrow a lot”

Farm ID 692: “I would never go and buy machinery unless I could afford it. The only loan I took out was when I took over the cows from father, and I took over 20 cows from father and paid £100 each, and I went to the bank and borrowed £2000, and I paid it back within two years, and that was the only time I ever borrowed money. My brother always said ‘Go to the bank and borrow money, they’ve got plenty’, but I said ‘You’ve got to pay it back’. My brother would do it but I didn’t like borrowing money, if I couldn’t afford it I’d do without.

Stories of Investment....

Farm ID 162: “The estate wouldn’t invest too much in buildings round here – even twelve years ago I was still tying up cows and cleaning them out twice a day “Some people took it on themselves and built sheds on the estate’s land, but I was reluctant to do that because after 7 years it becomes the estate’s, and then they can say ‘well there’s a jolly nice shed’ and increase your rent because it’s there, even though you built it yourself”

Farm ID 209: “I knew they weren’t making any more land in the world, so that was the thing to invest in. all these land purchases were financed off borrowed money, Barclays Bank, they were very positive, and land price inflation helped”

“Machinery-wise, milking parlour-wise, we were behind the times, I had neighbours who hadn’t bought land who had more modern machinery than we did, but I wasn’t disappointed in that because I thought those things can come after. Usually you’ve only got one chance to buy the land. We’ve had two chances to buy two little blocks of land that we’ve bought ... that was big borrowing back then, but in a year or two, with inflation, you could stop worrying about it”

Stories of Investment....

Farm ID 826: “The annual visit to the bank manager was important. The wretched bloke would encourage you to borrow more money, and like a sucker I would say yes,”

Farm ID 787: “the accountant told us don’t go out and spend hundreds of thousands, and I’ve met people like us with 120 cows, and they’ve gone to 150, and they’ve found that they need more buildings and a bit of part-time labour, and then they have to go to 200 to justify it, and then of course the parlour’s not big enough, so you invest in a parlour, and you need a herdsman, and to justify the cost of a herdsman, they’re skilled people, you need to keep 300, then the slurry lagoon’s not big enough”

Stories of Innovation....

Farm ID 2-7: “We were also into grass seed at one time, that was a little diversion. we had advisers in, in wasn’t just a decision made over a cup of tea, they had to prove to us that we could make a living going arable”

Farm ID 2-21: “I visited demonstration farms, and they came here to see some of the rare things we did that were progressive. The first one was the installation of a moist grain silo, that would be in about 1970, the first in the county, John dismantled it. He seems to have dismantled a lot of what I’ve done”

Farm ID 826: “I suppose in a way I was different to the average because having been to university my outlook was different to the normal Devon farmer who surrounded me. That was the last thing a normal Devon farmer would have done”

Farm ID 109: *Q: Did you ever do any training?*

“Colleges weren’t about then. I don’t ever remember people giving advice”

Stories of Innovation....

Farm ID 209: “And as far as machinery is concerned, the thing that’s transformed everything is hydraulics, right up to a telescopic loader, we do everything with them, they’re wonderful, it affects materials handling, ploughing – hydraulic instead of hand-draulic. If you went back 70 or 80 years a big farm could have 20 staff because the materials handling was enormous. It was better than being a miner, because you were working in decent air, but you were shovelling as many tons”

Farm ID 844: “that was a half-job; what the workmen built.... Never worked properly. Still there now – they never thought it out; closed it in, not enough air going in it – got pneumonia. [Q: *Who did that?*] Father and the workmen I think”

Farm ID 209: “we joined two cow houses together in 1966, dreadful mistake, didn’t last long, the milking parlour should have been put in then”

Farm ID 826: “He was still milking cows by hand then, and so was I when I first came home. The milking machine was installed when I was still at Bristol, and he refused to use it, and never used it. We got up to about 20, milked by hand”

Stories of Innovation....

Farm ID 2-7: “We started silage in 1948, which was early for around here. It was about getting a product that was fresher and better than old frowsty hay. You cut it at an earlier stage you get a better protein content”

Farm ID 139: “I remember when we first started making silage father saying you can put anything you want in there, but then people started to take a bit more care over it, and now I know that if you’ve got poor grass silage you’ve got a hell of a job to make them milk”

Farm ID 209: “We went over to silage in about the mid to late 50s, but we packed it in and went back to hay. cutting it out was too labour intensive, it was only a small clamp and we didn’t self-feed, and we went back to quality hay then as soon as we could afford it, about 1971, when the silage barn went up, we foraged our own grass and self-fed it. There was an improvement in milk quality and cattle condition, and you didn’t have to use so much concentrate, because there’s a lot more feed value in well-made silage than in well-made hay”

Farm ID 836: “Well I remember my father, doing silage once, building an outdoor clamp, no plastic sheet over or anything, and it all went in the dung swiller”

Stories of Family and Ambition....

Farm ID 826: “I got on extremely well with my father, but he typifies the earlier generation of Devon farmers, he didn’t want to change anything. We kept on with these dairy breeds until we stopped milk production completely in about 1972, we never went over to Friesians”

Farm ID 139: “My dad was open to new ideas – it showed in the way he handled it when I came back, he didn’t just hand over the reins and say there you are, but he was quite relaxed about new ideas. I was lucky, he had the final say at the end of the day, but he had the ability to listen and let you put your point of view, we didn’t fall out too much”

Farm ID 209: “1961 Dad could have bought 120 acres neighbouring, and I pleaded with him to do it, but he wouldn’t do it”

Farm ID 836: “My father and I, we never agreed all the time. If I wanted to go that way [*pointing*]; he would want to go that way [*pointing the opposite way*]. ... “we cut down vastly on root crops, and my father, he still had it in his brain he wanted to grow mangolds And I said “you grow ‘em”, and I said “I’m not touching ‘em”. And I didn’t. Yeah – I didn’t get involved at all, and I just refused”

Stories of Family and Ambition....

Farm ID 162: “it was a matter of keeping me on and interested. ... All he wanted was for me to take over, I think. And he retired at 62, because he was a bit concerned that I might not hang around if he stayed on until he was 70 or something”

Farm ID 2-7: “There isn’t any date when I definitely took over, or when I definitely gave up and Jill took over – sometime in the last 15 years”

Farm ID 2-21: “I always used to say when farming in more halcyon days that this could be a dog and stick farm, that farming it could be simplified, and John’s now gone almost full circle and he’s coming back to sheep and corn. He’s 52 now and he’s winding down, and I think he sees the opportunity to make a reasonable income from less intensive farming. It’s a much less intensive farm now”

Farm ID 844: “After the workman left he really let the [farm go] he wasn’t that perturbed, we just kind of doodled along a bit... And so I suppose we got going, after 1974 really we realised we had to do something; we were doing alright, just doodling along”

Stories of Family and Ambition....

Farm ID 787: “I farm in the way I want to farm, not just for money”

Farm ID 836: “like I said, I was never what I call, a top-flight farmer as such – just a victim of circumstances – but when I went to market, you get farmer’s in clusters, talking about the biggest turnip they could grow .. I was always a loner”

Farm ID 2-7: “In 1958 when we took the Manor farm my father went to the local agricultural engineer and ordered 10 new tractors, five for this farm and 5 for that, which was unheard of in the county, I used to drive round the village and the farm in a little Ford Dexta, which was really fast compared to the others, never actually did much work with it, but I could leap off and see to things”

“We all want to be seen to be doing a successful job, and having a new tractor every year is a symbol of that”

Farm ID 162: “he wanted to be proud to stand by it and say it was his. Would he literally do that, when they went into the ring, stand in the ring with them? Yes. That was important, to stand by your stock”

Conclusions

- Complicating the 'national' story – both at aggregated level and also at the individual
- Accounting for and explaining things
- Decision making processes
- Attitudes, context and contingency
- Serendipity and chance
- Including the 'failures'

Thank You!

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