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The Changing Landscape of 'Labour': Work and Livestock in Post-Second World War British Agriculture

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> When working with stock, great pleasure can be derived from the actual participation of both man and animal in what should be a collaborative exercise . . . Always working with stock calls for a deep understanding, a kind, firm attitude and a quick, intelligent reaction.[1]

> The farm workforce . . . was far from being an undifferentiated mass of John Hodges. Although the national census of 1901 was the first to acknowledge the major divisions . . . even the divisions of 1901 – shepherds, horsemen, cowmen and labourers – conceal the gradations of skill and prestige attached to these different jobs.[2]

Through debate, within detailed analyses and local studies and across broad economic surveys of farm incomes and variable wages, agricultural historians have worked since the 1950s to establish that nineteenth-century British farms large and small were complex sites of interconnected, mixed production. They were also the site of (often contested) stratified skill, of labour hired in service and of contracts (casual, seasonal and annual), that supported farming across the regions. Alun Howkins, and more recently Nicola Verdon, in *Working the Land*, have asked to what extent this model and its attendant divisions continued into the twentieth century, when there were widespread structural changes and unprecedented peacetime state intervention.[3] Agricultural historians have begun to address the ways in which we might trace the work of agricultural labourers, and begun to focus on farmers as specialist producers, at a time when their crops standardized to meet new market demands within food supply chains that sought out

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[1] S. Williams, 'Stockmanship', *Agriculture*, May 1965, pp. 226–30, at p. 230.

[2] A. Howkins, 'In the sweat of thy face: the labourer and work', in G. E. Mingay (ed.), *The Victorian Countryside* (London, 1981), pp. 506–20, at p. 506.

[3] A. Howkins, *The Death of Rural England: A Social History of the Countryside since 1900* (London, 2003); A. Howkins and N. Verdon, 'The state and the farmworker: the evolution of the minimum wage in agriculture in England and Wales, 1909–24', *Agricultural History Review*, 57/2 (2009), pp. 257–74; N. Verdon, *Working the Land: A History of the Farmworker in England from 1850 to the Present Day* (Basingstoke, 2017).

efficient machine-handling and delivery. Throughout the West, post-war agriculturalists, with wholesalers, packers and retailers, sought to generate more consistent, standardized produce in order to enter international, interlocked supply chains and global trade systems.[4] We see this history, and the call to do more with it, not only in Britain, but also in the work of key American agricultural historians such as Deborah Fitzgerald, who has raised the question of the domestic impact of these large-scale twentieth-century agricultural changes on small and family farms.[5]

This article addresses the history of post-war specialization and standardization, and its impacts on the farm worker, in terms of labour, 'manpower' and status, while acknowledging that this debate took different forms over the course of the century.[6] By focusing on livestock, and the idea of 'stockmanship' after the Second World War, this article will interweave an understanding of an increasingly data-rich delineation of human labouring life, as outlined in the 'grey' (advisory) literature and the specialist press, with the histories of the animals that they worked with and alongside. It shows how, notwithstanding the profound structural changes in British agriculture, twentieth-century perceptions of labouring prestige associated with livestock husbandry retained continuity with earlier periods. Not only did they continue to bring material benefits to some farm workers, but we see how these continued to be generated through the relationship of human and non-human within the (human) managed spaces of the British farm.

Harriet Ritvo has written powerfully on the interwoven histories of human and non-human animals in livestock production, requiring that environmental historians bring their insights to bear on events such as the UK's Foot and Mouth outbreak of 2001.[7] Animal studies theorists such as Erica Fudge and historical geographers such as Briony McDonagh and Carl Griffin have begun to look at the entanglement of human and non-human in rural life and agricultural production, as framed by human legislative boundaries and culture, during the early modern period to the early nineteenth century.[8] Alun Howkins himself, along with Linda Merricks, began to address the subject in the modern period by looking

[4] See, for example, D. Worster, 'Transformations of the earth: toward an agroecological perspective in history', *The Journal of American History*, 76/4 (1990), pp. 1087–1106, at pp. 1093–4, 1101–3. He refers to the concept of an 'agroecosystem': 'an ecosystem reorganized for agricultural purposes' in order to capture a wider sense of the relationship between farming, nature and human–animal interaction. This is to recognize that agriculture 'is a rearrangement, not a repeal, of natural processes' (ibid., p. 1094).

[5] D. Fitzgerald, 'Eating and remembering', *Agricultural History*, 79/4 (2005), pp. 393–408.

[6] Vernon, this volume.

[7] H. Ritvo, 'Counting sheep in the English lake district: rare breeds, local knowledge and environmental history', in H. Ritvo, *Nobel Cows and Hybrid Zebras: Essays on Animals and History* (Charlottesville and London, 2010), pp. 199–200. See also A. Cassidy, 'Vermin, victims and disease: UK framings of badgers in and beyond the Bovine TB controversy', *Sociologia Ruralis*, 52 (2012), pp. 192–214; A. Woods, 'Science, disease and dairy production in Britain, c. 1927–1980', *Agricultural History Review*, 62/ 2 (2014), pp. 294–314.

[8] M. Cragoe, and B. McDonagh, 'Parliamentary enclosure, vermin and the cultural life of English parishes, 1750–1850', *Continuity and Change*, 28/1 (2013), pp. 27–50; C. J. Griffin, '"Some inhuman

at consumers' responses to some aspects of twentieth-century livestock production, such as live-animal transport and exports, in their article 'Dewy-Eyed Veal Calves'.[9] Since then, agricultural historians like Paul Brassley have begun to write detailed accounts of the structures and processes implicated in the economic and policy shifts that took place in wartime and in post-war British agriculture.[10] However, few have ventured to look at issues surrounding labouring in connection to, or labourers' relationships with, animals as co-producers within the livestock system.

But even taking into account such work, and setting aside the work of rural sociologists such as Howard Newby, whose research in the period might offer historians a useful body of raw material, the focus of scholarship has been narrow.[11] Even when it has considered the non-human animal, only rarely – bar the quantitative economics of input/output – have scholars addressed the history of human–non-human animal relations within the new post-war agricultural paradigm. Drawing on the work of human geographers such as Lewis Holloway, this article will therefore consider the ways in which human labour was constructed through twentieth-century animal husbandry, as it related to the relationship between human and non-human in farming discourse, and the ways in which the dynamic relationship between that discourse and agricultural policy, and the relationships between stock and stock worker, produced new labouring identities.[12] This article will argue that working with animals carried with it a hyper-masculine prestige that, in a continuation of past practice, resulted in the maintenance of higher wages for some agricultural labourers. Further it suggests that, despite the emergence and subsequent dominance of the rhetoric of labour efficiency, capital was a hybrid produced by non-human animal and human interactions supported by modernization.

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wretch": animal maiming and the ambivalent relationship between rural workers and animals', *Rural History*, 25/2 (2014), pp. 133–60; E. Fudge, 'Milking other men's beasts', *History and Theory*, 4 (2013), pp. 13–28, at p. 13.

[9] A. Howkins and L. Merricks, '"Dewy Eyed Veal Calves": live animal exports and middle-class opinion, 1980–1995', *Agricultural History Review*, 48/1 (2000), pp. 85–103.

[10] P. Brassley, 'Silage in Britain, 1880–1990: the delayed adoption of an innovation', *Agricultural History Review*, 44/1 (1996), pp. 63–87, at p. 63; P. Brassley, 'Output and technical change in twentieth-century British agriculture', *Agricultural History Review*, 48/1 (2000), pp. 60–84; P. Brassley, 'Cutting across nature? The history of artificial insemination in pigs in the United Kingdom', *Studies in History and Philosophy of Science Part C: Studies in History and Philosophy of Biological and Biomedical Sciences*, 38/2 (2007), pp. 442–61. See also J. Martin, 'The wild rabbit: plague, policies and pestilence in England and Wales, 1931–1955', *Agricultural History Review*, 58/2 (2010), pp. 255–76; J. Bowen and J. Martin, 'The "big freeze" of 1962–63: the loss of livestock, the issue of fodder supply and the problem of the commons in two upland hill-farming regions in England and Wales', *Agricultural History Review*, 64/2 (2016), pp. 226–60.

[11] H. Newby, *The Deferential Worker: A Study of Farm Workers in East Anglia* (London, 1977); see also M. Bouquet, *Family Servants and Visitors: Farm Households in Nineteenth and Twentieth Century Devon* (Norwich, 1985).

[12] D. Butler and L. Holloway, 'Technology and hybrid capitals in dairy farming', *Sociologia Ruralis*, 56 (2016), pp. 513–53.

I

After the Second World War, until Britain's entry in the early 1970s into the European Economic Community (EEC) and to the Common Agricultural Policy (CAP), agricultural policy was shaped by two factors, the Agriculture Act of 1947 and the Agricultural Wages Board.[13] The 1947 Act drew both on the views of domestic commentators and on information provided by domestic producers, including a meeting of the Royal Agricultural Society for England (RASE) in April 1944, and by another following the food crisis of 1947, both of which resulted in recommendations being sent to government.[14] After 1945, and in marked contrast to the period immediately following the First World War, the decision that the state would support British farmers, once made, was defended robustly. The Minister for Agriculture even called an exceptional press conference in May 1950 after heated debate and '"grotesque and fantastic" attacks upon food producers' in the House of Commons in relation to price and subsidy policies.[15] We also see similar expressions in the trade press, with the *Farmer and Stockbreeder* declaring that 'concessions to farmers at the tax-payers' expense were running around our economy like cockroaches'.[16] This hostile article, the NFU response to it, and the report of the meeting with the Minister of Agriculture defending farming in the *Farmer and Stockbreeder*, all demonstrate the febrile atmosphere into which this new policy was born: farmers were going to take convincing that this time the government was to be trusted. Despite the extensive discussions with labourers' associations, farmers and farming bodies that had taken place before the government's agricultural policy had been finalized. But, what is also striking is the way in which farmers were reframed by the Minister as 'food producers'.

This use of 'food producers' hinted at the fact that the 1947 Act was also shaped by an international discussion of what would be required of agricultural producers after the Second World War, via the contributions of the forty or so nations that attended the Hot Springs

[13] It had first been set up established during the First World War, and then reformed via the Agricultural Wages Act (1948) J. Lourie, 'A minimum wage'. Research paper 95/7, 17 Jan. 1995, House of Commons Library, <file:///Y:/Downloads/RP95-7.pdf> [accessed 8 Nov. 2018], pp. 1–3. The state machinery for organizing agricultural labour supply, education and training went through several organizational changes after 1945. Amendments such as the Agriculture Act of 1957 also had an effect. By 1995 after the 1992 Trade Union Reform and Employment Rights Act, the only industry in which wages were controlled was agriculture, with a weekly rate at the time of £145.09 for 39 hours.

[14] N. Goddard, *Harvest of Change: The Royal Agricultural Society of England, 1838–1988* (London, 1988), p. 17.

[15] This had been prompted by the resignation of the Minister for Food, Mr S. N. Evans M.P., who believed that agriculture was subsidized to excess. Mr Evans discussed 'feather bedding' in the Commons, on Tuesday 16 May 1950, *Hansard*, 5th s., vol. 475, cols 1040–50, at col. 1049.

[16] Anon., 'The inaccuracies of Mr. Evans; agriculture no more privileged than any other industry, says M. P.', *Farmer and Stockbreeder*, 23 May 1950, p. 1562; Anon., '"Inaccuracies": N. F. U. shows where Mr. Evans went wrong with figures', *Farmer and Stockbreeder*, 23 May 1950, p. 1562; 'Mr Williams clears the air', *Farmer and Stockbreeder*, 23 May 1950.

Conference, Virginia, USA, in the spring of 1943.[17] That conference, promoted by President Roosevelt and organized by the United Nations to discuss international food deficiencies and nutrition, led to the formation of the Interim Commission on Food and Agriculture. The report on international food production that came out of the Hot Springs Conference was discussed in Britain during Parliamentary debates about the position and purpose of agricultural production. Hence, when asked about post-war agricultural policy in the Commons, Prime Minister Winston Churchill replied, 'His Majesty's Government have accepted the Resolutions of the Food and Agriculture Conference at Hot Springs in so far as they are applicable to the conditions in the United Kingdom.'[18] It led, too, to a frank debate in the Commons in which Harold Wilson (then Parliamentary Secretary to the Ministry of Works) referred to the dumping of fresh fruit and vegetables in British ports during the 1930s, when many people had little or no access to affordable food in the same city as that in which food was being destroyed.[19]

Issues of production, deficiency, malnutrition and nutrition, particularly within the empire, were already established economic and political questions for agricultural experts in the UK, with James Caird, for example, contributing to reports on famines in Ireland (1845–50) and in India (1876–9), as discussed by Peter Gray, in the mid- to late nineteenth century.[20] These were further explored in the early to mid-twentieth century, by authors such as Nagendranath Gangulee (a Member of the Royal Commission on Agriculture in India, Professor of Agriculture and Rural Economics at the University of Calcutta and Researcher at Rothamstead Experimental Station), publishing books such as the *Bibliography of Nutrition in India* (1940), and *Health and Nutrition in India* (1939). But the UN study both adopted new scientific thinking on nutrition developed within agriculture and medicine in the late nineteenth century, based not just on calories but also the disease-/health-determining nutritional composition of the diet (e.g. re Vitamins B1, A, B3, B and C, and amino acids – all discovered during the period *c.*1912–40), and widened the scope to the international level, beyond the bounds of any particular colonial or existing trading relations.[21] As a direct result of the UN Commission being established, when food surpluses were being identified as having been produced by

[17] 'Food conference (Hot Springs), Section reports. (Food and Agriculture)', Miscellaneous No. 4 (1943) United Nations Conference on Food and Agriculture, Cmd. 6461, vol. XI.529.
[18] 'Post-War Agricultural Policy', Commons sitting of Tuesday, 3 Aug. 1943, *Hansard*, 1942–42, 5th s., vol. 391, cols 2057-2266, at col. 2080.
[19] 'World Food Situation', Commons sitting of Thursday, 6 Feb. 1947, *Hansard*, 5th s., vol. 432, House of Commons session 1946–7, cols 1935-2098, at col. 2001.
[20] P. Gray, 'Famine and land in Ireland and India, 1845–1880: James Caird and the political economy of hunger', *Historical Journal*, 49/1 (2006), pp. 193–215.
[21] Secretary of State for Foreign Affairs, United Nations Conference on Food and Agriculture, Hot Springs, Virginia, United States of America, 18 May'3 June 1943, Section Reports of the Conference (in continuation of Miscellaneous No. 3 (1943) Cmd. 6451), Miscellaneous No. 4 (1943), July 1943, Cmd. 6461, pp. 3–20.

the West – Britain, the Common Market nations, America, Canada and Australia – in the late 1950s to early 1960s, it was the UN that suggested those surpluses be redistributed as aid under the 'Food as Capital' programme. And, within the context of the Cold War, this was something that seems to have been accepted for the first time among even the most business-minded of agricultural commentators in Britain. Clifford Selly, for example, an economist and farm management specialist who contributed to BBC TV's 'Farming' Sunday programme, saw the 'Food as Capital' idea as a good thing and perfectly compatible with W. W. Rostow's then highly influential economic model.[22]

Selly's publication *Farm Business* caught the emerging zeitgeist for the application of efficiency models and practices to agricultural production via adjustments to existing, or the adoption of new, farm buildings, policymaking and so on. As Selly characterized the idea, the aim was to free up the manpower that was being used in subsistence farming in so-called 'under-developed countries', in order that their 'surplus labour' could be used to 'supplement … monetary capital' in industry 'to get into the industrial "take-off" stage on which their whole future development depends'. He believed that it appealed to farmers, was simple and effective, and was very critical of the UK government for failing to adopt the scheme because the UK was 'a Western nation committed to raising the standards of the under-developed countries to attract them away from the Communist camp'.[23] This was farming at its most political, and in recognition of this he drew on authoritative quotations from George Allen of the Agricultural Economics Research Institute, Oxford, who wrote in support of the project of 'planned production of surpluses to aid under-developed countries' in the *Guardian* newspaper.[24] It therefore clearly came to be accepted by post-war competitive producers that policymakers should address domestic agricultural output in the context of international food production, not simply because of overseas competition and farm income but also – in the light of highly-politicized Cold War rhetorics of access to good nutrition/freedom from want – as a universal right to nutrition, which would lead to physical and health benefits that would speed world-wide economic development and fully employ labour and capital.

Three years later, this intersected with British domestic concerns over the so-called 'balance of payments', as seen in the publication

[22] C. Selly was agricultural correspondent to the *Observer*, and a contributor to 'Making the money go round: 2', *Farming*, 13:50 BBC One, Sun 16 April 1967, <https://genome.ch.bbc.co.uk/schedules/bbcone/london/1967-04-16> [accessed 5 Nov. 2018]. See W. W. Rostow, 'The take-off into self-sustained growth', *The Economic Journal*, 66/261 (1956), pp. 25–48.

[23] C. Selly, 'The surplus problem: "Food as Capital" offers a constructive solution', *Farm Business* (1962), pp. 4–8, 7–8.

[24] G. Allen, 'A plan for using food surpluses', *The Guardian*, 10 April 1962, <https://search.proquest.com/docview/184925132?accountid=13651> [accessed 24 Jan. 2019]. Cited by Selly, 'Surplus problem', pp. 7–8. See also C. Selly, 'The farmer and the feather-bedding', *The Observer*, 8 April 1962, <https://search.proquest.com/docview/475597773?accountid=13651> [accessed 30 Jan. 2019].

of the National Economic Development Plan, 1965. Authored with industry, the National Economic Development Council, and the Ministry of Agriculture, Fisheries and Food (MAFF), this demanded what it called the continued 'release of manpower' from UK agriculture for other industries. This was to be achieved by efficiency gains using farm machinery, so that labour productivity would increase over and above the increase in agricultural production of foodstuffs that government was also seeking to promote.[25] Its status as a piece of policymaking was unclear, so Selly explored the likely issues for farmers in a position piece for *Farm Business*. He took the view that agriculture, of all industries in the UK at the time, had to pay attention to it, regardless of its status, because of government's existing involvement in agricultural planning and the therefore (very likely) high input and checking of data relating to farm production in the plan.[26] Other than that, however, Selly took a fairly dim view of the whole thing, seeing it firstly as falling foul of previous policy directives exercised via pricing, and secondly due to the requirement that agriculture contribute to 'closing the manpower gap' and stepping up its productivity. This, Selly contended, would mean that not only would Britain soon reach the point where there were equal numbers of farmers and farm workers, but that government was 'clearly counting on a number of farmers and their wives being involved in this exodus'.[27]

The use of the word 'exodus' is telling as this immediately referred readers knowledgeable about country life and commentary back to fears of so-called 'rural depopulation' which had their roots in the late nineteenth century. Before the First World War, this perceived risk to agricultural productivity and national well-being, which were often presaged on assumptions that rural working populations were physically fitter than urban, was cast as a 'flight from the land', or as an 'exodus'. We see it in the title of P. A. Graham's article *The Rural Exodus* (1892), and in H. R. Haggard's use of the 'bogey of … the lean exodus-skeleton' in his 1902 book *Rural England*.[28] But, after the Second World War, this was reconceptualized as a 'release' in economic models that followed Rostow's requisite 'take off'.[29] Freeing up labourers from agriculture who could then move into industrial employment was seen as a good thing for British economic growth and prosperity.[30] Whereas commentators had worried for fifty years about how to keep the workers on the land – for example, by improving pay, and providing better amenities and living

[25] *The National Plan*, Sept. 1965, Cmd. 2764, Rt. Hon George Brown MP, Foreword, p. iii; Chapter 12 'Agriculture', pp. 135–41.
[26] C. Selly, 'The national plan: expansion on the cheap?', *Farm Business*, 5/1 (1965), pp. 8–22.
[27] Ibid., pp. 8–11, 21.
[28] P. A. Graham, *The Rural Exodus: The Problem of the Village and the Town* (London, 1892); G. B. Longstaff, 'Rural depopulation', *Journal of the Royal Statistical Society*, 56/3 (1893), pp. 380–442; H. R. Haggard, *Rural England* (London, 1902), pp. 542, 546, 566.
[29] See Rostow, 'Take-off', pp. 25–48.
[30] Rostow himself wrote agricultural history, e.g. W. W. Rostow, 'Business cycles, harvests, and politics: 1790–1850', *Journal of Economic History*, 1/2 (1941), pp. 206–21.

conditions – they were now to free them up from agricultural labour for the sake of manufacturing. The term 'release' was something that had been used widely in the Second World War, particularly in connection with the employment of women who 'were needed to release men for fighting'.[31] But, to see such a volte-face in peacetime British agricultural policy was clearly a shock to Selly, and doubly so because it appears that not only labourers, but also farmers and their wives were to be asked to leave the land to supply the shortages in other industries. It rested on the assumption, as he argued, that 'the small farmer' will leave, and the 'references in the Plan to support … the "full-time commercial farmer". He is a new character on the scene.'[32] This point was not pursued by Selly any further, and in subsequent issues the articles in the journal appeared to take the new policy at face value. However, it remains not only indicative of an acute level of observation on Selly's part, but also as the trace of a new approach to farm and labour organization in England and Wales that adopted an internationalist framework.

This paradigm shift over the purpose of farming emerged after the First World War, was debated in the interwar period and then became increasingly dominant due to the legacy of the ways in which agriculture had been centrally managed during the Second World War. It shifted both the rhetoric around agricultural production (in terms of its purpose), and in practical terms also established much more clearly the ways in which agriculture was to operate for the national (and even international) good in the post-war era. By this point, agricultural labour was already being widely discussed in the same way as any other form of labour, in terms that were common at the international level. For example, in 1948 Glen T. Barton, Agricultural economist at the Bureau of Agricultural Economics in the U.S. Department of Agriculture, published an article in an early edition of the *Industrial and Labor Relations Review* that referred to 'labor' in phrases that associated it, variously, with an economic act/net wages ('labor income', 'real labor returns', to workers), an economic input ('labor costs' per unit of production), a variable net result/out-turn ('labour productivity', 'labor efficiency'), a relationship ('labor relations'), a variable input ('seasonal labor needs', 'labor requirements'), a collective/group ('the farm labor force) and a physical effortful input ('the labor of … e.g. 'hired workers').[33] Only some of these terms referred directly to the person who had once been called 'the agricultural labourer' – the old nineteenth-century term for an adult able-bodied farm worker. As 'labour' became separated from 'the labourer', and could be done by anyone – as described in that article – including 'lower quality' (yet evidently more productive) workers such as women,

[31] For example, N. Gangulee, *The Battle of the Land: An Account of the Food Production Campaign in Wartime Britain* (London, 1943), p. 9.
[32] Selly, 'National plan', p. 21.
[33] G. T. Barton, 'Increased productivity of the farm worker', *Industrial and Labor Relations*, 1/2 (1948), pp. 264–82.

the old, the young and prisoners of war, not just the usual able-bodied men or migrant labourers, so we see an emergence of more skill-specific job titles, or references to 'the farm worker', 'hired workers' or 'employees'. Labour/labor became abstract: something that had to be managed and used efficiently, in order to maintain productivity. Organization, getting the right labour to the right place at the right time, along with good management of labour relations, through for example the use of non-pay incentives, would bring benefits even without adult able-bodied labourers – this would reap rewards with post-war mechanization and the return of the higher-quality labourers.[34]

Out of this, cheap food became the *sine qua non* for farmers, and agriculture's ancillary industries, and thenceforward the idea of using the most efficient form of (mass) agricultural production dominated the advisory, grey literature circulated by training programmes, commercial manufacturers (selling equipment, feed, pesticides, herbicides and so on to agriculturalists), farm management consultancies, and government ministries in the form of specialist reports and booklets, HMSO leaflets, films and text books. From this point onwards until the 1980s, critics of these agricultural techniques and modern production methods, such as Ruth Harrison, author of *Animal Machines* (1964),[35] could be dismissed out of hand by the industry for failing to see the accepted need to feed the world, the view being taken that such criticism could 'undermine all efforts to solve the nutritional problems of the underdeveloped world'.[36] At the rhetorical level, the dominant language used to progress the project of modern agricultural productivity had been established at Hot Springs in 1943.

This resulted in the promotion of new agricultural methods, including increased specialization, larger units, the use of new technologies, (petro-chemically-derived) herbicides, pesticides and artificial fertilizers, and the reconceptualization and quantification of 'the farm' in the national landscape. Moreover, the labour of the labourer at the same time came to be thought of as being distributed across the managed spaces of the farm, quantified and planned for the purposes of food production, while labour planning determined the layout and design of the farm's built environment. This dovetailed with the interwar emergence of modernist rhetorics of efficiency, such as the example we see here in J. A. S. Watson's Foreword to Edwin Gunn's *Farm Buildings New and Adapted* (1935):

> Many British Farmers are faced to-day with the heavy task of re-equipping their farms with buildings suited to modern needs. Most of our existing farmsteads were planned in times when the labourer's wage was but a small

[34] Ibid., pp. 276–8, 281–2.

[35] The book was serialized and promoted before publication, e.g. *Observer*, 23 Feb. 1964, p. 2; *Guardian*, 28 Feb. 1964, p. 11; *Times*, 28 Feb. 1964, p. 17; *Observer*, 22 March 1964, p. 26; *Times*, 19 March 1964, p. 16.

[36] F. E. Bryan, 'A wish to go backward?', review of R. Harrison, *Animal Machines: The New Factory Farming Industry*, *Poultry International*, 3 (1964), p. 64.

> fraction of what it is to-day, and when, therefore, economy of labour was an object of no special importance . . . Excessive expenditure on repairs and maintenance is the one consequence, and a great waste of the time of highly paid men is the other.
>
> In many respects the farmer's needs, in the way of housing, have greatly increased . . . more, and larger, and more delicate machinery is being used; labour-saving must be regarded from a new point of view.[37]

In this foreword to a short advisory text on farm buildings, 'modernity' was equated with labour efficiency and thereby a reduction in wages. In Watson's view, despite the distinctions of skill seen in the pay grading of the Agricultural Wages Board and within training programmes, the built spaces of the farm were also being reshaped by a focus on (abstract) 'labour' requirements. There were other key factors, discussed in the editor's Preface by H. C. Long, such as a need to avoid waste in fuel and new standards for hygienic milk production, but in that editorial comment, 'reduction of labour' and more convenient working practices were listed as essential to creating 'profit where there may have been a loss'.[38] Finally, in the author's preface, Gunn explained that the book was aimed at those who considered farming 'as a business . . . [and] the farm considered as a factory for food-production'.[39] 'Efficiency', along with 'Stability', was one of the 'twin pillars' of agricultural policy according to the Agriculture Act 1947: after the war the rhetoric of labour efficiency became dominant throughout the industry, and was frequently given as a reason to 'modernize'.

The increased share of labour in the farm's accounts, and difficulties posed by 'labour shortages', had thus already begun to reshape understandings of 'the farm' in the interwar period. But, in 1935, the farm was still being described in terms of acreage. This changed after the Second World War. Information/data became so key to managing work/labour that the description of the size of the farm was recast by the amount of labour that was needed to farm it, rather than acreage.[40] This was calculated on the basis of a 'Standard Man Day' (SMD) reckoned as an eight-hour day, for 300 days of the year. The actual hours per operation were sector-specific (the details updated about three times per decade to address the emergence of new machinery, technologies and methods), and were used in the detailed calculations needed to produce individual farm plans. These were used by farmers, for example, in grant applications or to seek building permissions (e.g. to build a labourer's

[37] E. Gunn, *Farm Buildings New and Adapted: A Guide for Farmers, Land Agents and Architects* (Surbiton, 1935), p. 3. Gunn was had been superintending Architect at the Ministry of Agriculture and Fisheries.
[38] Ibid., p. 5.
[39] Ibid., p. 7.
[40] The 'farm sizes in the University Agricultural Economists data in the Annual Review White Paper for 1957 are denominated in acres, whereas by the 1964 White Paper the corresponding figures for 1962–3 on p. 33 are denominated in SMDs'. Thanks to Paul Brassley for this information.

cottage, it was necessary to show that an additional labourer was needed to work the farm, given the SMD calculation). In the form of the SMD, labour therefore became the determining factor in farm management and planning. A measure of work required to extract agricultural value from the land, by the 1960s (alongside labour efficiency studies and work-time equivalents) SMD gave the farm a new shape in the official record. The 'farm' was redefined – its space now delineated by time, management and work rather than geographic area, by capital in the form of labour input instead of capital as acreage rented/owned. When MAFF deleted about 47,000 holdings from its lists as being too small to take into account in 1968, the SMD was used to determine, at least in part, what might be classified as a farm.[41] How did this change in the definition of a 'farm' take place?

The SMD was first discussed in parliament during the Minister for Agriculture John Hare's presentation of the Agriculture (Small Farmers) Bill during its second reading in the Commons on 10 November 1958. In the preceding White Paper, the use of a SMD was proposed – with minimum (twenty) and maximum (one hundred) acreages – as a way of establishing the size of a 'small farm'. This is how it was unpacked by Hare, who argued that where 'economic', small farmers were 'essential to the nation, for a nation cannot truly prosper unless it has its roots firmly in the land'.[42] Here, following on the heels of the Agriculture Act 1957, which had made provision for grants to farmers to improve their agricultural land, the old idea of 'the land' was still being represented as the enduring source of national stability and economic success. Or, as President of the Royal Statistical Society and long-time writer on agriculture, Sir R. Henry Rew had put it before the First World War,

> The Land remains, [the cultivation of the soil goes on]… beyond the interests of individuals… is the interest of the Land itself… [T]he land must be fairly dealt by, and the maintenance of its fertility should, in the national interest, be the paramount consideration.[43]

The fact that support for the White Paper and the Bill seems to have run across party lines suggests that was still the established perception of 'the land' in Britain in the 1950s. Yet, it also introduced a new measurement that turned away from land in the form of acreage, because 'land' could vary so much in quality and productive potential. The example given was '20 acres on rich land in the Fens may be worth ten times that acreage

[41] Grigg notes that in 1968 the Ministry of Agriculture determined that only those holdings of over 4 hectares that employed workers and required 26 SMDs or more annually could be returned as 'full-time' and therefore as statistically significant. D. Grigg, 'Farm size in England and Wales, from early Victorian times to the present', *Agricultural History Review*, 35/2 (1987), pp. 179–89, at p. 182.

[42] 'Agriculture (Small Farmers) Bill', Parliament 1959–59, *Hansard*, 5th s., vol. 595, 10 Nov 1958, cols 37–152, <https://parlipapers.proquest.com/parlipapers/docview/t71.d76.cds5cv0595p0-0001?accountid=13651> [accessed 23 Nov. 2018].

[43] H. Rew, *An Agricultural Faggot: A Collection of Papers on Agricultural Subjects* (Westminster, 1913), p. v.

on poor hill land'. Well-versed in agricultural practice, Hare recognized that the SMD would be novel to other policymakers, and referred at least one 'urban' MP (Mr Harold Lever, for Manchester, Cheetham) to look at the detail of the White Paper when questioned. But, Hare suggested, it was well established in farm management practice, was 'fair', and was 'nothing like as complicated as it looks at first sight'. To be eligible, the farmer had to prove they had reached 'standard labour requirements of at least 275 standard man-days'. This was, then, an instance in which the quantitative farm management practices established before and during the Second World War were adopted into policy. Farm management practice and policy came together to create a dominant set of languages focused on the concept of 'modernity', itself a new iteration of agricultural 'improvement', grounded in agricultural discourse (educational, professional, published and expert), with the aim of increasing farm incomes. The incomes were to be 'net', no one was to innovate technologically or aim to increase output regardless of the costs incurred and achieved through improved farm management and the adoption of new techniques and of accounting and planning. It had been developed with the NFU, the Advisory Services, country agricultural executive committees, County Landowners Association and the 'Agricultural Workers' Unions'.[44]

II

Paul Brassley et al. have looked at the rise of accounting and data associated with farm management, but little has so far been said about what this meant when applied to farm labour as input or for the agricultural labourer.[45] Johann Custodis has discussed how, during and immediately after the Second World War, the labour available via prisoners of war was calculated at 'man equivalents'. MAFF considered a productivity of 75 per cent per civilian worker a 'fair average', and the Ministry of Agriculture assumed that the most efficient civilian male labourer was 100 per cent, i.e. one man-equivalent, and worked on the assumption that, for example, a million acres of cereal would need 30,000 man equivalents of labour to farm. Though 'arbitrary', Custodis argued, 'MAF's manpower division estimated relative productivities in term of "man-equivalents" which were calculated to forecast rural labour requirements.'[46] As Gill Clarke has pointed out, there was a similar, if problematic, attempt to evaluate the contribution of the Women's Land Army by agricultural economist H. T. Williams after the Second World

[44] 'Agriculture (Small Farmers) Bill', Parliament 1959–59, Hansard, 5th s., vol. 595, 10 Nov. 1958, cols 37–152, at cols 38–9, 41, 44, 45.

[45] P. Brassley, D. Harvey, M. Lobley and M. Winter, 'Accounting for agriculture: the origins of the Farm Management Survey', *Agricultural History Review*, 61/1 (2013), pp. 135–53.

[46] J. Custodis, 'Employing the enemy: the contribution of German and Italian prisoners of war to British agriculture during and after the Second World War', *Agricultural History Review*, 60/2 (2012), pp. 243–625, at pp. 256, 261.

War. His estimates were based, due to pay differentials, on the idea that a woman, either in or outside of the Land Army, contributed two-thirds of the work of a man, though an earlier assessment by J. H. Smith (in 1941), assumed that women were often capable of a much higher average work output than that. For example, where the output of a man was assumed to be 100 per cent, Smith claimed a woman might work at 95 per cent output in setting potatoes, or 91 per cent in milking.[47] Neither Custodis nor Clarke assessed the gendered framing of these estimates – women had historically been paid at a lower rate than men in agriculture in ways that did not necessarily reflect their physical capacity or skill – but did reflect the gender norms of the period. However, what is striking in each case is the wartime attempt to standardize and to quantify norms of labour input in the interest of efficiency.

The idea of a (capitalized, because specified) 'Standard' – for example, 'Standard Price' – can be seen in use in policy before the SMD.[48] But, as Hare stated of the 1957 White Paper, the idea of measuring a farm by the amount of effort required to farm it – a labour day for a full-time equivalent – was something that originated within the worlds of agricultural economics and farm management, which were themselves in the process of formation as a discipline and sub-discipline before 1939. This history was captured briefly, but powerfully and almost with a tone of regret, in 1963, in the first chapter of volume IV of A. N. Duckham's *Farming* (a multi-volume standard with global reach), edited by J. Pearce, a lecturer in Agriculture at the University of Reading. In it, Arthur Jones made a case for seeing the farm as a business to be managed on the basis that there had been a step change after the depression of the 1920s and 1930s. Before then, he wrote, 'the good farmer, that is the man who did his crops well, was careful in his cultivations and had good stock sense, was synonymous with the successful farmer'. Yet, he suggested, in the interwar decades many 'first-class men [who had] farmed their land well…[and] reared premium stock' went bankrupt. In his words, that period 'killed irrevocably and finally any hope of farming successfully on the basis of good husbandry alone' while farming as 'an entrepreneur—a businessman', addressing competition and reducing costs, ignoring custom and tradition, became key.[49]

This statement sits oddly against the approach of 'improving' progressive farmers before the 1920s. As Eve Hostettler identified over forty years ago, if we assess the changing images in Henry Stephens's *The Book of the Farm* (1844) for example, the focus was on the most efficient

[47] G. Clarke, 'The women's land army and its recruits, 1938–50', in B. Short, C. Watkins and J. Martin (eds), *The Front Line of Freedom: British Farming in the Second World War*, *The Agricultural History Review Supplement Series 4* (Exeter, 2006), pp. 101–16.
[48] Annual Review and Fixing of Farm Prices, 1954 (Farm Prices), Agriculture Act, 1947. Annual review and determination of guarantees, 1954, vol. XXVI.299 Cmd. 9104.
[49] A. Jones, 'Management in modern farming', in J. Pearce (Ed.), *Farming*, IV (London, 1963), pp. 3–9, at pp. 3–4.

and cost-effective deployment of labour, albeit manual labour.[50] 'Good farming', as equated to James Caird's 'High Farming', which farmers could see as successful so long as output prices were high, may have involved excessively and unprofitably high levels of investment during the so-called 'Golden Age' of British agriculture,[51] but it was also framed by book-keeping and new modes of gathering and analysing data that were meant to produce higher yields and improve output. What we therefore see post-1945, despite the changed approach to state intervention by policy-makers, had much more continuity from the point of view of business-minded farmers than commentators and apologists for post-war agricultural economics and farm management tended to state. However, by the point that *Farming* was published, the stated aim was certainly to look for net profit, and to make gains by assessing 'efficiency indicators' such as:

> net output per £100 labour and power . . . livestock output per £100 feeding-stuffs; milk sales per cow and per acre; . . . yields of eggs per bird; number of pigs weaned per sow and so forth. Methods and techniques of measuring efficiency are part and parcel of farm management and these can often be supplemented by more detailed attention to what is termed 'work study' in relation to specific labour and machinery problems of individual farm enterprises.[52]

By the mid-1960s, work-time studies were therefore treated in UK agricultural reference texts such as Claude Culpin's *Profitable Farm Mechanisation* (1968) as part-and-parcel of normal direct farm management practices at the level of the individual farm or indirectly via policy-making and advice as framed by agricultural economics. Frederick Taylor's scientific philosophy of management, as we see here, still being applied in the UK as well as the United States in the 1950s and 1960s, was considered by the 1980s to stifle innovation from within based on experience.[53] But, in this case, a Taylorist approach, if unnamed in *Farming*, was clearly in play. The work of human labourers, power (of machinery), feed and stock were all equally abstracted as inputs, across a standard-hour, to be measured against equally abstract outputs, on each

[50] E. Hostettler, 'Gourlay Steell and the sexual division of labour', *History Workshop Journal*, 4/1 (1977), pp. 95–100.

[51] On the input/output debate, see classic cases by A. E. Musson, 'The Great Depression in Britain, 1873–96: a reappraisal', *Journal of Economic History*, 19/2 (1959), pp. 199–228; E. L. Jones, 'The changing basis of English agricultural prosperity, 1853–73', *Agricultural History Review*, 10/2 (1962), pp. 102–19; P. J. Perry, *British Farming in the Great Depression, 1870–1914* (London, 1974); R. Perren, *Agriculture in Depression 1870–1940*, (Cambridge, 1995). The debate was summarized by E. J. T. Collins in 1995 in one the Economic History Society's REFRESH bulletins, <http://www.ehs.org.uk/dotAsset/10ebf43b-ad22-4b6e-afc6-24f5f3d24e22.pdf> [accessed 6 Dec. 2018].

[52] Jones, 'Management in modern farming', p. 9.

[53] We can see this with reference to the change in management practice by US agricultural equipment manufacturer John Deere. See G. B. Sprinkle, and M. G. Williamson, 'The evolution from Taylorism to employee gainsharing: a case study examining John Deere's continuous improvement pay plan', *Issues in Accounting Education*, 19/4 (2004), pp. 487–503, at p. 489.

farm (termed, in the abstract, a 'unit'). Yet, this was actually very difficult to calculate as farms varied by type, and the underlying landscape could play as a large a part in labour requirements as the choice of system, degree of mechanization and so on. Any and all estimates had to be based on the collection and analysis of large datasets, and advice changed as practice changed.

The most widely used reference text to manage this was John Nix's *Farm Management Pocket Book*, which went through successive editions from 1966, but the model was referred to widely before this in standard agricultural reference texts. For example, in the chapter on sheep production in *Farming* (1963) we have Table 62:

Typical Labour Requirements for Grassland Breeding Flocks of up to 150 Ewes (includes labour on rams and unweaned lambs)

Per Flock per Day	man-hours
Routine inspections	½
Feeding	½
Per Ewe per Year	
Lambing	1 ¼
Shearing	1/3
Dipping	¼
All other work	½[54]

The actual hours would have varied for some processes (e.g. shearing) depending on the number of sheep kept, but other tasks (regular inspection of the animals, feeding bulk supplements) had to be completed regardless of the numbers. Using the table, it would be possible to estimate the number of man hours needed per ewe in a flock of 50 sheep (8 hours) as opposed to 150 ewes (4 hours). But, as the table title indicates, this was for a lowland breeding flock – the hours could be quite different for a hill farm where the stocking density was normally far lower, with consequently higher labour requirements. On upland farms the situation was different again, as the sheep often grazed the worst land, to get some value from it, yet supplement feeding was less commonplace. But, as most hill farms and upland farms relied on family labour, this was not quantified in either case. The labour requirements for sheep also varied markedly by season, because lambing and shearing were concentrated into specific times of the year. For the lowland breeding example used in *Farming* this was tabulated from thirty-five farms in Yorkshire and represented as a histogram that revealed the different labour needed month by month.[55]

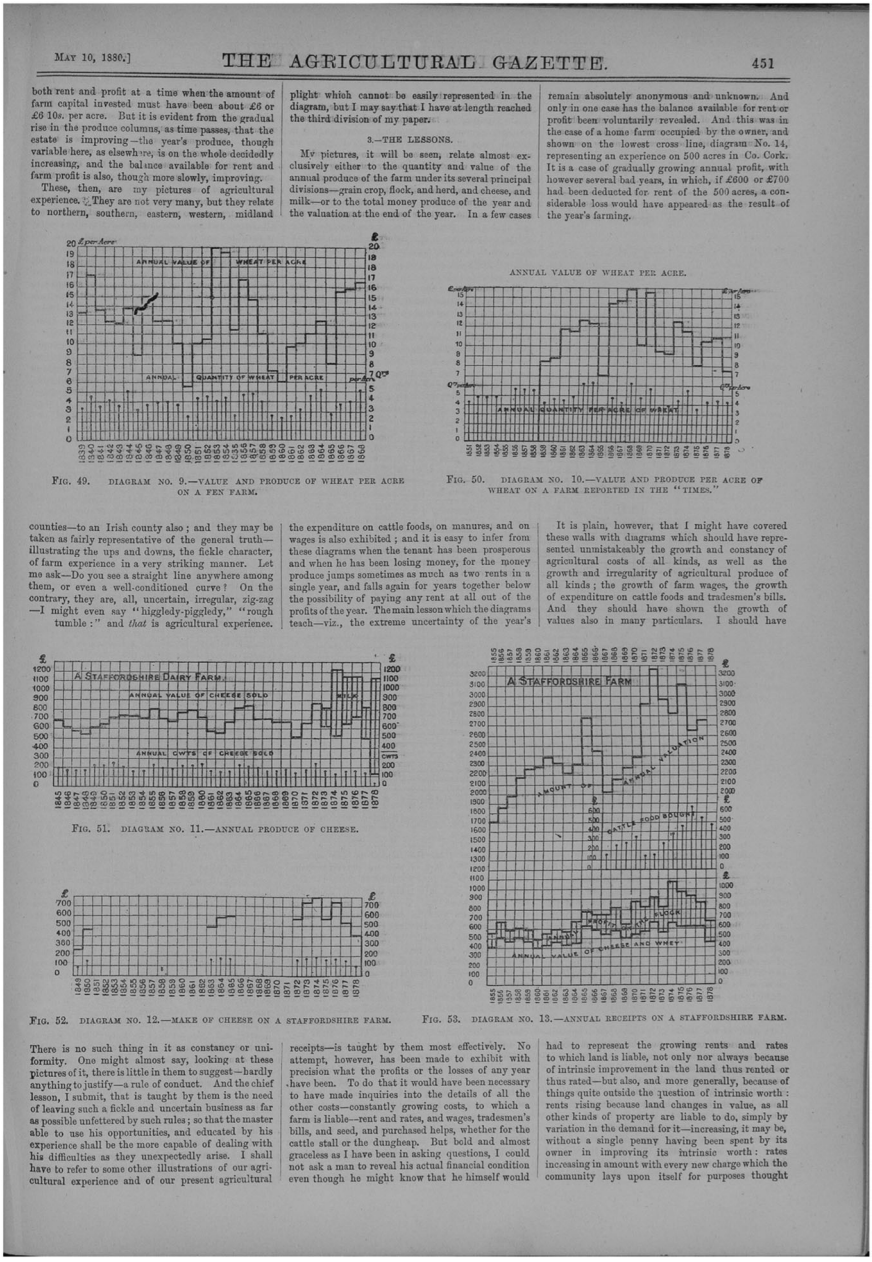
Once adopted into the official framework that farmers relied on to bid for grants and other state funds, pocketbooks and other easy-access versions of these formulae therefore became necessary for farmers, estate agents and agricultural advisers to access the different requirements for different sectors or specialism, and had to be updated regularly to support

[54] I. G. Simpson, 'Sheep production', in Pearce (ed.), *Farming* (1963), vol. 4, p. 344.
[55] Ibid., pp. 336–43.

their calculations. Like other datasets such as the decennial census and agricultural census, they have the potential to be an invaluable record for agricultural historians looking for the work done in and changes within British farming after 1945, and are as yet a largely untapped source.[56] But, despite the detailed tabulation, they will, much like the decennial census and the agricultural census, of necessity have smoothed out many variables. What they are evidence of is a continuity in the practice of improvement, as it was termed in the nineteenth century, through the generation and analysis of ever more complex sets of data. If we consider J. Chalmers Morton, 'Agricultural Experience: The Lesson of Forty Years' for example in *The Agricultural Gazette* (1880), we see not only many data points interpreted discursively in order to assess the success or otherwise of British agriculture, but also that that analysis was communicated to 'improving' progressive farmers through data visualization for the purposes of the lecture and then reprinted in the article.[57]

Thus we can understand British agricultural practice as a developing landscape of data points with continuity between the nineteenth and twentieth centuries. However, in the twentieth century it also came to include human labour quantified by hour/proportion thereof, not just crop/head of livestock/soil type. And it was one where permanent labour, as opposed to casual labour, was increasingly treated as a fixed cost in farm management planning sheets and later the computer programs that were used to support these calculations. In the annual reports following the Agriculture Act, the state reported on agricultural production by using 'whole-time man-equivalents'. These were based on 'the total number of full-time, part-time and casual workers, salaried managers, farmers, partners and directors returned in the annual June Censuses, weighted by the estimated average annual hours worked', in other words, a dataset based on the combination of employee, self-employed and employer across the range of British farms: arable, mixed, livestock, intensive, extensive, upland, lowland.[58] This was assessed against agricultural prices, and it was assumed that improvements in production came from 'technical improvements in, for example, plant and animal breeding, changes in the organisation of farming, movements in the numbers of persons engaged in agriculture and short-term fluctuations…[e.g. due to] the weather'.[59] These were, in turn, assumed to be linked to falling 'labour input', and to a rising index of production. For example, Table 24, in the

[56] Email conversation with Paul Brassley, 15 Nov. 2018.
[57] J. C. Morton, 'Agricultural Experience: the lesson of forty years', *The Agricultural Gazette and Illustrated Journal for Landowners and Tennant Farmers*, 10 May 1880, pp. 446–54, at p. 452. What we might term scientific lectures were often illustrated via (glass) slides projected by 'magic lanterns'. See <http://www.lib.usf.edu/special-collections/arts/about-lantern-slides/> [accessed 5 Dec. 2017].
[58] Agriculture Act 1947, Annual review of Agriculture 1987, presented to Parliament by the Secretary of State for Northern Ireland, the Secretary of State for Scotland, the Secretary of State for Wales and the Minister of Agriculture, Fisheries and Food, Jan. 1978, Cm 67, p. 4, <https://parlipapers.proquest.com/parlipapers/docview/t70.d75.1986-082527?accountid=13651> [accessed 6 Sept. 2018].
[59] Ibid.



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both rent and profit at a time when the amount of farm capital invested must have been about £6 or £9 10s. per acre. But it is evident from the gradual rise in the produce columns, as time passes, that the estate is improving—the year's produce, though variable here, as elsewhere, is on the whole decidedly increasing, and the balance available for rent and farm profit is also, though more slowly, improving.

These, then, are my pictures of agricultural experience. They are not very many, but they relate to northern, southern, eastern, western, midland

plight which cannot be easily represented in the diagram, but I may say that I have at length reached the third division of my paper.

3.—THE LESSONS.

My pictures, it will be seen, relate almost exclusively either to the quantity and value of the annual produce of the farm under its several principal divisions—grain crop, flock, and herd, and cheese, and milk—or to the total money produce of the year and the valuation at the end of the year. In a few cases

remain absolutely anonymous and unknown. And only in one case has the balance available for rent or profit been voluntarily revealed. And this was in the case of a home farm occupied by the owner, and shown on the lowest cross line, diagram No. 14, representing an experience on 500 acres in Co. Cork. It is a case of gradually growing annual profit, with however several bad years, in which, if £600 or £700 had been deducted for rent of the 500 acres, a considerable loss would have appeared as the result of the year's farming.

FIG. 49. DIAGRAM NO. 9.—VALUE AND PRODUCE OF WHEAT PER ACRE ON A FEN FARM.

FIG. 50. DIAGRAM NO. 10.—VALUE AND PRODUCE PER ACRE OF WHEAT ON A FARM REPORTED IN THE "TIMES."

counties—to an Irish county also; and they may be taken as fairly representative of the general truth—illustrating the ups and downs, the fickle character, of farm experience in a very striking manner. Let me ask—Do you see a straight line anywhere among them, or even a well-conditioned curve? On the contrary, they are, all, uncertain, irregular, zig-zag—I might even say "higgledy-piggledy," "rough tumble:" and *that* is agricultural experience.

the expenditure on cattle foods, on manures, and on wages is also exhibited; and it is easy to infer from these diagrams when the tenant has been prosperous and when he has been losing money, for the money produce jumps sometimes as much as two rents in a single year, and falls again for years together below the possibility of paying any rent at all out of the profits of the year. The main lesson which the diagrams teach—viz., the extreme uncertainty of the year's

It is plain, however, that I might have covered these walls with diagrams which should have represented unmistakeably the growth and constancy of agricultural costs of all kinds, as well as the growth and irregularity of agricultural produce of all kinds; the growth of farm wages, the growth of expenditure on cattle foods and tradesmen's bills. And they should have shown the growth of values also in many particulars. I should have

FIG. 51. DIAGRAM NO. 11.—ANNUAL PRODUCE OF CHEESE.

FIG. 52. DIAGRAM NO. 12.—MAKE OF CHEESE ON A STAFFORDSHIRE FARM.

FIG. 53. DIAGRAM NO. 13.—ANNUAL RECEIPTS ON A STAFFORDSHIRE FARM.

There is no such thing in it as constancy or uniformity. One might almost say, looking at these pictures of it, there is little in them to suggest—hardly anything to justify—a rule of conduct. And the chief lesson, I submit, that is taught by them is the need of leaving such a fickle and uncertain business as far as possible unfettered by such rules; so that the master able to use his opportunities, and educated by his experience shall be the more capable of dealing with his difficulties as they unexpectedly arise. I shall have to refer to some other illustrations of our agricultural experience and of our present agricultural

receipts—is taught by them most effectively. No attempt, however, has been made to exhibit with precision what the profits or the losses of any year have been. To do that it would have been necessary to have made inquiries into the details of all the other costs—constantly growing costs, to which a farm is liable—rent and rates, and wages, tradesmen's bills, and seed, and purchased helps, whether for the cattle stall or the dungheap. But bold and almost graceless as I have been in asking questions, I could not ask a man to reveal his actual financial condition even though he might know that he himself would

had to represent the growing rents and rates to which land is liable, not only nor always because of intrinsic improvement in the land thus rented or thus rated—but also, and more generally, because of things quite outside the question of intrinsic worth: rents rising because land changes in value, as all other kinds of property are liable to do, simply by variation in the demand for it—increasing, it may be, without a single penny having been spent by its owner in improving its intrinsic worth: rates increasing in amount with every new charge which the community lays upon itself for purposes thought

Figure 1 J. Chalmers Morton, 'Agricultural experience: the lesson of forty years', *The Agricultural Gazette* (1880), p. 451, figs. 49–53: diagrams present data in the form of shaded bar graphs. Courtesy of The Museum of English Rural Life, University of Reading.

1987 report, showed a trend of rising productivity in gross agricultural production from 1973, with a peak in 1984.[60] So, these reports were based on a lot of estimation, to generate 'equivalence', in order to report back on 'productivity': a framing lens that remained focused on agriculture, read as a national industry, for forty years after the Second World War. But, although the assumption was that methodological and technical changes resulted in less 'labour' being used, 'labour input' had become homogenized and separated from skill, expertise and individuals, even from different categories of people on the farm. This was, then, a highly abstracted form of 'labour' conceived purely and explicitly as time, no longer attached to either a specific task or person. DEFRA's 2017 report showed how this language and understanding of work on farms has continued. It stated that labour productivity had increased steadily since 1973, when Britain joined the EEC, arguing that 'labour is the key input driving productivity gains'. This rested on falling numbers. 'Labour volumes', the 2017 DEFRA report suggested, 'are now approximately half of what they were in 1973.'[61] In this regard, what was being sought in 1947 has been achieved, even with the significant policy shifts that took place with reference to agriculture in the 1970 and 1980s, especially the shift to countryside conservation as seen in acts such as the Agriculture Improvement Scheme of 1985, which marked a move away from the post-1945 policy of cheap production and surplus.[62] But, in the post-Second World War specialist press through to the 1980s at least, the landscape of labour still contained two components. Labour was represented firstly as work input efficiently into the farm– as delineated by data and metrics, discussions of its standardization and management underpinned by the authority of a widening cadre of agricultural economists. But also, as we shall see, labour could also be represented qualitatively, as skilled. Within this modernizing/modern landscape we find a labourer who embodied, physically, *his* experience, knowledge, competence and craft, which persisted as distinct from unskilled casual labour, and was created through work with livestock.

III

By the 1950s, the post-war focus on labour efficiency in production had become familiar enough to use as an advertising trope. An advert for the rat destruction 'Ratin Service' in *Farmer and Stockbreeder* for example, carried an image of a rat poring over a farm's account books, and the strapline 'strike him off your payroll'. In the body of the text, grounded in the discourse of accounting, the company stressed its own 'efficiency',

[60] Ibid., p. 36.
[61] DEFRA, 'Total Factor Productivity of the UK Agriculture Industry, First estimate for 2017', 8 May 2018, p. 6, <https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/704380/agriproductivity_statsnotice_03may2018.pdf> [accessed 7 Sept. 2018].
[62] For example, see Earl Fortescue, and Baroness Trumpington, House of Lords, *Hansard*, 29 Nov. 1988, vol. 502, cols 296–6.

and that rats could cause 'heavy losses'.[63] This evidences the pervasiveness of the idea, but also reminds us that specialist ancillary services increasingly took up roles and tasks that had been part of the skill set associated with farming. Under the rhetoric of scientific expertise, 'the latest scientific methods' were pitched against the rats' 'natural cunning'. An off-farm service provider like the Ratin Company sought to take on aspects of abstracted farm 'labour input' and redistribute them to its own workforce, which was rarely, if ever, accounted for in the national data.[64]

Yet, as the practice of describing farms in terms of their abstract labour needs took hold, tensions also emerged between ideas of labour efficiency and understandings of on-farm skill. These tensions remained in place long after the Second World War as small farms sought to remain commercially viable, as debate continued about best practice, and as old methods persisted even on large enterprises. Twenty years later *Farmer and Stockbreeder* reported on Mr Paul Francis, the chair of the NFU milk committee speaking at a conference in Askham Bryan, Yorkshire, about the potential future for smaller, family-run dairy enterprises. He ruled out 'economic milk production from any farm with fewer than 50 acres or 300 standard man days available'.[65] Though milk would still be produced on smaller farms, he thought, anything less than that should not be expected to continue on anything other than a part-time basis or be supported by the NFU. He encouraged 'two-man enterprises for milk', but if 'this meant the occupier and his wife', it would not remain 'attractive' in 'an increasingly leisured and affluent society', because of the 'unmitigated drudgery of milking 365 days a year'. Given that the Milk Marketing Board was heavily loaded with milk producers, the politics of this were complex in terms of the profits to be made from a dairy farm. But, even the labour of cattle could be described in terms of time by this point: the language of production concerning 'Day' by 1966 had moved on to include 'cow day', in order to describe the most and least productive fields within a single farm.[66] However, another speaker, Mr Walter Smith of the NAAS, put more emphasis on the cows than their human managers, by suggesting that rather than buying in more cattle, farms ought to increase the volume of milk produced per cow by 'growing better grass, conserving better forage, by better selection of breeding stock and, above all, by better stockmanship'.[67] The division in approach was increased labour ('drudgery' when in excess) versus increased skill (adaptation of the land, of the cattle and by the stockman). Here the farm conceived in abstract terms of SMD was set in opposition to the farm conceived in prestigious terms of grass, forage, animal and crafted stockmanship.

[63] Ratin Service, *Farmer and Stockbreeder*, 10–11 June 1952, p. 32.
[64] A. M. Burrell et al., *Statistical Handbook of United Kingdom Agriculture* (London, 1984), p. 2.
[65] The NFU had a high-level of influence as the sole negotiator on behalf of farmers with government over farm prices in connection to produce such as milk.
[66] Anon, 'Cost of a "cow day"', *Farm Business*, 5/2 (1965), pp. 14–20.
[67] Anon, 'Part-time dairymen', *Farmer & Stockbreeder*, 13 Jan. 1970, p. 31.

At the same time, *Agriculture* (the journal published by MAFF) posited that the idea of 'work study' had begun as early as 1240, and was writ large in Henry Stephens' *Book of the Farm* (1844) – in which it was stated that large farms must 'be arranged and equipped with more regard to labour saving' – to give the practice greater legitimacy.[68] This suggests hesitation by farmers when it came to adopting work-time assessments, and in the article's suggestion that it could include the opportunity to 'improve working conditions', that hesitation seems to have been connected to its impact on labourer/farmer-labour relations. Though naturalized as a long-established agricultural practice in this article's introduction, the emphasis was clearly on the Ministry's ongoing efforts 'to conserve labour . . . and widen profit margins' through information, education and training. Indeed, the article goes on to describe in detail a practical example of a work-study analysis that took place in 1970 in Durham as part of a training programme in work-study theory. Observation by Ministry staff members from the Northern England advisory service, which 'included officers who specialised in lands and buildings, general agriculture and dairying', revealed that the cattle in a byre were being over-fed, compared to the farmer's testimony, and were being milked for too long. Their observations included a breakdown of labour that went to 'man minutes spent' on feeding the cattle and assessment of the composition of the feed and working of the milking equipment. The result of the exercise was to reduce the weight of feed handled by switching to 'dried sugar beet pulp and bean meal' in place of 'brewers' grains, potatoes and swedes', as approved off-site by a 'nutritional chemist at the Regional Office'. It also aimed to reduce the hours spent on feeding, and to adjust use of the milking equipment. In all, 'the total time saved' was estimated to be 'over two hours per day, thus enabling the cowman either to start later in the morning or to be employed on other farm work'. A second assessment on the farm looked at feeding and bedding housed young stock and dairy heifers. This example noted excess walking for the assistant cowman, poor lighting and watering due to the position of switches and taps.[69]

Despite the stress on the possibility that the employee might rest, the opportunity to redeploy their labour was therefore flagged up alongside the implication that they had been overfeeding the cattle and had failed to monitor and set up the milking equipment properly. The article made no explicit reference to the cowman's abilities or skill, or to the consequences of questioning these, or to the work time of the cattle. It focused more on human labour in the abstract, than the labourer, and similarly addressed the cattle in terms of their abstract needs rather than behaviour or response, and looked off-farm to the Ministry staff and Regional Office for expertise. Yet, the implication is that the cowman

[68] B. McLaren and J. W. Stevenson, 'Work study in agriculture', *Agriculture*, vol. 70, Jan. 1972–Dec. 1972, pp. 29–30.
[69] Ibid., p. 30.

ought to know how much he and his assistant are feeding the cattle and ought to know how to adjust the milking clusters, based on his presumed skill set. The farmer had determined what the cattle were being fed, and was, by implication, criticized again in the second study for the selection of feeds given to the young stock and heifers. They were also asked in the second study to provide a water bowl for the stock, spend £150 on extending the livestock shed to save the assistant cowman working without cover and move the light switches to prevent walking outside in the dark. But whereas part-time, seasonal and casual contract labour was treated abstractly, via efficiency and the SMD, with their work seemingly de-skilled via their entanglement with petrochemical landscapes shaped by fertilizers, pesticides, herbicides and machines, those employed to work with livestock – whose jobs were just as entangled with technology on a day-to-day basis – maintained an aura of skill which was embodied and performed in their daily relationships with their stock. Their entanglements with animals gave them a gloss and better incomes. Just as in the nineteenth century, their status depended on the animal's status.

What do we know about labourers who worked with livestock post-war? According to a secondary analysis of the comparative data accessed from official sources (published in 1984), 'whole-time', 'adult male', hired agricultural labourers only made up a fifth of 'man equivalents' in agriculture by the 1980s. Over half of those working in farming were in fact 'self-employed farmers or their spouses'. This reveals the sharp divisions that existed within the abstract reports of 'labour input' based on aggregated 'whole-time man-equivalents'. But, there were also differences within the category of full-time male agricultural labourer, as analysts were aware. There were fewer stockmen than other farmworkers, for example, and of those 68 per cent of dairymen were provided with a house, compared to 47 per cent of 'whole-time workers'. Housing was provided due to a lack of council properties. The established phenomenon of a lack of private rental housing stock in rural areas, exacerbated by the sale of suitable housing to those unconnected with farming, had recently been legislated on at that time with the Rent Agriculture Act, 1976. However, in cash terms alone, for adult male farm workers, dairy cowmen (at £126.39) were paid more per week than other stock men (£105.44), and more than foremen (£125.83), tractor drivers (£106.79) and general farm workers (£95.30). In terms of income, by 1982, it had been established that 38 per cent of 'adult male agricultural workers' were below the 'poverty line' as then designated.[70] The higher level of housing provision to dairymen, and their increased pay, was linked to their superior status. That status was linked in turn to their relationship with animals, and this was itself expressed spatially as well as in cash terms. The higher level of

[70] A. M. Burrell et al., *Statistical Handbook of United Kingdom Agriculture* (Basingstoke, 1984), pp. 41–9. She also noted that stockmen, e.g. dairy cow men in the 1970s–1980s, tended to be younger on average than other specialists such as tractor drivers.

housing provision derived from the long-established necessity that they be on-farm to attend the animals they had in their charge. Responsibility for livestock demanded proximity to livestock.

Stockmen were among the best-paid farm employees because their expertise in managing their stock was valued highly. That expertise was based increasingly, post-1945, on a formal agricultural education, and on experience (i.e. learned from the non-human animals with which they worked), and was important to the success of a high-investment end of the industry. Farmers might use financial tools such as loans, advances and franchising to purchase livestock, or continue investing in stock already owned, and even take out insurance policies to protect them from diseases such as foot-and-mouth.[71] Consequently, it was essential that they employ reliable and knowledgeable people.

However, the stockmen were also expected to know the boundaries of their expertise. Though there was plenty of advice about animal health, for example, they nonetheless had to decide when to call in the vet and thereby transfer authority over their charges to a costly, off-farm expert. By the 1960s and 1970s, veterinary expertise was as a result mapped out clearly in various forms of advisory literature from standard textbooks such as *Fream's Elements of Agriculture* (in its fourteenth edition by 1962), to leaflets, and these tell us how the relationship between non-human animal, farmer, stockman and vet worked day to day.[72] For example, in the leaflet 'Pigmanship' published by *Farmer and Stockbreeder*, *c*.1970, a difficulty such as 'failure to show signs of oestrus' was labelled simply as 'a veterinary problem'. In other words, if no disease is named, the problem was reduced to the need for a vet. Though in this case some 'simple changes' were described, e.g. 'change of pen or pen mates (if can be achieved without too much fighting)' or 'may give the desired results'. By using the term *may*, there was the suggestion that this was being done with the expectation that the vet would still probably be needed, as well as the understanding that the changes could be too difficult to manage because of the animals' response to intervention.[73] Indeed, a large part of the skill captured in this leaflet was the skill associated with managing the relationship between the human and non-human animal: the need to look at the world from the stock's point of view, and the responses of livestock to agricultural practice. Towards the end of the booklet, for instance, there was an illustration setting out how to rope a boar to trim its tusks, with the instruction that they should be 'taken off level with the gum every 18 months or so'. Under the illustration ran the following injunction:

[71] Farmer and Stockbreeder, *Farm Finance: A Farmer and Stockbreeder Pocket Guide* (London, 1969), pp. 10, 21.
[72] D. H. Robinson (ed.), *Fream's Elements of Agriculture* (London, 1962), p. 695.
[73] Farmer and Stockbreeder, *Pigmanship*, *A Farmer and Stockbreeder Pocket Guide* (n.p., *c*. 1969), p. 8.

> Handle with confidence. Move steadily and firmly. Use a board – not a stick. Try to avoid going from one boar pen to another – the smell is carried and often incites boar to attack.
>
> All boars are potentially dangerous – care should always be taken.[74]

Other than the technical instructions, e.g. 'use a board', this advice focuses on the relationship between human and non-human subject, as expressed in the demeanour of the human handler in their approach to the boar (human confidence, steady and firm movement, carefulness) and the potential response of the boar based on the stockman's understanding of the boar's sensorium. It was advisable to follow good advice, and to pay attention to stock, as a labourer working with animals could potentially be killed if they made an error. In highlighting the very high number of injuries and deaths on farms, as part of a wider safety campaign by the National Union of Agricultural and Allied Workers (NUAAW), the *Land Worker* magazine for instance noted that there had been three 'fatal accidents' in 1970 and seven in 1971 caused by animals.[75]

Similarly, the *Farmer and Stockbreeder* booklet on 'Cowmanship' opened with advice on calving, and the recommendation under the heading 'Assisting':

> Don't be over-eager to assist in a calving – the cow can generally manage best on her own. But if assistance is needed and the animal is standing . . . [advice about roping and pulling the calf is listed]. If the animal is down, this is a case for the vet.[76]

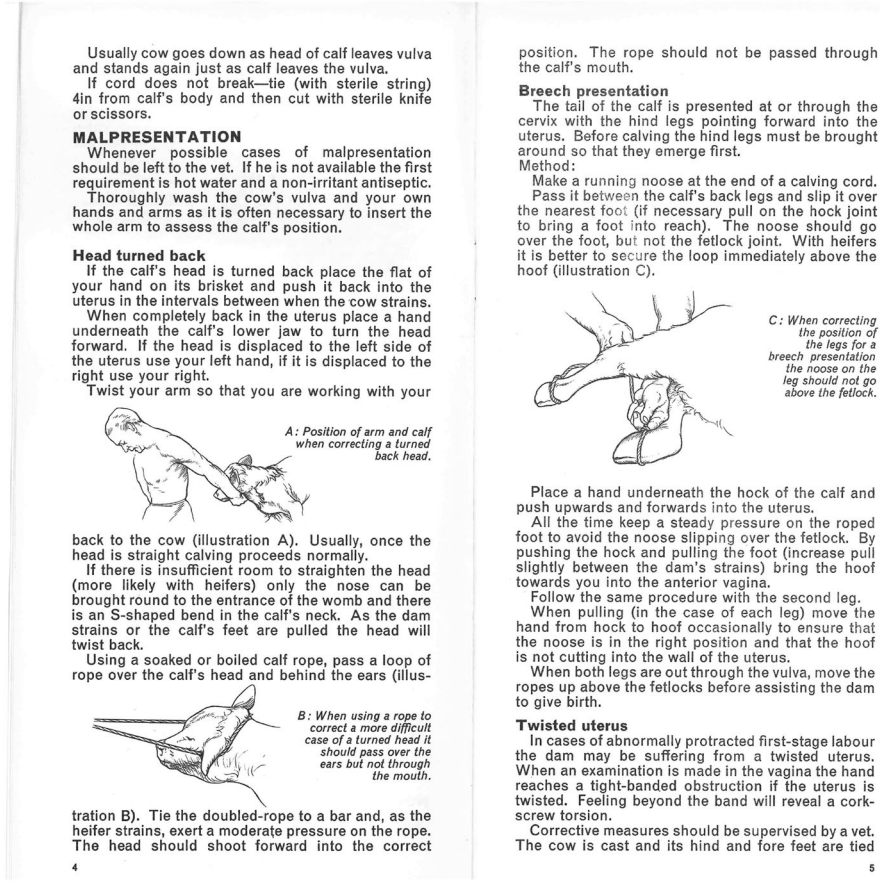
There was thus a demarcation of expertise that flows from cow to stockman to vet. The vet was also recommended where the calf was not presenting correctly, but detailed advice was set out with illustrations for the cowman if no vet could be found. Those illustrations included one of a half-stripped man reaching back to hold the head and correct the position of a calf in the uterus: the cow's body was not illustrated at all. As an image of heroic and vigorous masculine endeavour, the cowman was depicted as the embodiment of physical aptitude. The 'able-bodied man' was thus still visible, unlike the cow, even celebrated via sharp and distinctly modernist lines in the twentieth century.

The booklets, full of detail about nutrition, health, and the utility and monetary value of the stock, also captured a form of knowledge (knowing the animal) that was still thought valuable, even in the late 1960s and

[74] Ibid., p. 22.

[75] This was out of a total of 105 fatal farm accidents in 1970 and 118 in 1971. Anon., 'Tractor deaths . . . a censure to employers', *Land Worker* (Spring, 1972), Table 'Fatal Accidents in Agriculture 1970 and 1971 (England and Wales)', p. 2, Yorkshire Museum of Farming, Murton Park, York, L3860 shelf 99, Acc. No. 2.633. Accounts of a meeting in Huntingdonshire and Lincolnshire show that the NUAAW safety campaign involved resolutions and showing safety films and slides at local meetings (ibid., pp. 21, 22).

[76] Anon., 'Cowmanship', Farmer & Stockbreeder, (n.p. *c.* 1969), pp 3–7, at p. 3, Yorkshire Museum of Farming, Murton Park, York, L119, shelf 79A, Acc. No. 2.555.



Usually cow goes down as head of calf leaves vulva and stands again just as calf leaves the vulva.

If cord does not break—tie (with sterile string) 4in from calf's body and then cut with sterile knife or scissors.

MALPRESENTATION

Whenever possible cases of malpresentation should be left to the vet. If he is not available the first requirement is hot water and a non-irritant antiseptic.

Thoroughly wash the cow's vulva and your own hands and arms as it is often necessary to insert the whole arm to assess the calf's position.

Head turned back

If the calf's head is turned back place the flat of your hand on its brisket and push it back into the uterus in the intervals between when the cow strains.

When completely back in the uterus place a hand underneath the calf's lower jaw to turn the head forward. If the head is displaced to the left side of the uterus use your left hand, if it is displaced to the right use your right.

Twist your arm so that you are working with your

A: Position of arm and calf when correcting a turned back head.

back to the cow (illustration A). Usually, once the head is straight calving proceeds normally.

If there is insufficient room to straighten the head (more likely with heifers) only the nose can be brought round to the entrance of the womb and there is an S-shaped bend in the calf's neck. As the dam strains or the calf's feet are pulled the head will twist back.

Using a soaked or boiled calf rope, pass a loop of rope over the calf's head and behind the ears (illus-

B: When using a rope to correct a more difficult case of a turned head it should pass over the ears but not through the mouth.

tration B). Tie the doubled-rope to a bar and, as the heifer strains, exert a moderate pressure on the rope. The head should shoot forward into the correct

4

position. The rope should not be passed through the calf's mouth.

Breech presentation

The tail of the calf is presented at or through the cervix with the hind legs pointing forward into the uterus. Before calving the hind legs must be brought around so that they emerge first.

Method:

Make a running noose at the end of a calving cord.

Pass it between the calf's back legs and slip it over the nearest foot (if necessary pull on the hock joint to bring a foot into reach). The noose should go over the foot, but not the fetlock joint. With heifers it is better to secure the loop immediately above the hoof (illustration C).

C: When correcting the position of the legs for a breech presentation the noose on the leg should not go above the fetlock.

Place a hand underneath the hock of the calf and push upwards and forwards into the uterus.

All the time keep a steady pressure on the roped foot to avoid the noose slipping over the fetlock. By pushing the hock and pulling the foot (increase pull slightly between the dam's strains) bring the hoof towards you into the anterior vagina.

Follow the same procedure with the second leg.

When pulling (in the case of each leg) move the hand from hock to hoof occasionally to ensure that the noose is in the right position and that the hoof is not cutting into the wall of the uterus.

When both legs are out through the vulva, move the ropes up above the fetlocks before assisting the dam to give birth.

Twisted uterus

In cases of abnormally protracted first-stage labour the dam may be suffering from a twisted uterus. When an examination is made in the vagina the hand reaches a tight-banded obstruction if the uterus is twisted. Feeling beyond the band will reveal a corkscrew torsion.

Corrective measures should be supervised by a vet. The cow is cast and its hind and fore feet are tied

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Figure 2 Illustration from *Farmer and Stockbreeder* booklet 'Cowman' *c.*1970s offering advice on how to handle a difficult calving via a line drawing of man and calf, but absent cow. Courtesy of the Yorkshire Museum of Farming, Murton Park.

1970s, yet not quite quantifiable. Certainly, the farmer had to decide in hiring their staff if the tasks should fall to 'One Herd Manager/Relief @£25 and Two Herdsmen @£22' (£69 a week), instead of 'two head herdsmen @£20, two assistant cowmen @£16 and relief milking £18' (£90 a week). But, the information about handling the animals was present because it was part of the skill set of the so-called specialist 'pigman' or 'cowman', hence the implied art of 'pigman*ship*', 'cowman*ship*', a skill set linked qualitatively to high status as well as high pay. Though he deferred to the farmer, the cowman had the right to make suggestions based on experience when it came to questions of increasing the herd size, or selection of the structures for milking. This was an expertise that was therefore recognized, a qualitative aspect that was drawn in and

harnessed for the sake of addressing quantitative labour costs, termed in *Farm Business,* 'the whole dairy labour problem', and therefore increased farm efficiency in line with government policy.[77]

Advertising in the specialist press reflected the labour hierarchies still in play in the 1970s. An advert for Betanal E (Fisons) in *Agrifind*, a monthly regional farming journal (April 1973, Yorkshire), consisted of a series of nine black-and-white photographic images, each representing a difficulty in sourcing a labourer who might have hoed sugar beet. Beet was a crop that had taken off during sugar rationing in the Second World War, and, was well known as very labour-intensive.[78] In the Betanal E advert, each image of the nine people – three women, five men, one unknown – included a brief caption suggesting why they could not work. Potential casual labourers were represented as being subject to the following failings: pregnancy; competing demands, including being too busy with other paid work and childcare; wanting higher pay; moving away or pursuing an alternative lifestyle; (unspecified reports of) crises/difficulties; and being ill. Humorous in intent, and through its witty format, the construction of a farmer's point of view (as implied reader) and an expectation that it was commonplace for farmers to struggle to find seasonal casual labourers, the advertiser generated a relationship with potential buyers. In this way, having been drawn in by the question 'beet weeding again this year?' the target audience were encouraged to follow the example of 'more and more farmers [who] are switching from hand labour to Betanal E'.[79] In this way, the advertiser sought to normalize the switch from manual to chemical work.

But, where seasonally required casually employed arable workers could be dismissed as troublesome or difficult to source, and their labour therefore best replaced by petrochemical management, advertising in the classifieds shows that employers with stock worked hard to select farm labourers whom they believed to be essential to the care of their animals.

There is not the scope here to carry out a full quantitative analysis. However, addressing a typical page of classified job adverts in the national weekly *Farmer and Stockbreeder*, there were twenty-eight adverts for employees trained or experienced in working with animals, and eleven adverts seeking workers on mixed farms (often flagging the livestock role), out of a total of sixty-one adverts for 13 January 1970. Of the fourteen more highly formatted and therefore expensive of these adverts, six were for men who would work with animals, compared to four tractor drivers, one general farm worker and three other adverts.[80] *Farmer and Stockbreeder* only represented the farmers able to pay for national

[77] Anon., 'The one-man Herringbone', *Farm Business* (1965), pp. 27–32, pp. 30–1. Farm-level decision-making encompassed issues like paying better wages for 'high calibre men', or for 'high quality labour' available all the time, vs the costs of a 5-day week, sickness and holiday cover, use of flexible labour for elsewhere on the farm, 'less demand for farm cottages'.
[78] T. Harman, *Seventy Summers: The Story of a Farm* (London, 1987), pp. 176–7.
[79] Betanal E., Fisons whole-page advert, *Agrifind*, April 1973.
[80] Classified Advertising, *Farmer and Stockbreeder*, 13 Jan. 1970, p. 64.

YORKSHIRE NEWS

For more details of products mentioned in our editorial columns, please use the Editorial Enquiry Coupon with Agrifind Briefing on page 57

DESIGN FOR DAIRYING

SCIENCE in calf production will be demonstrated through work currently being undertaken by no less than eight world-famous research centres at this year's International Dairy Farming Event. Research on weed control in pastures and on European developments in dairy automation will also be illustrated.

These research features form only part of the most comprehensive range of technical and highly practical demonstrations for cheaper and more efficient milk production ever assembled at one time in Britain, say the organisers, the Royal Association of British Dairy Farmers.

The Event is open to members and non-members of the RABDF on Wednesday and Thursday, 9th and 10th May on the Great Yorkshire Showground, near Harrogate.

Research

Some of the ways in which scientists in the agricultural research service are seeking to improve calf production are to be demonstrated through the co-operation of the Agricultural Research Council. Practical application of egg transfer, determining pregnancy through milk analysis, predicting difficult calving and reducing risks of E. coli and salmonella infections are but some of the projects to be featured.

Other research on calf rearing involves the design of buildings for better health in intensive units, feeding, soyabean flour as an alternative to milk proteins, grass diets for young animals and the heritability of blood constituents affecting high performance. Research on weed-free grassland will also be demonstrated.

Management

Experiments on the most efficient means for rearing herd replacements after the young calf stage will be demonstrated through trials at Great House Experimental Husbandry Farm, which have shown the most economic techniques for calving heifers at 24 months of age.

ADAS, who will be manning an expert advisory panel throughout the Event, will be demonstrating the setting up of a modern dairying system. This is concerned with the installation and choice of equipment including a parlour, collecting yard, dairy, office and cattle handling facilities as well as other vital management factors relevant to economic production.

Other major exhibits are being staged by the Milk Marketing Board, the Farm Buildings Centre, the Agricultural Training Board and commercial firms. Among the RABDF's individual efforts to demonstrate the latest techniques will be research in parlour automation to be seen for the first time in this country.

'There is no doubt that the technical demonstrations at our first Event at Stoneleigh last year were greatly appreciated,' says Frank Francis, RABDF Secretary. 'So great was the interest of our specialist visitors and so detailed their questioning, that our professional advisers were under constant pressure. This year, through an even wider range of exhibits, we are presenting a 'Design for Dairying' that will help all milk producers who are planning the improvement and development of their businesses for the 1980s.' Ref.: 1348

TO SELL IN ENLARGED AREA

G. & A. BLACKBURN Ltd. of Coningsby, Lincs., distributors of SBM heating equipment, have taken over the Northern Heating and Installation Co. of 130, Westburn Avenue, Keighley, Yorks. The new Blackburn northern office at Keighley has enabled the company to greatly extend its selling area to the Scottish border. The northern office is being run by John Knowles who was previously in charge of Northern Heating. He is confident of increasing sales of SBM products in the North. Ref.: 1278

In view of the high cost of feed, methods of controlling the consumption of silage are likely to create a great deal of interest. This electrified feed barrier is from Hosier's. Ref.: 1349

SALES AWARD FOR BRADFORD DISTRIBUTORS

THIS YEAR'S Whitmoyer Animal Health Division Distributor Shield for top sales in the UK has gone to Wade & Mitchell. The Bradford company achieved a higher sales figure in its area market than any other Whitmoyer distributor in 1972.

Whitmoyer markets its entire range of animal health and hygiene products through a network of official distributors. The Division's annual award scheme to recognise the greatest individual distributor effort was established in 1964, and comprises two shields: one for highest sales against potential; one for the highest percentage increase in sales.

Wade & Mitchell received their award at a special celebratory dinner held at Bradford's Victoria Hotel. Ref.: 1338

NFU NEGOTIATE NEW OIL PIPELINE RATES

THE National Farmers Union has negotiated, on behalf of its Yorkshire West Riding and Lincolnshire County Branches a payment in excess of £1.00 per yard run of land for an oil pipeline – the first time a payment in excess of £1.00 has been made. This is for a strip of land 21feet in width.

The negotiations were with the Total Oil Company (Great Britain) which seeks a 99 year lease on the land. The purpose of the lease is to carry a pipeline of either 8in or 10in in diameter of white oil products from Imingham to Leeds. It is hoped to lay the line in 1974.

The total capital payment to an owner or occupier will be £1.10 per yard but where the property is tenanted the owner will receive 75p and the tenant 35p per yard run. The payments are subject to a minimum of £25 to an owner and £15 to an occupier. Ref.: 1327

POULTRY CHAIRMAN

W. D. AVERY of Avery Chickens Ltd., Ottringham, Hull has been appointed chairman of the NFU's poultry committee. Ref.: 1284

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EXPORT CONTROL ON POTATOES

A STRONG DEMAND has developed for maincrop potatoes for export. In order to safeguard the supply of potatoes for the home market the Government is, therefore, making the export of potatoes of all kinds subject to temporary licensing control by the Department of Trade and Industry. As in the past, the limitation of exports is being associated with some relaxation of the ban on imports of maincrop ware potatoes. The Department of Trade and Industry is prepared now to consider applications for licences for the import of specific consignments of maincrop potatoes. The present intention is that these measures, which form part of the standing arrangements for the organisation of the potato market, should continue in force until May 31, 1973. Ref.: 1344

GORSE WARNING

THE BURNING of gorse can cause a great deal of harm to wild life, including the nests and eggs of birds. Farmers are therefore being urged by the Ministry to discontinue their gorse burning now that birds in many areas have begun nesting. Ref.: 1276

TURKEY BAN UNLIKELY

THE proposed EEC ban on New York dressed poultry is unlikely to happen, according to Lancashire turkey breeder, Mr. E. W. Webster, of Bickerstaffe, near Ormskirk. He told a meeting of the Anglian Turkey Federation at Witham, Essex, that, if turkey producers could show that the New York trade was of special significance to the UK industry, they could ask the EEC to exempt it as a special case.

'We are not alone,' he said. 'We are likely to get the support of France, Italy and perhaps Belgium.

Mr. Webster said Britain's entry into the EEC was certain to result in higher standards of hygiene being required in packing stations. But they were likely to be an encumbrance to the trade, not a block.

'Although most of us agree that hygiene standards need to be stricter,' he said, 'there will be problems if Ministry inspectors carry out the regulations to the letter, for this could put us at a disadvantage compared with some countries in Europe, where packing station practices generally are often far wide of the regulations.

'Obviously, there have got to be certain standards of cleanliness in any plant processing human food. These need not be elaborate, although they are almost certain to require all-the-year-round packing to justify the extra expense.

'Fortunately, there is a big demand for fresh turkeys these days, and this demand shows every sign of increasing.' Ref.: 1342

MORE A.I.

AN INCREASE of 18,000 new inseminations for the past year was reported at the annual meeting of the Milk Marketing Board's Penrith Cattle Breeding Centre.

This was achieved almost entirely by the Friesian breed, which accounted for an increase of 16,500 or 22%, whilst most other dairy breeds showed a decline.

In the beef section Herefords lost almost 3,000 inseminations, while the decrease in the popularity of the Aberdeen Angus had been stemmed. Charolais and Simmentals also showed a rise in popularity. There was also a slight increase in the dual-purpose section with the Shorthorn and South Devon breeds.

The annual report showed a membership of 7,800, an increase of over 500 members for the year. Ref.: 1275

Figure 3 Full-page black-and-white advert for Betanal E herbicide, *Agrifind* (April 1973, Yorkshire). Courtesy of the Yorkshire Museum of Farming, Murton Park.

advertising and those normally sympathetic to the National Farmers' Union, that is, the most business-minded producers large or small. These adverts, like the booklets the publication produced for pigmen and cowmen, tell us that by 1970 the most valued openings, the ones that modernizing, commercial farmers were prepared to advertise for, and therefore the most prestigious jobs (not just the best-paid by the Agricultural Wages Board), were those working with animals. Moreover, looking qualitatively at the same page demonstrates that there was a high-level of competition between farmers to recruit the best candidates, and that those candidates were expected to be very capable specialists. This is characteristic:

> Herdsman Required
> For 100 cow Friesian herd. Bulk tank milking, cubicle housing.
> Good modern cottage on bus route.
> Applicant must be enthusiastic and capable of running the herd without constant supervision.
> Wages £23 per week.
> Plus production bonus. . . .[81]

[81] Ibid.

These adverts for stockmen carried the prestige of an expectation that the men were looking to specialize, as they were linked to specific breeds (beyond the cache of the pedigree herds). They incorporated the status of expecting the men to work independently and with modern stock management systems, via references to size of herd (60-150 cattle/60-700 sows)/(160-700 acre) farm, available equipment and livestock housing. They also implied that the men were of sufficient standing to expect modern domestic and other amenities (proximity to shops, schools, village and bus routes), as well as good pay and overtime, or Tayloresque production and bonuses. As many adverts offered additional work to the man's wife or specified that the man come with 'a working family', single men would have struggled to find a post as a 'herdsman'/'stockman'/'pigman'/'poultryman' (or assistant) unless an advert specified 'a young single man', a 'youth' (16-18), a 'trainee' or a 'student'.[82] The men to be hired through most of these adverts were family men who could increase their household's income through the judicious use of their wife's, and even their children's, time. Experienced employees brought with them the additional bonus for their employer of readily available casual labour.

This labour was gendered: whereas a stockman had to be able to manage a herd 'without constant supervision', be 'reliable', 'skilled', have 'training' or be 'interested in stock', his wife might 'assist', or had to have 'a working knowledge of young stock'. As in the nineteenth century, women's stock work was primarily linked to the feminized, nurturing work of rearing lower-status young animals. Where the adverts sought out women in their own right, other than as supplementary labour, it was in connection with traditionally feminine dairy work (this despite the widespread displacement of women by men in the dairy industry from the late nineteenth century), and though the practical details of breed and number of stock, livestock housing and method were given, there were no remunerative details about cottages, pay or overtime. Of all of the adverts on the page only two were explicitly aimed at women – 'Two young men or women or pre-college students required for modern dairy farm. Pipeline milking, young stock, and tractor work.'; 'one or two experienced Herdswomen required for approx. 80 Friesians. Abreast parlour, bulk tank'.[83] Given the use of the term 'Herdswomen', the wider context of legally binding agricultural wages differentiated by sex, as well as age and task, and the clearly male physique and physicality of the work depicted in the leaflets we have already seen, it ought to be assumed that most 'Herdsman' posts were probably exactly that: for men.

Despite the emerging preference for the reduction of unskilled labour input in agriculture stated in agricultural economics, and work-time studies promoted by progressivist proponents of efficient farm management, the regional and national advertising of the 1970s therefore

[82] Ibid.
[83] Ibid.

reveals a high degree of resilience in long-established concepts within agricultural discourse, such as the sexual division of labour and status accorded to labourers who worked with livestock. There was continuity in the employers' competition for, and the privilege and pay accorded to, adept, masculine skill, integrity and strength, and in the emphasis placed on these qualities for the success of the employer's farm, even as 'modernity' and new forms of quantitative management became dominant in agricultural discourse. Of the cattle, we see only the slightest trace – specific breeds within herds, implied bodies standing in parlours and livestock housing – but they were there, shaping housing so that it met their needs, requiring good handling to be more productive. Skill in handling animals could apparently be harnessed to modernity, even in the most specialized and technical of fields, such as dairy production. There was also a residual rhetoric in the persistent use of 'the Land'. One advert in 1970 *Farmer and Stockbreeder*, for example, included a quote from Sir George Stapledon (1882–1960) – an advert for a rye grass product in *The Land Now and Tomorrow* (1935) was headed 'to make good arable first make good grass'. What we see is that when this residual attitude referred to the labourer/labour prestige, then the old hierarchies between general and animal work also persisted. The co-work of human and animal produced that prestige.

IV

> It is obvious that a farm worker must be tough, physically strong, and have both grit and energy; he must also must have a considerable amount of interest in his work if he is to maintain the spirit necessary to force him to give the best under adverse conditions.
>
> A considerable amount of skill is needed to perform operations such as pruning, grafting, ploughing land drainage, stack-building, milking and other stock work, and a good farm hand is a highly skilled workman. He needs a good eye, a nimble pair of hands, and a considerable amount of knowledge.[84]

After the Second World War, noble rhetoric continued to elevate farming and the farm worker in texts like *Modern Farming* (1950), which celebrated an industry that contributed immeasurably to the war effort. Yet, after the war, farm managers were encouraged to look for efficiencies in design to carry the labour load within an international framework designed to place food production onto the global scale, within a new set of politics associated with the Cold War, and to release workers for other industries. The idea of the Labour Day/SMD overwrote the farm and placed abstract labour at the heart of modernization. Low-skilled labour was to be squeezed out as an unnecessary expense, but this progressivist

[84] S. G. Brade-Birks, *Modern Farming: A Practical Illustrated Guide*, I (London, 1950), p. 79.

focus, as seen in policy and advisory literature, could overwrite a more complex story. That story included a persistent understanding of livestock that equated with expertise, was grounded in a collaborative relationship with non-human animals, and was celebrated and better paid even in the most 'modern' of post-Second World War settings. As in the Victorian period, as Wilson Fox noted,

> the most responsible positions are those of the men in charge of the animals . . . a higher paid class of farm servant than the 'ordinary labourer' and . . . 'usually on longer terms of engagement' . . . divide[d] . . . by the kind of animals they were working with.[85]

In Britain, two versions of the concept of farm 'labour' crystallized during the twentieth century, in response to the wider structural changes attached to agriculture and agricultural policy making. Firstly, a highly abstract version of labour (as work/input) quantified in the SMD; and secondly, a continuing sense of stockmanship as skilled 'labour' as something qualitative, as a physical skill, as knowledge gained through education but also as the vernacular knowledge of experience, expressed through practice and embodied in the relationship with the animals cared for (not just use of new technologies). Neither was new – by the nineteenth century there were already very clear differentiations of pay and contract, impacted by perceived differences in skill, by demand (shortage/surplus), by age and sex, by season and task, that varied between regions (and even within counties), over time.[86] Victorian and Edwardian commentators and legislators were keenly interested in this and attempted to quantify the input of wages and payments in kind for the benefit of farmers, or labourers, depending on their approach.[87] According to the established historiography, the work of W. A. Armstrong, and E. J. T. Collins, there was a large pool of flexible/surplus/casual labour for farmers to draw on as demand rose and fell.[88] In this sense, there is continuity between the nineteenth and twentieth centuries, as the exigencies of land, season and market, plus longer-term structural changes, persisted and dictated both the work to be done and how it should be organized at the expense of the reserve who, in the end, moved on as producers sought to extract the

[85] Howkins, 'In the sweat of thy face', pp. 506–8.

[86] K. D. M. Snell, *Annals of the Labouring Poor: Social Change and Agrarian England, 1660–1900* (Cambridge, 1985); G. Clark, 'Farm wages and living standards in the industrial revolution: England, 1670–1869', *Economic History Review*, 54/3 (2001), pp. 477–505; W. A. Armstrong, *Farmworkers: A Social and Economic History, 1770–1980* (London, 1988).

[87] For example, see H. J. Little, 'The agricultural labourer', *Journal of the Royal Agricultural Society of England*, 2nd s., 14 (1878), pp. 763–802; A. L. Bowley, 'The statistics of wages in the UK during the last hundred years', *Journal of the Royal Statistical Society*, 61 (1898), pp. 702–22; F. Purdy, 'On the earnings of agricultural labourers in England and Wales, 1860', *Journal of the Royal Statistical Society*, 24/3 (1895), pp. 328–73; W. Fox, 'Agricultural wages in England and Wales during the last 50 years', *Journal of the Royal Statistical Society*, 56/2 (1903), pp. 273–359.

[88] W. A. Armstrong, 'The workfolk', in G. E. Mingay (ed.), *The Victorian Countryside*, II (London, 1981), pp. 495–7; E. J. T. Collins, 'The rationality of "surplus" agricultural labour: mechanization in English agriculture in the nineteenth century', *Agricultural History Review*, 35/1 (1987), pp. 36–46.

most value out of their farms. However, although there were similarities, the rhetoric attached to 'the agricultural labourer', and the impact of that rhetoric, changed into a dominant liberal, internationally framed Cold War production ethos, typified in the UK by the Agriculture Act 1947, with a residual trace of older labour relations in the 'heroic' labourer who struggled physically and worked with livestock to produce food for the nation. Effortful work, grounded in a nuanced understanding of farm animals and 'collaboration' with them, i.e. in the relationships between human and non-human animals on-farm and within the structures of policy making, generated higher pay and a masculine framing of crafted working relationships based in sensitivity and understanding, and control.[89]

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