

Farming in Depression: Wales between the Wars, 1919–1939

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Abstract

This article attempts to trace the response of Welsh farming to the depressed conditions which prevailed, in the main, throughout the inter-war years. As the pre-existing system of land tenure, dominated by the large estate, gave way to freehold occupation, the new freeholders were obliged to come to terms with economic conditions not markedly different from those prevailing in the closing decades of the nineteenth century. Whereas co-operative activity helped partially to cushion the blow, the principal response was a drastic reduction in arable farming with increasing concentration on dairying, for which market conditions became progressively more favourable. Even so, economic and agricultural depression came perilously close to damaging the fragile cultural and environmental framework of the country, and it was only with financial help and infrastructural change after the Second World War that the farming community returned to some semblance of relative prosperity.

IN THE recollection of many who lived through it, the inter-war period in rural Britain was one in which the proud farming traditions of the mid-nineteenth century, having emerged from the difficult times of the 1880s and 1890s, were finally sacrificed on the altar of political expediency. As ribbon building cast its ugly shadow on the land and the urban masses descended in ever-increasing numbers on the hitherto tranquil countryside, the farming interest found itself fighting a rearguard action to preserve not only its customary rôle, but in some cases its very existence. If it was not a period of unrelieved depression, the general trend of farm prices between 1921 and the early 1930s was downwards, while operational costs, especially of labour, continued steadily to mount. For those who had sunk wartime earnings into buying their freeholds, the difficulty of making enough profit to service management charges posed particular problems, while those who remained as tenants were hard-pressed to rebuild capital reserves even in the easier years of the middle and later 1930s. The whole period, characterized by a low-cost, 'dog-and-stick' approach left farmers with a profound suspicion of officialdom and a distrust of

the promises of politicians which for long remained embedded in the farming persona.

During the Great War agricultural production in Great Britain had been closely controlled by the County War Agricultural Executive Committees, and however much these may have been disliked and distrusted by the farming community, the fact remained that the activities of these bodies were essential in a business environment in which farmers first felt the full impact of international affairs on their daily round of work.¹ As the question of post-war policy was debated by a succession of departmental committees, it was generally agreed that the nation's interests would be best served by a concerted attempt to produce more food from home resources, commensurate with acceptable and stable returns to all involved in the farming industry. Producers would ultimately be allowed to operate in an unrestricted market (except in times of national emergency), while every encouragement would be given to establishing a wide-ranging campaign of

¹ E. H. Whetham, *The Agrarian History of England and Wales, VIII, 1914–1939*, 1978, pp. 97–102.

agricultural education under the aegis of the Board of Agriculture.²

Any confidence which these proposals raised among the general body of farmers was rapidly to wither in 1921 when the government, faced with a deepening economic crisis and a deficiency payments bill of £20 million, repealed the 1920 Agriculture Act which had promised a four year guarantee of prices for selected items of farm output. Hence the legendary 'Great Betrayal' which was to sour relations between farmers and governments in the decades ahead.³ 'Betrayal' it may have been, but the simple fact was that the problems faced by farmers from the mid-1920s into the later 1930s were more a reflection of world surpluses of food products than the withdrawal of price guarantees for wheat and oats which, when all said and done, represented only a modest component of total UK agricultural production. As British farming faced the general price fall following the brief post-war boom, the national market became a dumping ground for world food products. By the mid-1920s the UK absorbed some 27 per cent of world wheat exports and 20 per cent of feed grains, while imports of meat, butter and cheese rose by 44, 59 and 28 per cent respectively.⁴ Agitation for government assistance and tariff reform fell largely on deaf ears, and beyond minor legislative changes (leading, for example, to the de-rating of farm dwelling-houses), successive administrations were not prepared to see farming as a charge on public funds.⁵ Meanwhile, real agricultural costs were rising and with the introduction by

the Labour government of the Agricultural Wages (Regulation) Act in 1924, wage levels rose to represent 25-30 per cent of farm costs, so that farmers were increasingly forced to turn their attention to those enterprises giving the highest return to labour input.⁶

Following the Wall Street collapse in 1929 the gloom deepened within an already acutely depressed market for world agricultural products, and over the three years from September 1929 UK farm prices fell by 34 per cent. If the Ministry of Agriculture was sympathetic to the plight of many farmers, the Labour government of 1929-1931 steadfastly refused to take protective measures even though the index of crop prices had fallen to 74 from a 1927-1929 base level of 100.⁷ But change was afoot, and against the anti-protectionist polemics of Beveridge and his followers, the 1931 National government, with its powerful Tory phalanx, ushered in a policy based on protection and subsidized support.⁸ A series of moves, culminating in the Import Duties Act of 1932 and the Ottawa Agreement of the same year created a range of protective measures embodying built-in preferences for Imperial primary products in the UK market. The theoretical difficulties of reconciling the apparent incompatibility between protection and Imperial preference were circumvented by negotiating trade agreements which ensured that low-price food policies were combined with Exchequer-funded subsidies to help agriculture.⁹ In this sense, the problematic circle had been squared; home living costs had been kept low, and a gesture made towards the farming industry.

As *laissez-faire* attitudes were progress-

² Cmnd 8095, *Departmental Committee on the Production of Food in England and Wales, 1915*; Cmnd 9080, *Sub-Committee of Reconstruction Committee, 1918*; Cmnd 665, *Royal Commission on Agriculture, Report, 1920*.

³ E H Whetham, 'The Agriculture Act, 1920 and its repeal - the "Great Betrayal"', *AHR*, 22, 1974, p 48; A F Cooper, 'Another look at the "Great Betrayal"', *AH*, 60, 1986, pp 80-104.

⁴ Viscount Astor and B S Rowntree, *British Agriculture: The Principles of Future Policy*, 1938, p 113.

⁵ M Tracy, 'Fifty years of agriculture policy', *J Ag Econ*, 27, 1976, p 332.

⁶ J Brown, *Agriculture in Britain, 1870-1947*, Manchester, 1987, pp 83-84.

⁷ M Tracy, *Government and Agriculture in Western Europe, 1880-1988*, 3rd ed, 1989, p 159.

⁸ W H Beveridge, ed, *Tariffs: the Case Examined*, 1931.

⁹ T Rooth, 'Trade agreements and the evolution of British agricultural policy in the 1930s', *AHR*, 32, 1985, p 190.

ively abandoned, and guaranteed prices offered for wheat, barley and oats together with a flat-rate subsidy for cattle, further help was given in the form of the 1931 and 1933 Agricultural Marketing Acts, by which marketing boards for milk, pigs, bacon, potatoes and hops were eventually established. Since largely unrestricted Imperial competition and competition from foreign produce subject to relatively low duties would alone give little protection to UK farmers, it was believed that marketing schemes obligatory on all producers would introduce an element of price stability. Ultimately these schemes were viewed by the authorities as largely painless alternatives to full tariff protection.

The various protectionist measures led to increased agricultural production between 1931 and 1939, and although the general price index edged up from 76 in 1933 to 89 in 1937, overseas sources were providing 65 per cent of Britain's food by that year.¹⁰ Effectively, the various limited quotas and tariffs had shifted the bulk of the market away from the foreigner towards the Imperial producer, and although the British farmer had been spared the worst excesses of world competition, he was still obliged to operate under less than favourable conditions. In summarizing the rather bleak picture, and underlining the lip-service paid to the farmer, Malcolm Muggeridge commented laconically:

If the Preservation of Rural England was a cause which attracted adherents, and sometimes money, the Productivity of Rural England aroused little concern. The Ministry of Agriculture was the grave of the political expectations of its successive occupants. Quotas and bounties and, later, marketing schemes, would not make the soil increase its yield. The harvest was largely pensionable officials, of these a fine crop.¹¹

Ashby and Evans' admirable 1944 summary apart, the scholarly literature yields little coverage of Welsh agriculture

throughout this troubled period.¹² This is the more surprising in view of the existence of flourishing agricultural departments at the University Colleges of Aberystwyth and Bangor, the coming to maturity of the Welsh Plant Breeding Station, and the successful establishment and expansion of the Welsh Agricultural Organisation Society during the 1920s and 1930s.¹³ Scientists and rural economists from these various centres published extensively on agricultural issues specific to the Principality in two somewhat under-utilized sources, *The Welsh Journal of Agriculture* (1925-1943) and *The Journal of the University College of Wales Agricultural Society*, of which the first number appeared around the turn of the century and which continues to run to the present day. In drawing substantially on these sources, together with the agricultural returns and local newspapers, the present article attempts to outline some aspects of the pattern of Welsh agriculture between the wars. The almost total absence of reliable runs of farm accounts for this period precludes detailed analysis at the individual farm level, while the bias towards south-west Wales reflects a combination of agricultural diversity in the south-western counties and the interests and experiences of contemporary writers.¹⁴

¹² A W Ashby and H Evans, *The Agriculture of Wales*, Cardiff, 1944.

¹³ R J Moore-Colyer, *Man's Proper Study, A History of Agricultural Science Education at Aberystwyth, 1878-1978*, Llandysul, 1981.

¹⁴ Much of the material published in the *Welsh Journal of Agriculture* [WJA] between 1925 and 1943 reflects the research interests of the biologists and social scientists working at the University Colleges at Aberystwyth and Bangor and the recently-established Welsh Plant Breeding Station. Analysis of the subject matter of the various articles is highly instructive. Of 401 articles and papers, 31 per cent were concerned with grassland and forage production, 19 per cent with dairying and dairy technology and 7 per cent with sheep and beef cattle. Of the remainder, 10 per cent covered plant pathology, entomology and weed control, while the final 10 per cent reviewed developments in farm management economics and agricultural marketing. There are no obvious changes in emphasis over these subject areas between 1925 and 1943.

¹⁰ Tracy, *Government and Agriculture*, p 161.

¹¹ M Muggeridge, *The Thirties*, 1940, p 198.

I

Any consideration of structural change and developments in farming practice in the Principality needs to be set against a somewhat depressing background of indigenous rural depopulation and the steady decay of the rural craft tradition. 'Day by day, year by year, tree by tree, acre by acre, the old England perishes away' wrote Clough Williams Ellis in 1930, thereby echoing the widely-held view that the inexorable drift of people from the countryside – offset, to some extent, by an inflow of townspeople seeking a rural retreat – represented a haemorrhaging of much-vaunted rural values. Such matters were especially gall and wormwood to the more reactionary elements in the Conservative party who sought to restore the mythical 'old English (Welsh)' peasantry with its alleged natural instinct for patriotism.¹⁵ Yet there was an inevitability to this rural exodus and so long as urban wages remained substantially above those in rural areas, and standards of rural housing, education, medicine provision and social amenities lagged behind those in the towns, the establishment of Rural Industries Boards and other inducements would do little to reverse the trend. Throughout Wales declining rural population in the 1920s was the continuation of a pre-existing trend, so that in the counties of Montgomery, Radnor, Anglesey, Pembroke, Brecon and Cardigan, the 1931 census highlighted an extenuation of a population decline already in existence before 1914. Indeed, such was the economic state of agriculture and rural industry that of all Welsh counties, only those of Carmarthen, Denbigh and Flint returned higher populations in 1931 than in 1921.¹⁶ Concurrent with the decline in the popu-

lation was the decay of the ancient traditions of local craftsmanship and rural industry and the gradual dissolution of the essentially self-supporting local community.

It is difficult to quantify the effects of such change on patterns of employment and the general Welsh rural economy of the 1920s and 1930s, yet there may be some grounds for arguing that the decay of indigenous rural industry had important psychological effects which framed attitudes towards farming and rural life. As the closely-knit and cohesive fabric of rural society, with its reciprocal duties and obligations began to disappear, it carried away with it the quiet pride and satisfaction characteristic of localism. In so doing, it may have helped to usher in the 'make do and mend' and rather ramshackle approach so characteristic of the 1930s; the view that a relict bedstead would fix a gap in a hedge as effectively as an hour's work with a billhook and hedge knife. Perhaps it was not economic circumstances alone which led to the creeping dereliction spreading inexorably through Wales and much of England so deplored by R. G. Stapledon and his disciples?¹⁷

Some aspects of what several academics and ruralist pundits perceived as the increasing scruffiness of the Welsh countryside may have arisen as a direct consequence of an advancing pattern of owner-occupation. The social, political and fiscal reasons for the break-up of Welsh landed estates are beyond the scope of the present article, but the result was that in Wales as a whole, owner-occupation advanced from 10 per cent of total acreage in 1909 to 39 per cent in 1941–43.¹⁸ Before the Great War, sales

¹⁵ S. B. Ward, 'The environmental conservation movement in Britain, 1870–1980', *Acta Museorum Agriculturae*, 18, 1985; D. N. Jeans, 'Planning and the myth of the English countryside in the interwar period', *Rural History*, 1, 1990; D. Lowenthal, 'British national identity and the English landscape', *Rural History*, 2, 1991.

¹⁶ J. Saville, *Rural Depopulation in England and Wales, 1851–1951*, 1957, p. 48.

¹⁷ See, for example, R. G. Stapledon, *The Land Now and Tomorrow*, 1935.

¹⁸ This compared with 12 and 33 per cent in England (Ashby and Evans, *Agriculture of Wales*, pp. 90–99). For the decline of the Welsh estate see, *inter alia*, J. Davies, 'The end of the great estates and the rise of freehold farming in Wales', *Welsh Hist Rev*, 7, 1974; R. J. Moore-Colyer, 'The gentry and the county in nineteenth century Cardiganshire', *Welsh Hist Rev*, 10, 1981.

had primarily comprised outlying land, but between 1918 and 1922 virtually every major Welsh landowner placed at least part of his estate on the market, in a manner which mirrored the pan-European redistribution of land described by J A Venn in 1933 as the 'Green Revolution'.¹⁹ Having no legal security of tenure, and fearful of outside buyers subjecting them to quantum increases in rent (or even eviction), tenants flocked to gain liberty and status by purchasing their holdings. Given that two-thirds of Welsh farmers in 1926 had no other occupation than that of residents or workers on the parental farm, and that three-quarters of them were farmers' sons, their anxiety for future security on the land was hardly surprising.²⁰ Thus, when the Rhagat estate in Merionethshire was sold in 1920, almost all farms were purchased by tenants, a pattern repeated in the case of the Glanusk and Trefalwyn estates in Breconshire and Denbighshire. Desperate to cling to their holdings under any circumstances, tenants often bid grossly inflated prices of between 30 and 40 years purchase, when a figure of 20 years purchase would have been considered a more appropriate valuation.²¹ Under normal circumstances sitting tenants were given first refusal to purchase and offered the opportunity to reach a private agreement with the estate office, in which cases sales pro-

ceeded without acrimony.²² But where a landowner failed to come to terms with his tenant and opted to sell by auction to the highest bidder, local rivalries and tensions could lead to threats, and even acts of violence. When a butcher outbid a sitting tenant during the course of the sale of the Velinnewydd estate at the Castle Hotel, Brecon, in December, 1919, he was dragged from the auction room and violently assaulted by a group of tenants in an action which sparked off bitter local controversy.²³ In like manner, on those rare occasions when tenants were sent notice to quit to ensure a freehold sale, local pressure was brought to bear on an estate and its agents. This occurred in the case of the sale of the Camrose (Pembrokeshire) estate when tenants gathered at the auction were exhorted by the secretary of the Pembrokeshire Farmers' Union to demonstrate their collective loyalty by refusing to bid for farms. The secretary's intervention resulted in the withdrawal of notices to quit by a somewhat chastened Camrose agent and, incidentally, a steep increase in Farmers' Union membership.²⁴

The new freeholders encountered serious difficulties in the inter-war years. To many, the prices paid for their farms had not seemed excessive relative to the inflated prices of agricultural outputs in 1918-1920 and a mortgage rate of between 4 and 6 per cent, but as the index of agricultural prices began to decline against an increase in the real value of wages, recent purchasers found repayment of mortgages increasingly burdensome.²⁵ The necessity to raise mort-

¹⁹ J A Venn, *The Foundations of Agricultural Economics*, 1933, p 100.

²⁰ A W Ashby and J M Jones, 'The social origin of Welsh farmers', *WJA*, 2, 1926, p 19. Life may have been difficult on the smaller farm, yet as one farmer put it to Alwyn Rees in the 1940s, 'Cyw a fegir yn uffern, yn uffern y ayn fud' (A chicken reared in hell will want to stay in hell).

²¹ Davies, 'Great estates', pp 199-201. Of 717 sales studied by Ashby and Howell in 1927, average per acre price reached £19 14s 0d between 1915 and 1925, with the highest prices being realized in the counties of Glamorgan, Monmouth and Pembrokeshire, and the lowest being returned for Cardiganshire and Carmarthenshire. To some extent, farm size reflected price per acre, with farms of less than 50 acres fetching £30-£60; 50-150 acres, £15-£25, and those of over 150 acres realizing £4-£22, depending upon land quality: (A W Ashby and J P Howell, 'Rents and prices of agricultural land in Wales', *WJA*, 3, 1927, pp 6-22.

²² As in the case of the Cefn Mably estate in Glamorgan where farms not purchased by sitting tenants were offered by auction and acquired either by local businessmen as investment opportunities, or by former tenants keen to extend the acreage which they had already bought privately: P Riden and K Edwards, *Families and Farms in Llanvane, 1850-1950*, Merton Priory Press, 1993, pp 56-88.

²³ R Phillips, *Tredegar: The History of an Agricultural Estate, 1300-1956*, Newport, 1990, p 222.

²⁴ W R Morgan, *A Pembrokeshire Countryman Looks Back*, Tenby, 1988, p 80.

²⁵ R U Sayce, 'Further queries and suggestions for the study of local history in Powysland', *Mont Coll*, 57, 1962, p 187.

TABLE I
Percentage distribution of Welsh farms according to size class

Size class (acres)	Percentage distribution of holdings		Percentage of cultivated land area	
	1913	1939	1913	1939
1-5	16.8	13.4	1.3	1.0
6-20	31.5	30.2	7.8	7.3
21-50	21.6	24.1	16.0	17.5
51-100	16.9	19.5	26.9	30.0
101-150	7.4	7.7	19.7	20.0
151-300	5.3	5.8	23.0	19.7
300+	0.5	0.4	5.3	4.5

Source: A W Ashby and H Evans, *The Agriculture of Wales*, Cardiff, 1944.

gage repayments precipitated a withdrawal of capital from the business of farming to the business of landowning, and those who had bought in a period of relative prosperity saw their investment decline sharply in value during the deflationary 1920s. Indeed, some owner-occupiers abandoned the struggle and sold out to their neighbours, so that the total number of holdings in the Principality fell from 63,547 to 58,024 between 1913 and 1939.²⁶ Yet most farmers, large and small, tenants or freeholders, survived the deflation as a result of progressive belt-tightening and the exploitation of unpaid (or underpaid) family labour.²⁷ In some cases, the availability of extensive upland rough grazings (not included in the statistics before 1960) served as a safety valve, while the smaller farmer in the scenically-attractive lowland areas was able to exploit the growing tourist trade by taking in paying guests.²⁸ However, as Table I suggests, if the gener-

ally adverse economic conditions of the 1920s and 1930s led to a reduction in total holding numbers, they had little real effect on the distribution of farms within different size classes. The traditional pattern of essentially small farms continued to persist until the outbreak of the Second World War with some two-thirds of total recorded holdings encompassing less than 50 acres, although these accounted for a mere quarter of the farmed acreage.

In an agricultural economy based essentially on small farming units reliant, to a great extent, on family labour and possessed of limited capital reserves, mutual co-operation in a whole range of husbandry activities had long been enshrined in the Welsh farming ethos.²⁹ Whereas co-operation in haytime, harvesting and other activities might be seen to have acted as a disincentive to individual initiative, it was nevertheless fundamentally important to the operation, if not the survival, of many smaller farming enterprises, and at the turn of the present century progressive opinion was of the view that much progress could be made by building on the co-operative tradition. However, despite valiant efforts by various bodies to establish co-operation in both input acquisition and product marketing, co-operative organization was of strictly local, and often short-term impor-

²⁶ Data on holding numbers in the agricultural statistics and elsewhere need to be interpreted with some caution since many farms were worked jointly, while others (especially among the smaller acreages) were held by people whose main livelihood lay outside farming. This was particularly the case in locations close to industrial areas where miners, publicans, butchers and other workers frequently held small farms, either as owners or tenants. In the upland Montgomeryshire parish of Llanfihangel yng Ngwynfa where there were 114 holdings in 1939, 23 of the 32 occupiers of farms of less than 20 acres had by-employments: A D Rees, *Life in a Welsh Countryside: A Social Study of Llanfihangel yng Ngwynfa*, Cardiff, 1950, p 23. Moreover since the returns ignored holdings of less than 1 acre, occupation of small areas of land by 'non-farmers' is probably consistently underestimated.

²⁷ Davies, 'Great estates', p 205.

²⁸ J M Thomas, *Yesterday's Gower*, Gomer Press, 1982, pp 118-19.

²⁹ See, for example, R J Moore-Colyer, 'Crop husbandry in Wales before the onset of mechanisation', *Folk Life*, 21, 1983, pp 49-70.

TABLE 2
Quinquennial areas of farmed acreage
(thousands of acres)

Period	Rough grazing	Permanent pasture	Total arable
1915-19	1379	2111	854
1920-24	1541	2049	781
1925-29	1645	2116	659
1930-34	1724	2120	628
1935-39	1772	2139	571

Source: Agricultural returns, 1915-1939.

tance as far as the selling of farm output was concerned, and to all intents and purposes a state of marketing anarchy would await the setting up of the Marketing Boards in the 1930s.³⁰

II

The years between the wars witnessed a steady, but readily perceptible, change in the overall pattern of the farmscape as the acreage of arable cropping declined in the face of an increase in the areas of rough grazing and permanent pasture (Table 2). Consonant with the reduction in arable and pulse crops, wheat as a proportion of the total fell by half to 8.5 per cent by 1939, while the oat acreage expanded to comprise 70 per cent of the total by the end of that year. Cereals were a relatively minor component of farm income (with, for example, only 25 per cent of wheat, 33 per cent of barley and 15 per cent of oats being sold off Welsh farms in 1923), but they were, nevertheless, an essential adjunct to livestock production.³¹ Despite the high

unit costs involved in cultivating small acreages on the average livestock farm, oats in particular, with their tolerance of acidic soil conditions, were regarded by many as a *sine qua non*.³² This applied equally to roots and green crops and as the acreage of turnips and swedes fluctuated around 40 and 50 per cent of the total in this category, green crops (especially kale and fodder cabbage) advanced from 7 per cent in 1915 to 22 per cent in 1939, in parallel with the dramatic expansion of dairying throughout the Principality. Potatoes, meanwhile, grown for domestic (and residually livestock) consumption on most lower-lying farms, represented one-quarter of the root/green crop acreage over the whole period. In Pembrokeshire, however, where pioneering work on the early crop undertaken by W E D Jones, the county agricultural organizer, was yielding fruit by the mid-1930s, potato production came to assume major importance in the farming economy.³³ At the local level, the husbandry of horticultural and market garden crops was also given some encouragement with the passing of the Horticultural Produce (Emergency Customs Duties) Act of 1931. Sheltered valleys on the coastal belt, blessed with a seasonal tourist trade, were ideal for this purpose, and the seaside town of Aberystwyth, for example, received regular locally-grown supplies of peas, carrots and brassicas during the summer season. But this was, of course, a purely seasonal and very small-scale trade, and for much of the year most of Wales relied on external sources of supply for its vegetable and salad foods.³⁴

Inevitably, though it was the grassland acreage of Wales which provided the main-

³⁰ For cooperation, see J Jones-Davies, 'The history of the agricultural cooperative movement in Carmarthenshire', *Cann Antiq.* 1, 1942, pp 40-42; J M Jones, 'A review of agricultural cooperation in Wales', *WJA*, 6, 1930, pp 61-62; J M Williams and D Davies, 'Agricultural cooperative societies in Wales: a review of three years trading in farm requisites', *WJA*, 10, 1934, pp 64-74; W H Jones, 'Agricultural requisites societies in Wales', *WJA*, 15, 1939, p 27; T J Jenkin, 'The expression of Welsh agriculture', *JUCW Agric Sor.* 24, 1932, pp 5-7; W H Jones, 'Cooperative marketing of farm products in Wales', *WJA*, 15, 1939, p 21; W H Jones, 'Agricultural cooperative societies in Wales, 1933-1935', *WJA*, 13, 1937, p 109.

³¹ A W Ashby, 'The place of cereal growing in Welsh agriculture', *WJA*, 2, 1926, p 40.

³² J M Jones, 'Capital and equipment on some Welsh farms', *WJA*, 2, 1926, p 88.

³³ D Rees, *Rings and Rosettes; The History of the Pembrokeshire Agricultural Society, 1784-1977*, Gomer Press, 1977, pp 126-27; W H Jones, 'Farm productivity in Pembrokeshire', *Agriculture*, 60, 1954, p 334.

³⁴ J A Smith, 'The production and marketing of market garden produce in the Aberystwyth area', *WJA*, 11, 1935, p 61.

stay of the economy and yielded the bulk of farm income in terms of meat and dairy products. In the UK as a whole, improvements in grassland husbandry had lagged behind the major advances in arable agronomy of the mid-nineteenth to the early twentieth century, and by the end of the Great War grassland management had changed little from that prevailing a hundred years previously. Of the 4.5 million grassland acres of Wales in the early 1930s, more than half were dominated by *Agrostis* and *Molinia/Nardus* associations of low potential productivity, while much of the remainder, where free from the ravages of bracken, suffered from inadequate or neglected drainage.³⁵ Although government drainage grants had been available since the mid-1920s, these were largely ignored by a landowning and farming population in the grip of depression, and as ditches filled and existing field drains became blocked, the state of Welsh grassland became progressively worse.³⁶ T J Jenkin, one of the early members of the young Welsh Plant Breeding Station, and eventually its director, complained bitterly of the slovenly appearance of Welsh farms and of the seeming lack of pride of their occupants in their vocation. He told the University of Wales Agricultural Society in 1931:

I wish that through the influence of the members of this society pride in farming as a vocation with the love of good farming for its own sake could be reawakened in those districts where it has become torpid, and a keener sense of the artistic and the aesthetic cultivated. Our country is a beautiful one and we have no right to make it ugly.³⁷

Ugliness, in the view of Jenkin and others of the Plant Breeding Station, was equated with bad farming, and with a zeal almost messianic in its intensity they begged, cajoled and even coerced farmers to come and view the remarkable advances

in grass breeding and grassland management effected on the station and in its environs.³⁸ Working closely with the University Department of Agriculture at Aberystwyth, scientists at the Plant Breeding Station demonstrated conclusively that by combining the use of the new grass and clover varieties with a programme of drainage and liming, practically all the *Agrostis* dominated pastures and much of the *Molinia/Nardus* uplands could be brought into a productive state with relatively little effort. In terms of the national economy this would ultimately result in massive savings in food imports, while at the local level only a thriving pastoral agriculture would facilitate the maintenance of services and amenities and thus stem the flow of outward migration from rural Wales. Time and again R G Stapledon descanted on the virtues of grassland improvement, pointing out that provided something were done about the wholly inadequate farm infrastructure and lamentable rural communications, the stocking capacity of Welsh grasslands could be virtually doubled at modest capital cost, bringing with it immense benefits to the agricultural economy. The farmers were certainly impressed and, shepherded by their county agricultural organizers, they descended by the charabanc load on the experimental plots around Aberystwyth. The *Cardigan and Teifside Advertiser* regularly reported on these visits throughout the 1920s, and as farmers enthused over the grazing trials, seed production studies and grassland management exercises they '... proved to the world that they were a go-ahead lot of people ... leaving no stone unturned to save themselves from economic ruin'. Moreover, in learning what they could do for themselves without government help, '... how much keener they were to acquire knowledge and wisdom in regard to their

³⁵ R G Stapledon, ed, *A Survey of the Agricultural and Waste Lands of Wales*, 1936, p 142.

³⁶ J M Jones, 'Welsh agriculture in transition', *Agriculture*, 60, 1954, p 86.

³⁷ Jenkin, 'The expression of Welsh Agriculture', pp 10-11.

³⁸ For details see, Moore-Colyer, *Man's Proper Study*, *passim*.

profession than tradition would have them believe'.³⁹

But like all farmers before and since, the Welsh husbandman of the 1920s rarely shifted his focus from his bank balance. Stapledon may have decried the 'does it pay?' argument, but to a man with a mortgage, farming in economically depressed conditions, keeping costs to a minimum was of the utmost importance. Too often in the past had farmers in the Principality been persuaded to undertake expensive 'improvements' demonstrated on the home farms of the gentry, only to find that these bore little relation to the practical and economic realities of their own holdings.⁴⁰ This being so it is hardly surprising that while they applauded the efforts of Stapledon and his colleagues, they were chary of investing in their own grasslands merely to produce more food for an already over-supplied market. Accordingly, there was little general improvement in grassland productivity before the later 1930s. By this time, however, the dramatic results of the Cahn Hill Improvement Scheme near Aberystwyth were available for all to see, and government help became available in the form of the 1937 Agriculture Act by which subsidies of 50 and 25 per cent on the cost of lime and basic slag were introduced. This, and the prospect of war – perceived by many farmers as the road to salvation – stimulated some, particularly those with dairy cattle, to activate programmes of grassland renovation.⁴¹ Nevertheless, despite wartime financial incentives to promote land drainage, the plough-up campaign and ley farming, many parts of Wales still retained a

distinctly neglected and desolate appearance by the close of hostilities.⁴²

Throughout the first three decades of the present century, British consumers were not only demanding a wider variety in their meat diet, but were eating progressively more chilled or frozen meats from Australia, Argentina and elsewhere.⁴³ As home meat supplies fell from 82 per cent of consumption in the late 1870s, to 40 per cent between 1924 and 1927, frozen or chilled imports provided some three-quarters of the market in industrial south Wales, with inevitable effects on the traditional store cattle trade so important to the farm economy.⁴⁴

The eventual repeal, in 1922, of the long-standing embargo on the importation of cattle from a variety of overseas countries, although favourable to the arable/beef producers of the English midlands and East Anglia, further acted against the interest of the store cattle producer of the west. In reality, the relatively small numbers of imports had only marginal consequences on the overall economics of the trade, yet the debate surrounding the rights and wrongs of permitting the ingress of foreign store animals exposed the dominance of the larger, arable-based farmer over the smaller, livestock-producing sector of the economy.⁴⁵ But prior to the wholesale improvements in grassland husbandry following the Second World War, Welsh livestock men had little alternative but to continue to produce store cattle. It is true that in some of the more favoured areas pasture renovation had enabled the production of finished cattle, so that farmers could secure both breeder's and feeder's margin and reduce their reliance upon

³⁹ *Cardigan and Teifside Advertiser* [CTA], 30 June 1922, 9 Sept 1927, 29 June 1928, 11 April 1929.

⁴⁰ R. J. Moore-Colyer, 'Early agricultural societies in south Wales', *Welsh Hist Rev*, 15, 1986.

⁴¹ A. R. Staniforth, 'Fifty years of agricultural progress in Great Britain', *Agric Progress*, 50, 1975.

⁴² J. Sheail, 'Elements of sustainable agriculture: the UK experience, 1840-1940', *AHR*, 42, 1995, p. 188.

⁴³ F. Capie, 'Preferences in meat in England and Wales, 1920-1938', *Bull Econ Res*, 28, 1976, p. 93.

⁴⁴ R. Duncan, 'The demand for frozen beef in the UK, 1880-1940', *Jour Agric Econ*, 12(1), 1956, p. 83.

⁴⁵ S. Moore, 'The real "Great Betrayal"? Britain and the Canadian cattle crisis of 1922', *AHR*, 41, 1993, pp. 156-60.

demand from the English grazier. Nonetheless, stores still dominated the market. Moreover, store production tended to follow the seasonal pattern of grass growth, and in view of the essentially pastoral nature of the economy, the lack of balance between grassland and arable made continuity of supply a constant problem.⁴⁶ But, farmers attempted to make the best of things, and throughout the inter-war years they progressively reduced the ages at which their stores were sold, consonant with increased consumer demand for smaller, leaner animals. Thus the 3 year old 'runt', for so long the principal bovine 'export', had practically disappeared from Welsh farms by the outbreak of the Second World War.

The marketing of these store cattle might best be described as anarchic, or even shambolic. The trade remained largely in the hands of dealers (many of whom were farmers who could no longer survive in a full-time capacity), and since there were far too many of these for the volume of trade, there was a tendency for 'rings' to be formed. By so limiting the number of buyers in a given district, dealers' rings effectively reduced competition and forced down prices. Dealers buying from local farms, of course, secured the best available animals, while inferior material found its way to the local auction markets of which there were more than 2000 in Wales in 1927.⁴⁷ Whereas the Livestock Marketing Act of 1937 enabled growing numbers of finished animals to be despatched to abattoirs for sale on a grade and dead-weight basis, individual Welsh producers could rarely offer sufficient cattle to make up an economically viable consignment so that their stock had to be bulked-up with those of other farmers before being carried to distant slaughterhouses. Cattle marketed in this way generally yielded higher returns

than those realized at the fatstock auctions where, once again, dealers ring operations ensured that even a marginal increase in supply would cause prices to plummet.⁴⁸

Many of the problems confronting the marketing of cattle were paralleled in the sheep sector which, although of major significance to the hill farm, was also of growing importance on the lowland. While total sheep numbers declined towards the close of the Great War as farmers were persuaded to sell breeding stock for slaughter in response to rapid price increases, flock numbers began to recover throughout the 1920s and 1930s from 3.3 million in 1920 (the lowest level since 1895), to a peak of 4.6 million in 1939 by which year there were some 535 sheep for every 100 cattle in the Principality (Table 3).

Efforts to promote pedigree recording and flock improvement, sponsored by the Welsh Mountain Sheep Breeders Association (founded in 1904) and underpinned by Ministry of Agriculture grant aid channelled through local breed improvement societies, had led to some limited advance in overall flock quality by 1918. Even so, it was widely averred that among the general body of farmers there was an unerring tendency to select the cheapest of rams regardless of quality, and to adopt a deplorably slapdash approach to the culling of ewes.⁴⁹ But if breed improvement was making little progress, a steady advance in the quantity and quality of nutritional provision on the lowland farm offered some compensation. A combination of increased hay yields on the more progressive holdings, coupled with the availability of cheaply imported concentrates for cattle, meant that a growing proportion of lowland pasture was available for the sheep flock which had hitherto been forced to take second place to bovine

⁴⁶ A W Ashby and T Lewis, 'The cattle population of Wales and the cattle supply', *WJA*, 5, 1929, pp 12-15.

⁴⁷ T Lewis, 'The marketing of cattle in Wales', *WJA*, 5, 1929, p 41.

⁴⁸ W H Jones, 'Cooperative marketing of farm products in Wales', *WJA*, 15, 1939.

⁴⁹ Anon, 'The improvement of Welsh mountain sheep', *JUCW Agric Soc*, 11, 1922, pp 23-24.

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TABLE 3
The sheep population of Wales*

Years	Total (millions)	Ewes and rams for breeding (percentage)	Sheep of 1 year old and above (percentage)	Sheep of less than 1 year old (percentage)
1915-19	3.83	43.3	24.2	36.5
1920-24	3.46	42.8	17.3	39.3
1925-29	4.02	44.8	14.4	40.3
1930-34	4.26	46.5	11.7	40.8
1935-39	4.44	49.5	8.2	42.3

*As this table is based on the 4 June returns, numbers of younger sheep may be an underestimate for many would have been sold by this date.

Source: as for Table 2.

stock. So, while cattle and sheep numbers tended to increase in proportion, the 1930s witnessed progressive intensification of sheep on the lowland grassland/arable holding.⁵⁰ This was further facilitated by a continuing decline in the numbers of 2-3 year old wether sheep which, for generations, had been the prime source of Welsh mutton. As consumers came to demand younger, leaner lambs, and government grading schemes, aimed at achieving carcass uniformity, began to take effect, so age at slaughter was reduced and the proportion of sheep of more than one year old fell from 24 per cent in 1915-19 to 8 per cent in 1935-39 (Table 3). Indeed, by the later period the majority of these older sheep were females being bred as stock replacements. True, mutton continued to be produced in parts of the uplands of Merioneth, Radnor and Brecknock, but over the Principality as a whole, sheep producers on all but the more extreme hills would henceforth direct their attention towards the fat lamb trade.⁵¹

For the hill farmer, the inter-war decades represented a period of largely unrelieved physical and financial struggle. The rigid structure of the hill system, limited to outputs of wool and store stock by the combined rigours of altitude, elements and

soils, and subject to wide variations in lamb yields and the capricious nature of sheep prices, meant that farming at any level was a constant and unremitting challenge. The brisk demand in breeding ewes from lowland producers offered a living in the early post-war years, but the slump in mutton and wool prices to 34 per cent and 62 per cent below the base level of 1911-13 created profound economic difficulties by the early 1930s.⁵² Despite recovery in the overall prices of cattle and sheep products between 1934 and the outbreak of the Second World War, hill producers derived little benefit due to the inevitable lag in the adjustment of store prices to the improved returns from finished animals. Meanwhile migration reduced the availability both of family labour and of local co-operative help, and as hill populations fell to 0.5-0.8 persons per 100 acres by 1940, periodic farm tasks became increasingly difficult to perform.⁵³ Reflecting both the human population decline and the declining ratio of cattle to sheep, the botanical composition of upland swards began to deteriorate as bracken began its insidious spread across the hills. The reduction of the numbers of hill cattle and, to a lesser extent, wether sheep, severely limited the

⁵⁰ J G Williams, 'Changes in the sheep population of Wales', *WJA*, 8, 1932, pp 59-60.

⁵¹ E C Harry, 'Some aspects of the sheep industry in Wales', *WJA*, 15, 1939, p 132.

⁵² D Grigg, *English Agriculture: An Historical Perspective*, 1989, pp 238-39; E Whetham, *Beef, Cattle and Sheep, 1910-1940*, 1976, *passim*.

⁵³ This contrasts with 1.5-2.0 persons per 100 acres of lowland rural Wales.

control of the coarser and less productive grass species with clear implications for livestock output.⁵⁴ Hill farmers in possession of suitable land followed their low-land colleagues and tried their hand at milk production, although considerations of access, slope and terrain limited the extent to which this was possible. But in essence the inter-war years witnessed a serious deterioration in the fortunes of hill farmers and the physical condition of their holdings, a situation which would only be relieved with the passage of the Hill Farming Act (1946) and the Livestock Rearing Act (1951), by which official financial aid was provided to sustain human and animal populations in the hills and uplands.⁵⁵ It is probably not overstating the case to claim that this legislation, in facilitating the application of wide-ranging methods of hill land improvement pioneered at the Welsh Plant Breeding Station, was virtually the salvation of Welsh hill farming. In the absence of grant aid and subsidy, the hills and their human population would ultimately have succumbed to the unwelcome advances of bracken and scrub.

In May 1929, the *Carmarthen and Teifside Advertiser* covered a demonstration of the new International 'Farmall' tractors, held at Synod Inn, Cardiganshire, an event which seemingly 'caused a great stir'.⁵⁶ But, as with kindred mechanical contrivances, this lightweight machine, capable of turning on its own length, failed to make any significant inroads on the primary source of farm tractive power, the horse, in the years preceding the Second World War. Although total horse numbers in Wales declined from 174,000 in 1915-19 to 121,000 in 1935-39, this decline arose, in the main, from a reduction in the numbers of riding and cob animals, and

the continued dominance of the horse on the farm was such that by 1939 there were only 1932 tractors in the Principality. Horses, of course, were expensive to keep, profligate in the use of land and, for much of the year, under-utilized. At peak periods of springtime cultivation and haytime they tended to work constantly, but for the rest of the year, apart from autumn ploughing and dung-carting, they ate steadily but worked sporadically. Yet horses remained indispensable and even with the reduction in arable acreage, the increased use of horse-drawn hay mowers, turners and tedders and the need to shift root crops for livestock in the winter months ensured their continued ubiquity.⁵⁷ Many regarded the horse as a tried and trusted companion, and if the tractor offered the potential for flexibility and greater efficiency in time-liness of husbandry operations, farmers remained suspicious of investing capital in the early machines which, after all, were of questionable reliability, demanding of off-farm inputs and carried annual depreciation charges. This apart, the work range of the tractor was severely limited prior to the invention of the hydraulic three-point linkage system in 1934-35 and, indeed, there were only some 2000 of these machines in operation in Britain by 1939. Before the tractor became an irresistible force in Welsh agriculture after the Second World War, farmers went to some trouble to maintain and improve the quality both of the native cob (used primarily for market and hack work) and of the Shire, the principal motive force on the land.⁵⁸ Aided by grants under the 1914 Livestock Improvement Scheme, local heavy horse societies annually arranged for quality, disease-free travelling stallions to visit their locality to cover members' mares. Typically, the North Pembrokeshire Shire

⁵⁴ A W Ashby and J R E Phillips, 'Some aspects of the hill sheep farming in Wales', *WJA*, 17, 1943, p 74.

⁵⁵ Jones, 'Welsh agriculture in transition', p 290.

⁵⁶ *CTA*, 31 May 1929.

⁵⁷ J Davies, 'Horse labour on Welsh farms, 1821-1927', *WJA*, 6, 1930, pp 46-47.

⁵⁸ R J Moore-Colyer, 'Horses and equine improvement in the economy of northern Wales', *AHR*, 39, 1991, pp 126-42.

Horse Society hired the stallion 'Folville Blue Blood' at a cost of £250 to travel the area in the 1915 covering season. A grant of £40 under the scheme allowed the 110 society members to have their mares covered at fees of 2 guineas (for farms of more than 100 acres) and £1 8s 0d for occupiers of smaller holdings.⁵⁹ While it is difficult to provide unequivocal data, it is generally evident that the more substantial farmers, if not their lesser brethren, were more readily prepared to pursue equine improvement than to attend to enhancing the quality of their other livestock species.

III

Of the multiplicity of food products sold by British farmers, liquid milk remained one of the few immune to overseas competition. As the image of milk as a food improved along with progressive legislation against adulteration, demand for the product had steadily increased throughout the later nineteenth century when breast feeding by children became less common and tea-drinking became virtually ubiquitous among adults of all classes.⁶⁰ Despite Victorian legislation and the provisions of the Milk and Dairies Order of 1908, milk was by no means a totally 'safe' commodity, and if milk production was to be the economic salvation of many farmers in Wales and the rest of the UK in the 1930s, it was perceived by many as 'liquid dynamite' in the earlier decades of the present century. The serious problem of bacterial contamination was vigorously addressed by the newly-established Natural Institute of Research in Dairying at Shinfield, near Reading, whose efforts, along with the activities of government-appointed advisory bacteriologists, lay the basis for the principle of 'clean milk production'. This eventually came to embrace tubercu-

lin testing and the production of graded milk of low bacterial count, both being facilitated by the development of on-farm cooling methods and rapid advances in dairy technology.⁶¹ At the local level, sterilising service was performed by peripatetic dairy instructors operating under the aegis of the county authorities or, in the case of south-west Wales, working directly from the Dairy School at the University College in Aberystwyth. Butter making and clean-milk production classes were regularly held in farmhouses, vestry rooms, parish halls, village schools and even the stable yards of local pubs, their activities being set out in the local press. In June 1925, chastely reported Miss R M Evans, the two-week class in dairying at Lampeter successfully came to a close with a tea, concert and 'appropriate' social activity.⁶² Three years later thirty maidens and matrons successfully completed a dairy course at Hafod Farm, Verwig, Cardiganshire, during which they were joined by children from the upper standards of the village school who apparently approached the matter of clean-milk production with enthusiasm and gusto.⁶³ Meanwhile, competitors in the dairy competition held at Boncath, Pembrokeshire, in 1926 were honoured by the lofty presence of Professor R Stenhouse Williams, director of the NIRD, who in congratulating them on their efforts suggested that 'a decent pair of clogs' might more befit a dairymaid than the 'dancing shoes' worn by most of the girls.⁶⁴ If patronizing remarks like this failed to sour the milk, they probably did little to advance the cause of the NIRD in west Wales!

Compared with countries on the continent of Europe, consumption of liquid milk in Britain remained low at 20 gallons per head per year in 1925, and the govern-

⁵⁹ CTA, 19 March 1915.

⁶⁰ P J Atkins, 'The retail milk trade in London, ca 1790-1914', *Econ Hist Rev*, sec ser, 33, 1980, p 537.

⁶¹ E C Crossley, 'A half-century of dairying: from tradition to technology', *J Soc Dairy Tech*, 29, 1976, p 5.

⁶² CTA, 12 June 1925.

⁶³ *Ibid*, 26 Oct 1928.

⁶⁴ *Ibid*, 3 Sept 1926.

ment was anxious to promote consumption as production rose from 20 per cent of gross agricultural product in 1908 to 27 per cent in 1930.⁶⁵ To some extent this was achieved by way of the school milk scheme by which schools were provided with milk at a reduced price from accredited producers capable of supplying 'clean' milk. The regular inspection of farm dairy facilities, and the bacteriological examination leading to accreditation, yielded 11,228 accredited producers in England and Wales by 1935, although of that number only 896 were registered in the Principality.⁶⁶ Milk production, of course, was characterized by markedly seasonal surpluses; some 20 per cent in the winter and 40 per cent in the summer months.⁶⁷ Traditionally, much of the seasonal surplus had been converted to butter and cheese, but by the mid-1920s the pressure of imports had so eroded the market that farmhouse cheesemakers and factories were in rapid decline, while butter-making only remained significant in localities where lack of access to the railways made the liquid milk trade impracticable. So it was that by 1930 three-quarters of all milk sold was in the form of the liquid product, destined primarily for the urban market.⁶⁸ Although the level of rail charges was a source of constant complaint, and operation in an unrestricted market not without its risks, liquid milk production was generally profitable. Some farmers were wary of rushing wholesale into a trade which would make them largely dependant on a single product sold on a market subject to periodic glut, but others readily embraced the system, viewing it as a means of riding out the storm of

depression which ravaged other sectors of the farming industry.⁶⁹

As was so often the case, progress towards the achievement of clean milk production in Wales lagged behind that of other parts of the UK. To the chagrin of many observers, including some of the more efficient farmers, Welsh dairying at the beginning of the present century had largely failed to come to terms with modern methods. Little attention was devoted to selection of cows according to yield, to rationalizing calving patterns as a means of promoting continuity of milk supply, or to compliance with the legal requirement whereby unadulterated milk should contain not less than 3 per cent fat and 8.5 per cent solids-not-fat. In the meantime, many buildings were totally unsuited to milk production, while the management of cows was only marginally less rudimentary than the outdated wooden utensils used for dairy purposes.⁷⁰ It was hardly surprising then, that Welsh butter (the main component of dairy output for those many farmers whose holdings were remote from the railway) was of generally inferior quality and unable to compete with imported Irish, Continental and Colonial supplies.⁷¹ Welsh butter, claimed the Teifi Vale Co-operative Society in 1904, had a bad name and commanded a bad price, especially when in competition with the uniform and graded product from Ireland.⁷²

⁶⁵ *Departmental Report on the Fluid Milk Market in England and Wales*, 1927.

⁶⁶ J R E Phillips, 'The milk marketing scheme in Wales, 1934-35', *WJA*, 12, 1936, p 97.

⁶⁷ D Taylor, 'The English dairy industry, 1860-1950: the need for a reassessment', *AHR*, 22, 1974, p 153.

⁶⁸ D Taylor, 'Growth and structural change in the English dairy industry, 1860-1930', *AHR*, 35, 1987, p 88.

⁶⁹ C Hallas, 'Supply responsiveness in dairy farming: some regional considerations', *AHR*, 39, 1991, pp 14-15; E H Whetham, 'Supply responsiveness in dairy farming: a note', *AHR*, 39, 1991, p 169.

⁷⁰ E Hughes, 'Some observations on dairy farming in Cardiganshire', *JUCW Agric. Soc.*, 1, 1909, p 18. In 1917, the year in which the first milking machine in Cardiganshire was installed at Blaenpant, by J E James of Newcastle Emlyn and 'caused quite a sensation', the Carmarthenshire County Council expressed grave concern over the poor hygiene standards on dairy farms. However, the shortage of labour availability for building repairs and upgrading was exacerbated by wartime conditions. Nevertheless, such was the public concern over the spread of tuberculosis, that they instructed officials to inspect all milk-producing premises and to order defects to be remedied within a specific time if dairying was not to be prohibited on those farms: *CTA*, 6 April and 3 Aug 1917.

⁷¹ Butter and cheese imports in 1900 were valued at £17 million and £5 million annually: W Williams, 'The farmers' needs', *JUCW Agric. Soc.*, 2, 1901, pp 11-17.

⁷² *CTA*, 10 June 1904.

For generations dairymen in the southern and western counties of Wales had produced casked, salted butter for the industrial markets of the south, but taste for this product had so declined in the face of imports of standardized butters that it had been largely driven from the market. By 1910, for all the well-intentioned promotional and educational efforts of the county councils and the University College of Wales, farmers themselves had done little to change the quality and image of their butter, seemingly viewing the deteriorating market conditions with blithe indifference. In fact, to many, dairying was 'almost beneath their consideration', and as they applied themselves to the more agreeable tasks of sheep and cattle management, they regarded butter-making rather contemptuously as 'women's work'.⁷³

From a structural standpoint Welsh dairy farming was hampered by a combination of seasonal irregularity of milk supply and the location of many of the small producers some distance either from a weekly market or from a creamery. Carmarthenshire, very much the centre of the nineteenth-century Welsh dairying industry, was favoured with several creameries by 1880, including a *dépôt* at St Clears which was specifically concerned with the blending of butter. Several decades later further *dépôts* had been established at St Clears, Laugharne and Whitland whence liquid milk was despatched by rail to Cardiff, so that by 1910 the *Cardigan and Teifside Advertiser* was able to lament the decline of local cheesemaking consequent upon the 'export' of milk from the area.⁷⁴ At much the same time, new butter-blending factories were being opened at Llandysul and Newquay in Cardiganshire, their steam-

operated machinery processing some 6 tons weekly and thereby saving local farmers the need to sell their butter on the notoriously fluctuating Carmarthen market.⁷⁵ Unfortunately, a combination of locational problems, management incompetence and the failure of farmers to appreciate the complexities of the dairy trade, led to the collapse of many of these burgeoning ventures in the medium term.⁷⁶ The answer would seem to have been the establishment of co-operative dairy enterprises on the Irish model, in order to ensure that milk, butter, cream and cheese would remain in the farmers' control until they reached the customers' door. This was all the more compelling since as late as 1922 some 30 per cent of Welsh milk (compared with 10 per cent in England) was still being processed into butter. Some inroads, however, had been made by this date, with the four counties of north Wales being served by 30 co-operative creameries catering for remote and inaccessible areas wherein farmers would not previously have attempted to produce milk or dairy products in quantity.⁷⁷ From Anglesey, for example, not more than half-a-dozen farmers sold milk to the mainland in the 1920s, but with the opening of a co-operative creamery in Bangor in 1934, an important marketing opportunity presented itself. Aided by increasingly sophisticated motor lorries, some 200 of the island's 620 registered producers were despatching their milk to the Bangor outlet by 1939 and, taking advantage of pricing schemes aimed at reducing winter milk shortages, eventually found it possible to abandon seasonal production in favour of level output. The overall effect of the developments at Bangor was to shift milk away from the traditional systems of store cattle raising

⁷³ E. Evans, 'Dairying in Cardiganshire', *JUCW Agric Soc*, 1, 1909, pp. 14-18. This may seem surprising in view of the growing importance of dairying to the farm economy. Yet, as A. G. Street repeatedly observed, the 'cow-keeper' was universally regarded as socially inferior to the 'proper' farmer: the man who grew his corn and fattened his stock, however unprofitably.

⁷⁴ *CTA*, 2 Dec 1910.

⁷⁵ *Ibid.*, 20 March 1908.

⁷⁶ E. Williams, 'The Carmarthenshire butter trade', *Carmarthenshire Antiquary*, XX, 1954, p. 74.

⁷⁷ R. G. White, 'Cattle breeding and dairying in Wales', *JUCW Agric Soc*, 11, 1922, p. 13.

and localized butter making to wholesale trading in the liquid product.⁷⁸ But despatch of milk or butter to co-operative or wholesale outlet inevitably involved costs, both of rail transport and of transit to the railhead, the latter amounting to 1.54d per gallon where a horse-drawn float was employed, and 1.25d when produce was carried by motor van.⁷⁹ Farmers living in close proximity to the industrial valleys of the south could ignore the wholesale/co-operative system and operate as producer-retailers. Desperate to make some sort of living in the teeth of the prevailing depression, many went into this trade with little knowledge of hygiene matters and a vestigial understanding of its business aspects, and as they engaged in savage price-cutting strategies, few individuals operated at satisfactory levels of profit. Often with minuscule herds of 3 or 4 cows, they delivered liquid milk from door-to-door by float or hand-cart, and since it was necessary to return to the farms shortly after midday to attend to routine tasks and the afternoon milking before trudging off with the evening delivery, this was not a job for the faint-hearted. Many pundits took the view that the local producer-retailer did little to enhance the image of milk, and looked forward to the day when a rational pricing system and a general realization of the benefits of economies of scale would drive these small men of 'inadequate knowledge' back into systems of farming of which they had greater understanding.⁸⁰

Of major significance to milk production and marketing in the Principality was the Milk (Special Designations) Order of 1923 which introduced a pricing system whereby certified and graded tuberculin tested milk commanded a higher return

than the ungraded product. Public health and education authorities, drawing upon experience gained in the previous decade, subjected all milk producers to routine inspection of premises and bacteriological examination of milk, before certifying that a given farmer could market his output as 'graded milk'. The additional costs of producing graded milk (including, in particular, the requirement for steel utensils and efficient cooling equipment) were passed to the consumer in the form of a higher price, and the fact that only 5 per cent of the milk retailed in Cardiff in 1933 was of graded quality suggests that consumers, especially in the less affluent parts of the city, were unable or unprepared to pay for this enhanced quality.⁸¹ But steady improvement was afoot, and while there were only 53 certified graded milk producers in Wales in 1931, bacteriologists regularly reported a consistent diminution in levels of bacterial contamination in milk sold from Welsh farms.⁸² Yet there were still widespread complaints of inertia. Of the 841,000 cattle in Wales in 1930-34, some 43 per cent were dairy cows or in-calf heifers, and of these only a tiny proportion was subject to any objective system of breeding selection.⁸³ The provisions of the 1914 Livestock Improvement Scheme had offered subsidies to reduce the cost of obtaining the services of a quality bull, but few farmers apparently bothered themselves with judicious bull selection, while milk recording as a basis for culling remained the province only of the enthusi-

⁸¹ *Ibid.*, p 81.

⁸² S B Thomas, 'Some aspects of the graded milk movement in Wales', *WJA*, 8, 1932, p 214.

⁸³ The structure of the cattle population changed surprisingly little through the inter-war years. From a total of 850,800 in 1915-19, numbers declined marginally in the 1920-24 period and gradually built up to 847,200 by 1935-39, while cattle under 1 year old and 1-2 years old changed little from the mean of 24 and 22 per cent throughout the inter-war period. Meanwhile cattle of over 2 years old declined from 11 to 9 per cent. Although the statistics do not differentiate these various classes, it is probable that many animals in the last three categories were destined to be replacements in the dairy herd.

⁷⁸ F A Barnes, 'Dairying in Anglesey', *Trans IBC*, 21, 1955, pp 138-40.

⁷⁹ J P Howell and H J Meredith, 'Farmers' costs of milk delivery in Wales', *WJA*, 3, 1927, p 45.

⁸⁰ W Jones and W Cowie, 'Retailing of milk by producers in the Cardiff area', *WJA*, 10, 1934, p 82.

ast.⁸⁴ When the United Counties Milk Recording Society met at Carmarthen at the close of 1922, only 42 herds (692 cows) were being recorded in Cardigan, Carmarthen and Pembrokeshire, and although this had increased to 49 herds (745 cows) by 1924 this was but a tiny proportion of the whole. In emphasizing the vital importance of milk recording and the enhanced price of dairy cows with recorded yields, the *Cardigan and Teifside Advertiser* exhorted farmers to join recording societies whose activities were '... far from being a mere fad for the indulgence of more prosperous farmers'.⁸⁵ Four years later, D J Morgan, the highly active county agricultural organizer for Cardiganshire, reported that with 25 herds being recorded, his county was at the forefront of milk recording in Wales and that if more farmers joined the local milk recording society, the modest membership fee of £1 for the first year and 10s for each subsequent year (with a further charge of 6s 6d per cow recorded) might be further reduced.⁸⁶ The apparent indifference of farmers to milk recording was also reflected in their attitude towards grassland management and renovation as a means of improving stocking capacity. Although it was clear to all by the mid-1920s, that the prevailing cheapness of imported cereal and protein feeds would not last for ever, and that a period of low prices and comparatively high costs lurked below the horizon, there was little urgency to adopt the grassland improvement measures so clearly demonstrated at the Welsh Plant Breeding Station. Indeed, it would take a war to reinforce this message, and as late as 1938 some 60 per cent of starch equivalent and 72 per

cent of protein equivalent fed to Welsh dairy cows derived from concentrated feeds.⁸⁷ The era of milk production from grass and grass products with concentrates as stimulatory adjuncts was essentially a post-war phenomenon.

Directly linked to dairying in many of the lower-lying parts of Wales, pig production expanded in the inter-war years with numbers increasing from 217,000 in 1915-19 to 239,400 at the outbreak of the Second World War. Whereas in the more remote butter-making areas, skim milk tended to be fed to calves, the pig came into its own in those localities from which liquid milk was 'exported', where it was called upon to consume seasonal surpluses. It was for this reason that the counties of Flint and Denbigh (selling milk into Liverpool) and Glamorgan and Carmarthen (supplying the industrial valleys) had among the highest densities of pigs in the Principality. The period under review witnessed important changes in the breed structure of the population as upgrading boars, introduced under the Livestock Improvement Scheme, imposed their genotype on the mixed bag of Middle Whites, Gloucester Old Spots and Large Blacks comprising the bulk of the national herd.⁸⁸ The Large White and Landrace, together with the Landrace-like Welsh pig (officially constituted as a breed in 1923) would henceforth come to dominate pig production with clear consequences for the prolificacy, efficiency and maturity characteristic of pigs on the farm.⁸⁹ To many producers, however, pig production was regarded as a supplementary or scavenging enterprise, and the drive for efficiency awaited post-war developments in intensification. Cottagers, on the other hand,

⁸⁴ E G Owen, 'Dairy farming in Wales', *JUCW Agric Soc*, 17, 1928, p 39.

⁸⁵ *CTA*, 5 Jan 1923, 11 and 19 Jan 1924.

⁸⁶ *CTA*, 20 Jan 1928. John Lewis, the senior milk recorder in Cardiganshire took 539 samples from individual cows in 1928, 58 of which were below the 3 per cent fat standard required by law. Subsequently Lewis went on to become director of dairying at the University College of Wales, which post he held until the early 1970s.

⁸⁷ These figures fell to 51 and 57 per cent by 1942 as a consequence of substitution by hay, straw and root/green crops: J D Griffiths, 'The changeover to wartime milk production', *WJA*, 17, 1943, p 36.

⁸⁸ *CTA*, 24 Dec 1923.

⁸⁹ T Lewis, 'The production and marketing of pigs in north Wales and Cardigan', *WJA*, 6, 1930, pp 67-73.

continued to take the pig very seriously, and the exclusion of holdings of less than 1 acre from the statistics, probably underestimates the importance of the pig to the economy of the small holder or by-employment part-time farmer. As the Begelly (Pembrokeshire) smallholder W R Morgan recalled in his memoirs as he described taking the family sow on a two mile journey to receive the services of the local boar, the cottager of the 1920s continued to rely upon the bacon pig to supply his family with meat and lard for the winter months.⁹⁰

IV

The pioneering work of the Aberystwyth-based Assistant Advisory Economist for Wales, J Pryse Howell, provides invaluable data for an assessment of the varying financial fortunes of different categories of Welsh farms during the difficult years of the 1930s. Howell undertook detailed annual surveys of between 50 and 60 farms of over 20 acres in extent, with the objective of ascertaining fluctuations in farm income on four general classes of holdings. These comprised 'Cattle and Sheep (Poor land)', generally upland farms with a high proportion of rough grazings; 'Cattle and Sheep (Better land)', broadly similar holdings but with a lower proportion of rough grazing; 'Mixed (lowland) Farms'; and 'Cattle/Dairy Farms', which were essentially lowland operations with primary emphasis on dairying.⁹¹ Given that the number and size of farms within the different categories varied each year, direct comparisons are of questionable value, although transposing the figure to a per

100 acre basis as in Table 4 allows for meaningful comparisons of temporal changes in income of these generally undercapitalized holdings.⁹²

The exclusion of holdings of less than 20 acres from Howell's surveys obviates any discussion of the general effect of depressed agricultural conditions on the plight of the part-time farmer or smallholder. On the other hand the data highlight the stark financial realities faced by full-time farmers on the various categories of holdings where, in the broadest of terms, the best returns were obtained by those farms with the lowest proportion of tillage crops and the minimum of hired labour. The depression of 1929-32, in effect, led to significant financial loss for many Welsh farmers, and their capacity to surmount such losses in the later 1930s depended largely upon the type of farming system they pursued. Since, on all farms, some 75 per cent of capital was invested in livestock, 8 per cent in crops and 17 per cent in implements of various descriptions, the economy was highly sensitive to fluctuating livestock prices. Table 5, in which total farm receipts are set out on the basis of farm size, further underlines this point.

In all cases livestock and livestock products yielded in excess of 90 per cent of output, and it is particularly noteworthy that on the smallest farms, sales of pigs and poultry/eggs represented a disproportionately high component. Poultry, in particular, regarded as the perquisite of the farm women, could be kept at low cost with cheap imported maize, and with the introduction of breeds like the Rhode Island Red and Red Leghorn in the 1920s, the potential for egg production was substantially increased. Throughout Wales as a whole, poultry numbers rose from 3 million in 1921-25 to 4.7 million in 1935-39 and although by the mid-1930s egg prices

⁹⁰ Morgan, *A Pembrokeshire Countryman*, p 52.

⁹¹ Howell's assessment of farm income represented the margin between gross output and gross expenditure corrected for valuation changes. Expenditure on hired and family labour was included, together with a figure to take account of perquisites and the value of board and lodging *in lieu* of wages, besides which a value was attributed to the quantity of farm products consumed in the house. In effect, farm income provided the reward to the farmer and his wife, and return on capital employed.

⁹² Average capital deployed per 100 acres between 1925 and 1934 was as follows: cattle and sheep (poor land) £388; cattle and sheep (better land) £815; mixed farms £917; cattle/dairy £1153.

TABLE 4
Farm incomes in £ per 100 acres on Welsh farms, 1929-1939

Years	Cattle and sheep (poor land)	Cattle and sheep (better land)	Mixed farm	Cattle/dairy
1929-30	80	122	70	351
1930-31	56	152	87	168
1931-32	-4	-20	36	140
1932-33	-18	5	-50	68
1933-34	27	0	8	169
1934-35	32	44	260	163
1935-36	36	87	178	240
1936-37	58	54	211	130
1937-38	54	74	189	221
1938-39	12	3	131	239

Source: J P Howell, 'The financial results of different types of farms in Wales', *WJA*, 12, 1936; *WJA*, 13, 1937; *WJA*, 14, 1938; *WJA*, 15, 1939.

TABLE 5
Percentage receipts on Welsh farms of various sizes, 1929-1938

Produce	Under 50 acres	51-99 acres	100-149 acres	Over 150 acres
Cattle	14.9	19.5	26.9	27.3
Dairy products	35.4	37.8	27.0	23.9
Sheep and wool	5.4	13.0	17.9	20.4
Pigs	22.4	10.8	12.3	14.3
Poultry and eggs	18.0	10.3	5.4	5.0
Horses	0.6	1.7	3.1	3.1
Crops/sundries	3.3	6.9	7.4	6.0

Source: as for Table 1.

fell relatively faster than feed costs, modest-scale poultry production continued on many farms, following an overall increase in egg sales of 59 per cent between 1931 and 1934.⁹³ Given that some 300 million eggs were annually consumed in Wales relative to an output of 150 million, there was potential for further expansion, yet this was restricted by farmers' unwillingness to divert grain from other livestock to what many misguidedly saw as little more than a 'pin-money' operation.⁹⁴

It is clear from Table 4 that the first four years of the 1930s provided little or no real surplus for private expenditure, and in many cases farmers were obliged to draw

upon earlier savings for this purpose. While the Ministry of Agriculture's index of farm prices fell from 126 in 1929-30 to 86 in 1933-34, feed and fertiliser costs fell by a mere 10 per cent, with labour costs soaring to some 70 per cent above pre-war levels.⁹⁵ There was gradual, if fluctuating, improvement over the next five years, yet the fact remained that on the two categories of cattle and sheep farms, income averaged a derisory 4s per week per 100 acres between 1935 and 1939. This contrasts to 48 s and 60s on mixed and cattle/dairy holdings, the fortunes of the former group being largely dependent on producing a high proportion of output in the form of store or finished cattle, or animals suited as replacements for farmers managing

⁹³ Once again, exclusion of holdings of less than 1 acre from the statistics must inevitably have underestimated poultry numbers: J S Smith, 'The profitability of poultry enterprises in Wales', *WJA*, 13, 1937, p 117.

⁹⁴ *CTA*, 8 Aug 1929.

⁹⁵ J P Howell, 'Economic depression in Welsh farming', *WJA*, 11, 1935, p 12.

dairy herds. It was the latter, for all the deficiencies described earlier, which weathered the depression. Taken as a whole, acceptable working profits on Welsh farms in the 1930s depended very much on the extent to which they had either developed specialist dairying operations or, in the case of mixed lowland units, contributed to the expansion of dairying by way of heifer rearing or the production of fodder for sale.

V

The evidence presented above suggests that against a background legacy of inadequate farm buildings, shortage of capital and deeply-seated conservatism, Welsh farmers attempted, where it was practically feasible, to accommodate depression by adopting dairying systems. Armed with advice from peripatetic dairy instructors and supported by the increasing availability of organized markets for their product, especially after the inception of the Milk Marketing Board in the mid-1930s, they effectively adjusted to the expanding national demand for liquid milk. Yet in this, and other areas of farming activity, they appear to have been reluctant to invest in innovative measures. There were, after all, plenty of new ideas abroad, emanating from the Ministry of Agriculture, the National Institute of Research in Dairying, the Welsh Plant Breeding Station and elsewhere. Milk recording, the use of quality bulls and rams, grassland improvement and other measures were practical techniques which could be put into effect at relatively little expense and which, in the medium term, would yield abundant rewards. But farmers were

suspicious. Well-schooled in the memory of the often scatterbrained 'improvement' schemes of many nineteenth-century Welsh landowners, they took a sceptical, if not jaundiced, view of investing time and money in land and livestock improvement where the prospect of short-term profit was remote. Grassland renovation was all very well – and many farmers expressed their interest in regularly visiting the Plant Breeding Station and attending local lectures on the subject – but there seemed little purpose in improving grazing merely to flood an already overburdened market with more store or finished sheep and cattle. Faced with a depressed market for most farm products, it seemed logical to cling fast to one's limited savings and only to invest in agricultural improvement in the unlikely event of capital being generated from profits. As bank managers clamoured for interest repayments on recently-purchased farms, little cash remained for management income, let alone capital accumulation and expenditure, and as confidence fell, many of the basic tenets of good farming were abandoned. In a sense, this initiated a vicious cycle whereby bad farming resulted in dereliction, leading to psychological depression and further bad farming, a cycle which, incidentally, may yet prove to be in its early stages at the present stage of the twentieth century. In any event, throughout much of Wales, economic and agricultural depression came perilously close to permanently damaging the fragile cultural and environmental framework of the country, and it was only with financial help and infrastructural change after the Second World War that the agricultural community returned to some semblance of relative prosperity.