

Some Welsh Breeds of Cattle in the Nineteenth Century

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THE quiet revolution in livestock breeding which played so significant a part in the evolution of English farming during the eighteenth century created an awareness among farmers and landowners of the financial benefits to be gained from adopting an enlightened approach towards animal husbandry. The increased demand for meat from an expanding population, coupled with the fact that livestock breeding was "fashionable," encouraged farmers to follow the lead of such men as Webster, Bakewell, and Canley in taking a rational and critical view of cattle improvement.

In general, however, the gentleman farmers of Wales did not share the enthusiasm of their English counterparts with the inevitable result that, in the main, the *pot-pourri* of native stock remained largely unimproved until the latter part of the nineteenth century. As late as 1853, R. H. Jackson wrote to Edward Jones of Glansevern complaining bitterly about the attitude of the Welsh landlords towards stock improvement; "... had the attention of the Welsh gentry been given to the improvement of the native breeds, we should ere this have had a description of cattle indigenous to Wales far superior to any of the Highland or Ayrshire . . . our attention to breeding has been literally worse than nothing; the best stock being invariably sold out of the country, added to which a great deal of prejudice has existed among people of capital and influence against anything Welsh."¹

At this point it is perhaps worth pausing to discuss some of the technical problems which confronted the Welsh farmer who may have considered embarking upon a programme of breed improvement. While the technical capacity to develop a superior strain within a breed of cattle may be available, the effort expended in so doing is justified only if the environment is modified in such a way as to exploit the enhanced genetic potential of the "improved" animals. Thus as the genetic potential for growth-rate and the capacity for fattening increases so must the level of nutrition improve; a fact recognized by Bakewell and Rowlandson among others. In the harsh upland environment of Wales the capital cost of improving grassland was often prohibitive, particularly where the major proportion of farm income was derived from such low-output enterprise as store-cattle production. This was the first obstacle to the improvement of native stock. The second obstacle was also based largely upon economic considerations. The principles of improvement advocated by Bakewell and his associates aimed to fix the breed type by concentrating all the desirable characteristics as a result of close in-breeding. During the process of any close inbreeding programme a considerable proportion

¹ National Library of Wales, Glansevern, MS. 2374.

of the progeny exhibit undesirable characteristics, in particular the characteristics of reduced vigour. In order to prevent the spread of this inferior genetic material throughout the population such individuals have to be vigorously culled. If this were not done inbreeding depression would rapidly reduce the vigour of the race to the extent that its very survival would be threatened. Had the Welsh farmers been sufficiently affluent to undertake long-term inbreeding programmes of the Bakewellian type and to stand the expense of rejecting undesirable material, then the process of inbreeding could have been used to establish a uniform type whilst at the same time preserving important indigenous characteristics such as hardiness and the ability to withstand adverse environmental conditions. However, the majority of Welsh farmers preferred to follow the cheaper method of cross-breeding as a means of upgrading the value of native stock, a policy which was often unsuccessful owing to lack of consideration for environmental factors. Thus, although the imported breeds introduced characteristics of early maturity, the resultant cross-breds were unable to tolerate the harsh climatic conditions of upland Wales.

The absence of attention to the improvement of indigenous Welsh cattle is reflected in their lack of success in an exhibition of livestock held at Gloucester in 1853: "... The Welsh breed was a complete failure: £70 was offered, for which only five animals were shown and these were not worth the amount of the prizes."¹ As hinted above the evidence suggests that gentleman farmers were more interested in experimenting with the introduction of improved English stock than selection within the native breeds. This practice was largely condemned by contemporary agricultural writers, who realized that no significant advances could be achieved by cross-breeding unless the native breeds were initially improved by close inbreeding followed by culling of animals exhibiting undesirable characteristics. In 1887 Morgan Evans wrote of Anglesey cattle: "They cannot be improved by crossing with English breeds. They will not blend with foreign blood; the colour becomes destroyed and the type broken and the produce cannot be reduced to a uniform standard."² However, it appears that some breeders were successful with the English crosses. The Rev. J. E. Vincent noted that in 1832 an Anglesey dealer in a substantial way of business "... gave the greatest price for three year old half-bred Short-horn × Anglesey cattle and that they were the only lot in that drove that he made money of."³ Unfortunately many landowners attempted to introduce English blood into regions which were environmentally unsuited with the result that the performance of subsequent cross-breds was considerably below potential. Accordingly, small farmers became highly suspicious of the supposedly superior English stock. In an edition of the *General View of the Agriculture of Pembrokeshire* held by the National Library of Wales, Charles Hassall condemned the introduction of Leicester blood to Pembroke stock: "These cattle crossed with ours made them altogether ill-calculated for stocking in this district. By this fatal error our farmers

¹ *Journal of the Royal Agricultural Society of England*, xiv, 1853, p. 457.

² See J. Coleman, *The Cattle, Sheep and Pigs of Britain*, 1887, pp. 210-11.

³ N.L.W., MS. 18062.

became more than ever attached to their own breed and prejudiced against anything that bore the name English." An anonymous marginal note in the same edition comments: "I procured the names of the introducers of the new breeds of cattle, but I do not think it necessary to publish them. When they got their oxen fat for market they could find no purchaser. The drovers come into this country for pure Pembroke cattle and for them only." This observation is borne out by the answer of the Rev. Mr Herbert of Dolgellau to a questionnaire included in Kay's *General View of the Agriculture of North Wales*. Regarding the cattle of Merionethshire, he wrote: "Some gentlemen have lately introduced the English breed, but the farmers don't like them so well, as the drovers are not so apt to buy them as the old black breed."

The influence of the cattle trade with the English Midlands upon the development of local breed types in Wales has not been fully investigated, but contemporary evidence would indicate that where a constructive breeding policy was operated animals tended to be selected on the basis of their meat-producing rather than milking potential. In Cardiganshire Thomas Lloyd found the local cattle "... to be less milky than most breeds, but as the country in general places more dependence on the drover than on the dairies, this objection may be no great disadvantage to the farmer."¹ Ironically enough, the drovers, who formed a key link in the chain of trade between Wales and England, have often been cited as obstacles to livestock improvement. One example of this may be seen from a letter written to G. Kay, compiler of the *General View of Caernarvonshire*: "The drovers, I was informed, are great enemies to the improvement of stock; and the reason assigned for it is that were larger and finer cattle reared, they might meet with more rivals in the trade, which is at present in a very few hands by which means they have both credit and prices on their own terms."² In North Wales the drovers tended to prefer the small hardy native breed, which would thrive not only on the rich old fattening pastures of the English Midlands but also on the heavy clay values of Essex. The Northamptonshire grazier, Samuel Arnsby, rhapsodized on the qualities of the North Wales cattle in a letter to the *Farmer's Magazine* in 1859. Having praised the virtues of these cattle as scavenging grazers, he pointed out that "... the North Welsh cattle are second to none in strength of constitution, which is the foundation of sound and profitable breeding; an animal weak in stamina may be compared to a bell without a clapper."³ An important feature of autumn pasture management involves reducing the surplus grass on the pastures to a minimum before the winter frosts. By so doing "winter kill" is reduced and growth of the grass in the subsequent spring is not retarded. In 1866 Moscrop noted that in Leicestershire there was a considerable demand for Welsh runts to scavenge the autumn pastures. These 4-5-hundredweight animals were stocked at the rate of one beast per 10 acres "... by which means the hardy Welsh runts improve in condition throughout the

¹ *General View of the Agriculture of Cardiganshire*, 1794, p. 22.

² G. Kay, *General View of the Agriculture of Caernarvonshire*, 1794, p. 19.

³ *Farmer's Magazine*, January 1859, p. 71.

Winter.”¹ Westley Richards, while complaining about the high store-cattle prices of the 1880’s, commented “. . . that in a grazing district stores must be had to eat the grass even if we have to pay too much for them.”²

There seems little doubt that the selective introduction of English bulls into areas which were environmentally favourable would have improved the potential of local breeds of native stock. Indeed, in the lowland areas of Caernarvonshire the introduction of “Bakewell and Warwickshire” breeds was highly successful and cross-bred animals were fetching £2-£3 per head more than native pure-breds when sold at three years old. Such a situation apparently did not appeal to the drovers, for as Kay’s correspondent pointed out: “The general improvement of stock by the introduction of English blood would be a great inducement to many other drovers to come into the country to purchase cattle with ready cash, instead of credit which is at present the practice, whereby many an honest farmer is duped out of his property in whole or in part.” This observation corroborates the views of John Lawrence (1805) who noted that “. . . the drovers it seems are averse to the improvement, preferring the inferior breed and price.”³

In spite of the importance of the store-cattle trade to the rural economy of Wales, it is difficult to accept that the drover’s rather negative attitude was a serious barrier to stock improvement in the nineteenth century. It is perhaps more realistic to suggest that a combination of adverse climatic conditions, shortage of capital, lack of mutual confidence between landlord and tenant, and unwillingness on the part of many farmers to accept the new turnip husbandry were some of the more important obstacles to stock improvement.⁴ Furthermore, lack of education and suspicion of innovation were certainly contributory elements and indeed may have been among the root causes. In 1849 Read wrote of the education of the Welsh farmer: “. . . not only is it totally deficient in providing a scientific knowledge of his future occupation, but the common rudiments of a sound and plain education are frequently dispensed with.”⁵

Stock improvement may be most rapid and effectively achieved by selection of superior male animals. In view of this the widely adopted practice of selling the best male animals to the drovers and keeping back the poorest calf to rear as a stock bull would have the effect of progressively worsening the quality of the animals in a given herd. Read observed “that there is not much prospect of the cattle in the

¹ *J.R.A.S.E.*, 1st ser., xxii, p. 296. ² *Journal of the Farmer’s Club*, May 1889, p. 75.

³ John Lawrence, *A General Treatise on Cattle*, 1805, p. 56.

⁴ Although the turnip husbandry had been established in certain areas of the border counties and along the river valleys by the first decade of the century, it had not achieved much significance in the upland regions. Edward Williams, antiquarian, poet, and agriculturist, wrote in 1810: “Artificial grasses, crops, turnips and clover are properly enough adapted to the views of Bakewell’s disciples of puffing up large oxen and sheep for Smithfield and grossly feeding paunch-bellied cockneys and for supplying royal navies and merchant ships with large supplies of coarse beef *manufactured* from turnips.”—N.L.W., MS. 13147A. He argued that the piecemeal adoption of the four-course system in Glamorgan would be doomed to failure. As far as the upland region was concerned this argument was no doubt tenable. In lowland areas, however, the cause of livestock improvement would have been greatly assisted by the provision of more adequate supplies of winter feed in the form of fodder root crops.

⁵ C. S. Read, *J.R.A.S.E.*, x, 1849, p. 149.

interior of the Principality improving as too little attention is generally paid to the selection of the male animal."¹

Contemporary commentators attached a great deal of value to the hardiness and adaptability of the native breeds to local conditions. They rightly argued that quality cattle could not be produced unless priority was given to land improvement and the provision of better grazing and winter feed. According to Rowlandson: "the first object ought to be to produce nutriment capable of sustaining superior breeds; until then the old breed will maintain its ground and under the present circumstances will prove the best."² In an annotated edition of the *General View of the Agriculture of Brecknockshire* now in the National Library of Wales, the compiler John Clark, railed against the poor quality of the local cattle; but in a marginal note Walter Davies commented that "... the breed of cattle in the country are not despicable . . . nothing is wanted but to cultivate more turnips. The turnip crops are shamefully neglected not one acre in thirty being down to the Norfolk system." In view of this it is hardly surprising that the cattle of superior type were found in areas favourable to grass growth and in which the turnip husbandry had been accepted and incorporated into the farming system.

In spite of the relatively favourable environment in the counties of Pembroke and Glamorgan the proportion of good grazing land to that of total pasture area was very small. Notwithstanding, these regions produced cattle which were held in high regard by English graziers. In particular there was a steady demand for store cattle of the Pembrokeshire breed. "The Pembrokeshire ox always finds a ready market in the feeding counties. Kent and Sussex have usually been the principal places of sale with our drovers; and of late years great numbers of our cattle are driven to the Midland counties."³ John Bannister saw many Pembroke cattle on the rich lands of Sussex, particularly in the region of Pevensey "... where the goodness of the soil will throw out a head of grass sufficient for the purpose of fattening these large beasts."⁴ Furthermore, numerous Pembrokeshire cows were taken to London and used for milk production.⁵ According to Read the Pembrokes were coal black, "having a clean light head and a bright prominent eye."⁶ Youatt's statement that "... a few have white faces or a little white about the tails or udder"⁷ was strongly contested by Evans who insisted that any such marking indicated the influence of "strange blood." Observers of the Pembroke breed agreed unanimously that given good management the cows possessed excellent milking qualities, being capable of giving 6-7 pounds of butter per week during the summer months. Charles Hassall felt that this performance could be further improved by careful attention to feeding. The Pembroke cattle of the poorer regions of Carmarthenshire were considerably inferior, however, "being a short-bodied coarse kind of beast, ill-shaped and unprofitable to the pail." It is possible that these were the Pembrokeshire cattle observed by Lawrence which had deteriorated due to crossing

¹ *Ibid.*, p. 140. ² T. Rowlandson, *J.R.A.S.E.*, vii, 1846, p. 582.

³ C. Hassall, *General View of the Agriculture of Pembrokeshire*, 1794, p. 41.

⁴ J. Bannister, *A synopsis of husbandry*, 1799, p. 47. ⁵ Coleman, *op. cit.*, p. 212.

⁶ Read, *loc. cit.*, p. 139. ⁷ W. Youatt, *Cattle, their breeds, management and disease*, 1834, pp. 72-3.

with the Longhorn in an unsuccessful attempt to improve milk yield, "... thereby making the carcass coarse and long."¹ In view of the prevailing local conditions the Pembroke cow could be fed and bred 15 per cent cheaper than the Hereford or Shorthorn breeds, which apparently had to be housed for three weeks longer than the Pembroke over winter. Both Read and Evans expressed enthusiasm over the meat-producing qualities of the breed which, in spite of its deficiency in width and roundness of rib, would weigh between 7 and 8 hundredweights at four years old. Although his praise for the Pembroke was unbridled, Evans admitted that "Capitalists holding sheltered or luxuriant pastures, having extensive farm buildings, and who aim at producing large prime fat beasts may there, as elsewhere, keep Shorthorns to greater advantage than any other breeds. . . ." In the main, however, "... persons of limited means, living on poor land, and with small farmyards, cannot do better, I think, than maintain and cultivate the indigeneous breed of the country."²

Within the broad framework of the Pembrokeshire breed which extended throughout Pembrokeshire, Carmarthenshire, and South Cardiganshire were two important sub-varieties.³ These sub-varieties arose in the areas of Castlemartin in South Pembrokeshire and Dewsland in the northern part of the county. Owing, perhaps, to the enterprise of the farmers in the anglicized Castlemartin district, the local breed achieved greater popularity than the cattle of the Welsh-speaking area around Dewsland. Evans, however, insisted that by the late nineteenth century the larger Dewsland type was of equal, if not greater, merit than the Castlemartin. Eventually both these sub-varieties, together with the Anglesey and North Wales types, were amalgamated in the Welsh Black breed for which a herd-book was opened in 1874. The efforts of such enthusiasts as Lord Cawdor of Stackpole Court resulted in dramatic improvements in the breed after the opening of the herd book. Its subsequent popularity is evidenced by the fact that some 25,000 "South Wales Blacks" were annually taken to England towards the close of the century.⁴ The influence of English farming practice, and accordingly of English cattle breeds, was strongly felt in the border counties of Wales where, by the closing years of the nineteenth century, the "pure" local breeds had all but disappeared. Indeed, as early as 1797 Clark noted that in the border counties "the native small black breed is mostly out in consequence of a mixture with that of Hereford and Shropshire. The Herefordshire breed, it is true, always dwindle away and grow smaller in proportion, as they are carried higher into the mountainous country."⁵ Although there are abundant descriptions of a distinct Glamorgan breed during the mid- and

¹ Lawrence, *op. cit.*, p. 54. ² Coleman, *op. cit.*, pp. 212-13.

³ In the upper regions of Cardiganshire local cattle had been much improved by the introduction of Pembroke stock. Even so, it was considered that selection within the native breed would precipitate more rapid improvement.—S. Meyrick, *The History and Antiquities of Cardigan*, 1808, p. cclxxix. As early as 1800, Thomas Johnes of Hafod, Cardiganshire, was crossing local stock with Hereford bulls. These hybrids were fattened intensively in a purpose-built "beast-house" at Hafod.—Thomas Johnes, *A Cardiganshire landlord's advice to his Tenants*, Hafod Press, 1800, pp. 78-9.

⁴ J. Barrow Wall, *J.R.A.S.E.*, 2nd ser., xxiii, 1887, p. 78.

⁵ J. Clark, *General View of Brecknockshire*, 1797, p. 70.

late nineteenth century, the Rev. J. E. Evans protested in 1804 that he was unable to notice any difference between the cattle of Pembrokeshire and those of Glamorgan; indeed, "... many Pembroke are purchased and sold as the breed of Glamorgan."¹ However, according to Read, the Glamorgan was "... generally a muddy brown with white along the back and belly."² Youatt described Glamorgan cattle with white faces, although it is likely that such animals contained some Hereford blood. The Glamorgan breed was widely distributed throughout Glamorgan, Monmouth, and Brecon, but according to Walter Davies was only rarely to be seen west of the River Dulais where the Pembroke breed predominated.³ The cows, which were particularly good milkers, averaging 16-18 quarts per day, were held in high regard by George III. This notable judge of stock had a herd of Glamorgan cows on his Windsor farm for which he frequently drew replacements from Welsh country fairs. Glamorgan oxen also were used for all the carting, harrowing, and rolling in the King's park.⁴ However, neither Davies nor Read was particularly enamoured of the beef potential of the Glamorgans, which "... are commonly handsome in the forequarters but want for symmetry from the loins backwards." Read complained that the Glamorgans "... had too often flat backs and high rumps." In spite of these deficiencies in conformation Glamorgan oxen were capable of achieving weights of 12-14 scores per quarter and of providing meat of very high quality. Edward Williams (Iolo Morgannwg), an enthusiastic devotee of the Glamorgan breed, declared that the true Glamorgan animals were greatly preferable to crosses with any other stock, maintaining that nine out of every ten attempts at crossing had resulted in failure. He regarded their docility and "length of leg which makes them useful at a cart" as most valuable characteristics. Although the Glamorgans were much sought-after by the graziers of the Midland counties, Williams considered that their condition deteriorated substantially if they were driven for long distances. He mentioned a Mr Davies of St Athan (1810) "... who buys great numbers of the Glamorgan cattle, but never drives any further than Bristol, Bath or Gloucester. In these markets they are in very high request, but driven farther they would very much fall away, more so than the black western breed."⁵

In spite of Williams's comments upon the iniquities of cross-breeding, it is clear that crosses by Hereford, Ayrshire, and Shorthorn bulls became more common as the century wore on. Hassall was amazed at the "extraordinary prices" paid for the hiring of Hereford bulls in Abergavenny. When these bulls were put to Glamorgan heifers the progeny produced a greater weight of beef at five to seven years of age while at the same time preserving the essential "activity" of the pure Glamorgan, a

¹ J. E. Evans, *Letters written through South Wales*, 1804, p. 32.

² Read, *loc. cit.*, p. 40. Read's description is verified by that of H. Rees in *A description of the counties of Glamorgan, Pembroke and Radnor* of 1810. Rees found the Glamorgan cattle to be "... of middling size, handsome in their make and of a fine brown colour, occasionally presenting black and other varieties." It is likely that these animals of black-coat colour came about as a result of crosses with cattle of the Pembrokeshire type which were widespread throughout Glamorgan and western Monmouthshire. Such, no doubt, were the beasts described by Evans.

³ N.L.W., MS. 1659.

⁴ *Victoria County History, Berkshire*, II, 1906, p. 334.

⁵ N.L.W., MS. 13147A.

vital characteristic if the animal was to perform well at the yoke.¹ Youatt agreed that meat production was increased in the hybrid, although he held reservations about the quality of this meat which he contended was inferior due to early maturity. With the expansion of coal-mining in South Wales, local demand for milk and milk products was stimulated, encouraging some farmers to experiment with the introduction of the Ayrshire breed, noted for its capacity to produce milk of high butterfat content. The experiment met with considerable success. Not only were milk yield and quality enhanced in the cross-bred animal but also a more acceptable beef carcass was produced when the cow was eventually slaughtered.

By the close of the century the effect of cross-breeding had been such that no pure Glamorgan herds remained. However, repeated cross-breeding was not the sole cause of the decline, and there is some evidence to support the assertion that many farmers, particularly the more affluent ones, were selling up their Glamorgan herds and restocking with Hereford or Shorthorn cows quite early on in the century. Thus in a letter to the *Farmer's Journal* in 1824, J. B. Smythe predicted that Herefords and Shorthorns would soon completely supersede the Glamorgan. In support of this prediction he pointed out that two-year-old Hereford steers had fetched between £5 and £10 more than six-year-old Glamorgans at Tredegar Show.² That a price differential existed is certainly true, but a study of contemporary farm accounts indicates that its magnitude was considerably less than that suggested by Smythe. The boom in corn production which accompanied the Napoleonic Wars was in part responsible for the eventual disappearance of the breed. The profitability of cereal growing was such that farmers in Glamorgan ploughed every available and readily croppable acre, with the result that the stock were relegated to less fertile corners of the farm and there they remained while the boom lasted. Thus stock improvement was largely ignored, and existing stock were forced to eke out a precarious existence on poorer pastures of the holding.³ This situation was aggravated by the advanced demand for hay from the pit owners of the South Wales coalfield which was such that it was more profitable for a farmer to sell his hay for the sustenance of pit ponies than to use it for cattle production.⁴ The yield of hay from the peaty meadows of the Glamorgan lowlands did not usually exceed 7-8 hundredweights per acre. If, as is likely, the best hay was then sold off to the pit owners, it may be assumed that overwintered stock languished under conditions of considerable nutritional deprivation.

Beyond the mountains of Brecknockshire which supported "... an innumerable store of oxen which are well stocked and return thousands to the country,"⁵ the Radnor or Builth breed held sway. These cattle, of which little appears to be

¹ C. Hassall, *General View of the Agriculture of Monmouth*, 1812, p. 14.

² *Farmer's Journal*, 26 January 1824, p. 26.

³ According to Youatt, the breed did not deteriorate to the same degree in the upland regions where the proportion of arable land was substantially less than that in the vales.—*Op. cit.*, p. 78.

⁴ Samuel Lewis, *A Topical Dictionary of Wales*, 1845.

⁵ W. Davies, *General View of South Wales*, II, 1815, p. 220. "White faced cattle have now invaded the Vale of Usk . . . as far as Trecastle, where the native blacks make a stand against their further progress. In the Vale of Wye they reach up as far as the winds of Irfon in Buallt [Builth Wells]"

known, were "... superior to that of most of the mountainous districts of South Wales, weighing from 10-20 stones/quarter."¹ It is unlikely that this comment referred to pure-bred local animals, for the evidence suggests that the lack of uniformity and lightness of flesh characteristic of the local type were largely the result of indiscriminate matings with North Wales cattle. Youatt, an eloquent advocate of cross-breeding, declared that the introduction of Hereford bulls to these "scrub" cattle "had produced a beast too large and too capable of yielding beef to be perfected upon their poor land, but they have obtained one that will thrive and pay everywhere else and that will consequently find a ready market." Youatt also paid tribute to the husbandry expertise of the farmers of the uplands of Brecon and Radnor who "... rarely overstock their ground and the cattle have plenty of food both in Winter and Summer ... however coarse it may be." Some years later it was noted that the cattle of these upland areas had markedly improved, largely as a result of the introduction of West Highland cattle by the Duke of Newcastle.²

In the early part of the century Walter Davies noted that a new type "... of the long legged high red colour without any spots and with smoky or dun faces"³ was assuming some importance in the area around the Severn Vale. These cattle, which were known as the Montgomeryshire Smoky Faced breed, were believed to have come originally from Herefordshire through the Bishop's Castle area and into Montgomeryshire. Smoky Faces it appears were also found in the uplands of Radnorshire in the earlier part of the century, for, "There were formerly some good red smoky faced cattle in the hilly parts of Radnor, but they have lost much of their distinctive character by crossing with the Shropshire and Hereford cattle."⁴ The breed was apparently adapted to a wide range of conditions, being both extremely hardy and of good fattening potential. Writing after the dispersal of the last herd in 1886, J. B. Morgan observed that the breed had been preferred by butchers and graziers above all other Welsh cattle.⁵ According to Davies, Mr Croxton of Oswestry, "a grazier of good judgement and great experience," preferred the Montgomeryshire cattle from the vales of the Severn and Vyrnwy to any other breeds of Welsh cattle, "... because they collect bulk on the most valuable parts ... after 9 months feeding with hay or turnips they will add about three score pounds weight to each of their quarters."⁶ A four-year-old ox of the Montgomeryshire breed would weigh 6-7 scores per quarter if reared on the hill, and 9-11 scores per quarter if reared in the vales. The disappearance of this breed, which apparently possessed so many good qualities, came about largely as a result of cross-breeding with Hereford cattle. In the early 1860's an attempt was made to stem the inflow of Hereford blood, as it was believed by many that the offspring of the cross-bred animal were too "coarse" to meet the requirements of the dealers. It is doubtful that breeders were successful in this endeavour, for when the Mont-

¹ J. Clark, *General View of Radnor*, 1794, p. 18. ² H. Keary, *J.R.A.S.E.*, ix, 1848, p. 440.

³ N.L.W., MS. 173D. ⁴ Read, *loc. cit.*, p. 140. ⁵ J. B. Morgan, *Powysland Club*, xix, 1886, p. 1130.

⁶ W. Davies, *General View of North Wales*, 1810, p. 313.

gomeryshire Agriculture Society offered prizes for the breed in the 1870's it was found that good examples of the Smoky Face were restricted almost entirely to the herd of Colonel Heyward of Guilsfield.¹ Thus repeated crossing with Hereford blood had gradually diminished the numbers of pure-bred Smoky Faces until eventually the breed shared the fate of the Glamorgan in being cross-bred out of existence.

Of the cattle of North Wales, the Anglesey and Lleyn types were undoubtedly of the greatest importance. Indeed, the cattle of the remainder of Caernarvonshire and the highlands of Merioneth and Denbigh were, in the main, diminutives of these two types. Davies stated that "An Anglesey runt should be of coal-black colour with white appendages, remarkably broad ribs, high and wide hips, deep chest, large dewlap, flat face and long horns turning upwards."² In these respects the Anglesey was not dissimilar to the Castlemartin. Evans, however, believed the former to be "coarser in the forepart, but having better hindquarters and broader loins than their southern rivals."³ The importance to the local economy of cattle exports to England is suggested by the fact that cattle to the value of £142,000 were sent from Anglesey and the Lleyn peninsula in 1801. As late as 1870 Beever was extolling the virtues of the Anglesey breed, of which many still found their way to Northamptonshire and the eastern coastal counties of England "... where they fatten on the scraps of more favoured and fastidious kine."⁴ The majority of these animals would be two and three years old, and after a twelve-month period at grass would fatten at between 8 and 11 scores per quarter. Where the cattle had been used for draught purposes and subsequently fattened at eight to nine years old they were reputed to be capable of achieving weights of 11-15 scores per quarter. Davies contended that many graziers preferred cattle which had been previously worked as they not only could be purchased more cheaply but also gained weight more rapidly than animals which had not been used for draught purposes. The performance of the Anglesey and Lleyn types could not be matched by their diminutives in other areas. Indeed, the cattle of Merioneth, Denbigh, and the uplands of western Montgomeryshire "have little to recommend them save their extreme hardiness and consequent cheapness of rearing."⁵ However, Mr Corbet had successfully crossed mature Merionethshire cattle with (unspecified) English stock to considerable advantage. Having subjected pure-breed natives and cross-breeds to similar conditions of management he was able to sell the latter for twice the sum fetched by the local-purchased stock. In view of Youatt's comment that the native cattle of Merioneth were "... at the very bottom of the list and disgracefully neglected,"⁶ this result is hardly surprising.

In the hilly areas of North Wales, large quantities of butter and cheese were made for sale in the markets of Holywell, Chester, Shrewsbury, and Bridgenorth. Consequently the milking potential of the Angleseys and their diminutives was of

¹ Report of Royal Commission on Land, in Wales and Monmouthshire, 1896, Cmnd. 8222, p. 748.

² Davies, *North Wales*, p. 311. ³ Evans, *op. cit.*, p. 209.

⁴ W. H. Beever, *Notes on Fields and Cattle*, 1870, p. 21.

⁵ Davies, *North Wales*, p. 312. ⁶ Lawrence, *op. cit.*, p. 56; Youatt, *op. cit.*, p. 73.

considerable importance. Milk yield apparently ranged from 5 to 15 quarts daily according to locality and quality of food. Davies contended that cattle which did not give above 5 quarts of milk per day "... generally manifest a greater disposition to fattening than milking, and should not be kept a week longer on a dairy farm." To illustrate the potential of the North Wales cattle, Davies instanced a cow in Flintshire which produced 4026 quarts of milk and 358 pounds of butter over a period of 183 days. Cows continued to be profitable milkers for eight to ten years, although in the herd of Mr Wynne of Rytton were three cows which "... continued to give milk in abundance until they were each eighteen years old."¹ Their productive life over, the cows were dried off, shod, and eventually driven to the fattening lands of the border counties or the English Midlands.

Attempts to introduce improved breeds to North Wales were generally unsuccessful. Scottish cattle had been introduced on the west coast, particularly around Llwyngwil in Merionethshire, although with little success for as Rowlandson pointed out, "several gentlemen have introduced the Ayrshire and Galloway breeds, but the cattle are looked upon as whims of the gentry."² During the first decade of the century improved English cattle had been brought into west Caernarvonshire. This importation improved the indigenous stock to a limited degree, but Davies was sceptical regarding the future of such a policy: "the difference of climate and of quality of pasture, will at length dwindle the mixed breed, after repeated crossings, nearly to the original native size."

There is little doubt that adverse environmental conditions of both North and South Wales operated against the effective implementation of an improvement plan based upon the importation of English stock. Such stock improvement which did take place was achieved almost entirely in the lowland regions of Wales where pasture quality could be advanced at a relatively low cost and the improved stock thereby supported. It is difficult, however, to escape the conclusion that in the main the neglect of local stock in upland and marginal areas resulted largely from an unwillingness of the larger farmers to commit their limited capital to expensive programmes of stock improvement based upon the principles pioneered by Bakewell. Indeed, even if the more progressive landowners had succeeded in achieving some degree of improvement within their own herds, it is likely that the reactionary and suspicious nature of the impecunious small farmer would have severely reduced the chances of facilitating a widespread and permanent upgrading of native stock.

Despite these limitations to livestock improvement, the trade in Welsh cattle with the English Midlands, which had expanded dramatically following the Irish Cattle Act of 1666, continued to play a vital part in the rural economy of Wales during the nineteenth century.³ The demand for hardy Welsh stock, both from the graziers and yard feeders of the Midland and South Eastern Counties, persisted

¹ Davies, *North Wales*, p. 315. ² Rowlandson, *op. cit.*, p. 582.

³ 18 Car. II, c. 2, 1666. For a discussion of some aspects of the Welsh cattle trade see R. J. Colyer, 'Welsh Cattle Drovers in the Nineteenth Century, Part I', *National Library of Wales Journal*, xvii, 4, 1972, pp. 392-409. Part II of the series is in the press for 1973-4.

throughout the last century, and indeed still persists today. The fact that these "unimproved" Welsh beasts were so highly prized suggests that their performance, in terms of growth rate and ability to fatten on the superior nutritional régime of the Midland grazing pastures, may reflect the stimulus of compensatory growth arising from previous nutritional deprivation.

APPENDIX

WELSH CATTLE WEIGHTS IN THE NINETEENTH CENTURY

In 1929 Dr Fussell drew attention to the size of cattle in the eighteenth century in relation to the supply of beef for the expanding urban population.¹ He maintained that while the size and weight of cattle increased substantially throughout the century, the total cattle population did not advance dramatically. Accordingly he concluded that the expansion of meat supplies arose largely as a result of increased slaughter weight coupled with earlier maturity. The latter factor reflected the increasing use of horses as draft animals and hence the release of oxen for earlier fattening. There is certainly little doubt that by the turn of the eighteenth century many farmers were beginning to realize the advantages, in terms of efficiency of food utilization, to be gained from providing animals which reached slaughter condition at a relatively early age. In 1805 Charles Gordon Grey explained to the Bath Society "... that in the rich soils of the kingdom where large oxen have usually been fed, the graziers there (generally) are feeding Scotch, finding the smaller most profitable."² Five years later, it was contended that on good-quality pasture-land (45s. per acre) "... a large ox with quick aptitude to fatten sometimes increases in twelve months as much as a small ox weighs." Nonetheless, the writer held the view that although smaller beasts did not make the same profit on good land, on poorer land (30s per acre), they would fatten earlier in the year thereby coming to market before the autumn "glut."

There is some evidence to suggest that consumers were beginning to react against the fat and often enormous cattle which were arriving at Smithfield in the early nineteenth century. In the *Farmer's Magazine* of January 1800, we are told of the arrival in London of a bullock from Buckinghamshire weighing 300 stones live weight, and of such bullocks being slaughtered in the streets around Blackfriars Bridge, being unable to stagger on to Smithfield! Numerous correspondents to the *Gentleman's Magazine* witnessed the arrival of these monsters, and in their comments they echoed the aversion of many people to the excessive quantities of fat on butcher's meat at the time. One correspondent, signing himself as "A friend of the Golden Days of Good Queen Bess", declared: "... the cattle produced ... are in general so loaded with blubber that we may suppose, and with reason, that their feeders are more in the interest of the tallow chandler than the butcher. To introduce the custom of killing sheep or oxen so enormously fat ... and in consequence rendered almost useless for the table can never be attended with any good effect."³ If contemporary reports, prints, and lithographs are to be trusted, there is little suggestion that the apparent demand for more lean meat was satisfied as the century progressed. McDonald wrote of an ox of 4½ years of age being slaughtered at Smithfield in 1829, the internal fat of which constituted one-quarter of the carcass weight.⁴ At the Christmas fatstock show of 1893

¹ G. E. Fussell, 'The Size of Cattle in the Eighteenth Century', *Agricultural History*, 1929, pp. 160-81.

² Charles Gordon Grey, *Letters to the Bath Society*, x, 1805.

³ *Gentleman's Magazine*, August 1801, p. 717. See also *ibid.* May 1801 and July 1802.

⁴ J. B. McDonald, *J.R.A.S.E.*, xvii, 1881, p. 359.

we read of Welsh runts of between 2,240 and 3,000 pounds.¹ The fat content of such animals must have been extremely high. However, it is unlikely that the later reports of Smithfield fatstock shows represent realistic average weights of cattle of the day. The "prize" animals arriving at Smithfield were carefully chosen and hand fed, "with the mark of the shovel on their mouths." Accordingly weights of cattle from the Metropolitan Market and Smithfield Club Shows which are included in the following tables should perhaps be regarded as atypical.

The tables, compiled from contemporary sources, show the weights of some of the Welsh cattle types throughout the century. Irish and Scots cattle weights are included for the purpose of comparison. All weights have been converted into pounds.

IRISH AND SCOTS CATTLE WEIGHTS

Breed	Age	Date	Dead weight (lb)	Source	Comments
Irish	?	1790	560-700 980-1,120	W. Marshall, <i>Rural Economy of the Midland Counties</i> , I, p. 364	Imported cattle
Irish Long-horn	5 years	1847	1,400-1,600	J. M. Wilson (ed.), <i>Rural Cyclopaedia</i> , Edinburgh 1847, I, p. 745	"Do not have the fine quality of the Galloways and West Highlands" "... can be brought to great weights"
Irish	19 months 22-24 months	1878 1878	1,008 840	J. Clark, <i>J.R.A.S.E.</i> , 2nd ser., XII, 1878, p. 27	Suckled and fed turnips and oilcake after grazing. "Beef was most beautiful and not at all vealy as some may suppose"
	?	1889	677	A. Pell, <i>J.R.A.S.E.</i> , XXV, 1889, p. 459	59% liveweight—maiden heifers
	?	1889	599	<i>Ibid.</i>	54% liveweight—maiden heifers
	?	1889	622	<i>Ibid.</i>	54% liveweight—maiden heifers
Irish Shorthorns	?	1889	842	<i>The Times</i> , 4 November 1889	Second quality—shown at Metropolitan Meat Market

¹ Youatt, *Cattle, their breeds, management and diseases*, 13th edn, 1899, p. 46.

IRISH AND SCOTS CATTLE WEIGHTS—*continued*

<i>Breed</i>	<i>Age</i>	<i>Date</i>	<i>Dead weight (lb)</i>	<i>Source</i>	<i>Comments</i>
Polled Scotch Galloways+	?	1808	700	R. Parkinson, <i>General View of . . . Rutland</i> , 1808, p. 118	
	?	1810	560-840	R. Parkinson, <i>Treatise on the breeding and management of livestock</i> , 1810, I, p. 53	
	3-4 years	1819	640-1,040	<i>Farmer's Journal</i> , 25 October 1819, p. 337	Not worked
	?	1827	640-680	U.C.N.W. Bangor, MS. 6572	
	4½ years	1829	1,040-1,120	J. McDonald, <i>J.R.A.S.E.</i> , 2nd ser., XVII, 1881, p. 373	Exceptional—showed at Smithfield, when the inside fat was found to be one-quarter of the dead weight
	4 years	1847	700-840	<i>Rural Cyclopedia</i> , I, p. 738	In favourable circumstances may attain 980-1,120 lb
	5-6 years	1847	Sometimes 1,400	<i>Ibid.</i>	"Beef of fine quality"
	?	1848	784-946	H. Keary, <i>J.R.A.S.E.</i> , IX, 1848, p. 442	
	Not exceeding 2 years	1889	1,170	Smithfield Club Show, 1889, in A. Pell, <i>J.R.A.S.E.</i> , 2nd ser., XXV, 1889, p. 459	70% of live weight. Daily live-weight gain 2·38 lb
	Not exceeding 3 years	1889	1,444	<i>Ibid.</i>	70% of live weight. Daily live-weight gain 1·92 lb
	Not exceeding 4 years	1889	1,464	<i>Ibid.</i>	64% of live weight. Daily live-weight gain 1·65 lb
	?	1889	742	<i>The Times</i> , 4 November 1889	Second quality, Lincs.-grazed—shown at Metropolitan Meat Market

IRISH AND SCOTS CATTLE WEIGHTS—*continued*

<i>Breed</i>	<i>Age</i>	<i>Date</i>	<i>Dead weight (lb)</i>	<i>Source</i>	<i>Comments</i>
Highland	?	1802	560	'A Farmer', <i>Rural Recreations</i> , 1802, p. 127	
	?	1809	420	Rev. W. Bingley <i>Memoirs of British Quadrupeds</i> , 1809, p. 413	
	4 years	1847	420-500	<i>Rural Cyclopaedia</i> , I, p. 744	First-rate grazers—thrive equally well on turnips
	?	1848	504-604	Keary <i>loc. cit.</i> , p. 443	

WELSH CATTLE WEIGHTS

<i>Breed</i>	<i>Age</i>	<i>Date</i>	<i>Dead weight (lb)</i>	<i>Source</i>	<i>Comments</i>
Anglesey	3-4 years	1805	480-960	J. Lawrence, <i>A General Treatise on Cattle</i> , 1805, p. 57	"No cross would improve these islanders"
	3-4 years	1810	640-880	W. Davies, <i>General View of the Agriculture of North Wales</i> , 1810, p. 311	Oxen worked at the yoke
	8-9 years	1810	1,040-1,200	<i>Ibid.</i>	
	4 years	1849	784-896	C. S. Read, <i>J.R.A.S.E.</i> x, 1849, p. 145	
Cardigan	3-4 years	1814	480-560	W. Davies, <i>General View of . . . South Wales</i> , 1814, p. 215	"When crossed with Herefords weigh 800-960 lbs"
Carmarthen	?	1848	504-664	Keary, <i>J.R.A.S.E.</i> , ix, 1848, p. 440	"Little propensity to fatten"
Glamorgan	3-4 years	1814	640-800	Davies, <i>South Wales</i> ,	Cows
	?	1814	960-1,120	<i>Ibid.</i> , p. 218	Oxen (some heavier)
	4-5 years	1848	784-896	Keary, <i>loc. cit.</i> , p. 440	"Coarser than the Pembrokes and inferior in early maturity"

WELSH CATTLE WEIGHTS—continued

<i>Breed</i>	<i>Age</i>	<i>Date</i>	<i>Dead weight (lb)</i>	<i>Source</i>	<i>Comments</i>
Montgomery	?	1800	784	Garrard, <i>Description</i> (quoted by G. E. Fussell, <i>Ag. Hist.</i> , 1929, pp. 160-81)	Montgomery cow beef 560-800 lb
	4 years	1810	480-660	Davies, <i>North Wales</i> , p. 313	} Cattle reared on hills
	5 years	1810	640	<i>Ibid.</i>	
	4 years	1810	720-880	<i>Ibid.</i>	} Cattle reared in vales
	5 years	1810	880-1,040	<i>Ibid.</i>	
Radnor	?	1800	520-720	N.L.W., MS. 1895B	
	?	1815	480-960	T. Rees, <i>A Topographical and Description of . . . South Wales</i> , 1815, p. 880	"Superior to most mountainous districts of South Wales"
Pontypool	?	1809	480	W. Pitt, <i>General View of the Agriculture of Northamptonshire</i> , 1809, p. 200	
Pembroke	4 years	1805	640-1,120	Lawrence, <i>op. cit.</i> , p. 54	"... comes early ripe"
	4 years	1814	720-800	} Davies, <i>South Wales</i> , p. 216	} Oxen Cows
	4 years		480-560		
	4 years	1848	700-784	Keary, <i>loc. cit.</i> , p. 440	"Best found in Castlemartin and Roos Hundreds"
Castlemartin	4 years	1814	800-960	Davies, <i>South Wales</i> , p. 215	
North Wales	6-7 years	1800	1,120	W. Youatt, <i>Cattle, their breeds, management and diseases</i> , 1834, p. 73	"beautifully veined and marbled"
	4 years	1848	560-700	Keary, <i>loc. cit.</i> , p. 439	
Welsh Runts	?	1805	720-1,200	A. Young, <i>General View of the Agriculture of Hertfordshire</i> , 1805, p. 185	

WELSH CATTLE WEIGHTS—*continued*

<i>Breed</i>	<i>Age</i>	<i>Date</i>	<i>Dead weight (lb)</i>	<i>Source</i>	<i>Comments</i>
Welsh Runts	4 years	1889	658	A. Pell, J.R.A.S.E., 2nd ser., xxv, 1889, p. 459	55% of liveweight
	?	1889	776	<i>The Times</i> , 4 November 1889	Good second-quality cattle shown at Metropolitan Meat Market

It is clearly necessary to exercise considerable caution in drawing conclusions from the subjective estimates of contemporary observers. Very few cattle were weighed before the latter half of the nineteenth century and thus the accuracy of his assessment depended entirely upon the skill and judgement of the observer. The figures shed little light on the question as to whether there was any significant change in cattle weights throughout the century, for the wide variation in dead weights within a period render inter-period comparisons relatively meaningless. Furthermore, the fact that contemporary observers saw and assessed these cattle under a broad spectrum of management conditions makes it impossible to draw conclusion about the genetic potential for meat production of the various breeds. Thus the figures tend to reflect environment and plane of nutrition rather than genetic potential. This is well illustrated by a comparison of the dead weights of cattle from upland Wales with those of Pembrokeshire for a given period. The superiority of carcass weights of the Pembroke breed may reflect a more amenable nutritional régime, and an environment capable of producing a store animal which would feed to heavier weights than similar animals reared in the harsh upland regions of Wales. A further complication arises from the fact that most of these weights relate to animals reared in Wales but fed in England. Accordingly, the final weight of the animal would depend as much if not more on the quality of Northamptonshire fattening pasture or the expertise of the Essex stall fattener as it would upon the genotype of the store beast.