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ROBERT BAKEWELL.

ROBERT BAKEWELL, son of Robert and Rebecca Bakewell, was born, early in the year 1726, at The Grange, Dishley, two miles north of Loughborough, in the county of Leicester, where also, on October 1, 1795, he died, "after a tedious illness, which he bore with the philosophical fortitude that ever distinguished his character." The words here quoted, from the earliest biographical memoir, written immediately after his death and published before the close of the same year,¹ convey a guiding hint of his idiosyncrasy.

One of the memoirs of Bakewell, written within ten years after his death, describes him as a yeoman of considerable property; another, also of an early period, as the son of a farmer. The truth appears to be that his nearer ancestors, whether as landowners or as tenants, had been engaged in agricultural pursuits, and that he was the descendant of a very old and highly respectable family. The exact social position of his forefathers may not, perhaps, be of general public interest, but the offices held by some of them at different periods of the 600 years, extending over nineteen generations, through which his pedigree can be traced, suggest the inheritance of more than average brain-power, thus illustrating one of those laws of which Bakewell himself was an intelligent student.

The most remote ancestor named in the records of the family was Leverrettus, Thane of the King, and King's

¹ *Gentleman's Magazine*, Vol. LXV., Part II., 1795.

Chancellor in the reign of Henry II., presented to the rectory of Bakewell, in the county of Derby, in the year 1158. Three of his descendants consecutively were Rectors of Bakewell; and the last, on his ejection in the reign of King John, retained the territorial name, and thus became the founder of the family. A direct descendant, Sir John de Bakewell, Seneschal of Poitou, a lineal ancestor of Robert Bakewell, was Baron of the Exchequer in the years 1322-23, and had two brothers, Sir Thomas, who represented the county of Kent in Parliament in 1321, and Roger de Bakewell, member for Derby. Four generations down the line from Sir John we find Henry, Ambassador to Rhodes in 1415; and three generations later, Thomas, having the degree of LL.D., appointed Ambassador to Brittany. It is needless to add the various Church benefices held by members of the family at different periods. Robert Bakewell, Rector of Hartingbury, was the first of five consecutive descendants bearing the same baptismal name, the last of whom is the subject of this memoir; and although the Dishley branch ended with him, the family, in its hereditary social status, is still extant. Robert, one of the sons of the Rector of Hartingbury, resided at Normanton, in Leicestershire. He had four sons, who all left issue. One of those sons, Robert, was the first Bakewell of Dishley; from what date we are not told precisely; but as he was born in 1643, and died in 1716, we may assume that an old chronicler, who indefinitely places the beginning of the connection with Dishley somewhere about the beginning of the last century, was probably not far from the truth.

Bakewell's first biographer, already quoted, says that Bakewell's father, the second Robert Bakewell of Dishley, died about the year 1760; and several subsequent writers, no doubt taking him, with or without acknowledgment, as their authority, have given that statement, by repetition, the semblance of confirmation. It has apparent support, also, from the fact that about that time *the* Bakewell began to come to the front as an experimental agriculturist and as a breeder of live-stock improved by himself. But his father, from whom, as we shall see, he derived much of his pioneering instinct, and of the enterprise which marked his character, was born in the year 1685, and died, assuredly, as his monumental inscription proves, on May 23, 1773, aged 88 years. However hale a man he may have been, he would scarcely take an active part in the business of the farm to that advanced age, but more probably at the age of 75 years, or thereabout, transferred the entire control to his able son, then in his 35th year, and qualified, by several years

of participation in the management of the farm, to take it into his own hands alone.

From his father Bakewell had an excellent training for practical and experimental farming, besides many of those special mental qualities, possibly inherited either immediately from him or through him, which were manifested in his advance beyond the traditional notions and practice of the old English farmer. "His father," says the writer of the obituary notice in the *Gentleman's Magazine*, "had always the reputation of being one of the most ingenious and able farmers of his neighbourhood." According to Arthur Young, who inspected the operations at Dishley on two occasions, with the space of



Dishley Grange, as it appeared in 1790.

fifteen years between, the irrigation, which was one of the most prominent features of the Dishley husbandry, had been begun by Bakewell's father.

In *Necrology*,¹ memoirs of eminent men who died between 1756 and 1798, edited by John Lawrence, Bakewell is described as tall, broad in the chest and shoulders, with a benevolent countenance combining intelligence and sagacity. "His manners had a rustic yet polite and pleasing frankness. He spoke neatly in few words, always to the purpose, and had a store of anecdotes and stories." In politics he does not appear to have allied himself decisively with any party, or to have classed himself under any name; but the same writer tells us that "he

¹ *Necrology*: London, 1805. Article on Bakewell by "Benda." John Lawrence, in his *General Treatise on Cattle*, says: "I formerly gave the best sketch in my power of the life and character of Bakewell in a volume entitled *Necrology*."

lived and died one of the warmest supporters and staunchest defenders of liberty." He adds that one of the principal blemishes of Bakewell's character was a certain degree of acquired cunning, "the vice of his profession." The writer first quoted (in the *Gentleman's Magazine*) describes him¹ as tall, broad-set, and in later years rather inclined to corpulency, his countenance bespeaking intelligence, activity, and a high degree of benevolence; his manners frank and pleasing; well calculated to maintain the popularity he had acquired. Sir John Sinclair described him as "a person of strong natural sagacity"; and another authority as a man of unimpeachable morals, whose conversation was never disgraced with expletives.

Visitors at Dishley without exception have agreed in celebrating his generous hospitality. The doors of Dishley Grange² were ever open to friends and strangers alike, and the liberality of entertainment appears to have been fitly accompanied by the most genial and hearty welcome with which he received all who could show the claim of a real interest in agricultural progress.

In appearance [says Mr. Prothero in his *Pioneers and Progress*] he resembled the typical yeoman who figures on Staffordshire pottery, "a tall, broad-shouldered, stout man, of brown-red complexion, clad in a loose brown coat and scarlet waistcoat, leather breeches, and top boots." In his kitchen he entertained Russian princes, French and German royal dukes, British peers, and sightseers of every degree. He never altered the routine of his daily life. "Breakfast at eight; dinner at one; supper at nine; bed at eleven o'clock; at half-past ten, let who would be there, he knocked out his last pipe."

The benevolence of countenance, remarked by more than one of those who have described his personal appearance, was the true index of a characteristic mentioned by many who have recorded, from personal acquaintance, their estimates and impressions of him as a man. These all concur in showing that he was eminently kind-hearted, and that his natural kindness made him the friend of man and beast. He was surrounded by old and attached servants, and so much disliked losing sight of a familiar face that he would not engage a farm man for a shorter term of service than four years. After spending four

¹ The portrait of Bakewell on horseback, which appears as the frontispiece to this part of the Journal, is reproduced from a painting in the possession of Mr. J. S. Bakewell of The Old Hall, Balderton, Newark-on-Trent, and the Society is indebted to Mr. Bakewell for his kindness in lending the portrait of his distinguished ancestor for the purpose of illustration.—ED.

² The woodcut on page 3 is taken from the background of a picture, by J. Boulton (also in the possession of Mr. J. S. Bakewell), representing "the celebrated Cart Horse, the property of Mr. Bakewell of Dishley, 1790." This picture was reproduced in 1791 as a coloured engraving, a copy of which is in the possession of the Shire Horse Society.—ED.

years with such a master, the man was seldom found who desired to change his place. But the happy relations of master and servants at Dishley seem to have belonged to the traditions of the house of Bakewell, for several of the people who remained with the last Robert Bakewell to about the close of his life had lived some years in his father's service. "How long have you been here?" a visitor asked, in July, 1793, turning to William Arnold, the junior herdsman. "About twenty years" was the reply. "And you?" addressing the senior, John Brendon, who promptly answered: "Since the King was crowned, sir"—fully thirty-two years. William Peet, superintendent of the horses, said he had served the family for nearly forty years, but had been away a few years and returned to Dishley. Others had been ten or twelve years in the service.

Mr. Bakewell's kindness to brute animals was proverbial, and being in constant practice at Dishley was rewarded with extreme docility in the farm animals. Powerful bulls of terrible presence, looking the more formidable for the immense horns distinguishing their breed, were led about by mere children. One writer says he saw an animal of elephantine bulk led about with a pack-thread by a boy of seven; another, that a lad with a switch could single a bull out from his companions and guide him to any part of the farm by holding the switch to one side or the other to indicate the way; and a third had been greatly amused by a little boy, five years old, mounted upon one of the big bulls, and so guiding him with the point of his switch. Similar instances of docility, resulting from unvarying kind treatment, were noticed in the stallions; and throughout the live-stock departments of the Dishley farm confiding gentleness, as an effect, afforded the surest evidence of considerate and compassionate gentleness as the cause. On this subject Mr. Bakewell was far in advance of his day, for his generous anger was kindled instantly by the sight or report of cruelties so often practised in the times when the sufferings of the inferior animals, however discreditable and degrading to man who inflicted them, were thought beneath the notice of the law.

In quite early life, having developed to some extent his father's desire to discover or learn better methods of husbandry than those of his predecessors, and thirsting for knowledge of what men were thinking and doing elsewhere, Bakewell often left his home to travel about England, seeing the different breeds of farm stock, to find out the purposes for which the breeds severally were best suited, and the conditions under which they served those purposes; his main object, no doubt, being to ascertain what breeds would do best at Dishley. That such

was his purpose appears to be indicated by the fact that after looking around him in various districts he selected a few choice specimens of different breeds, purchased and took them to Dishley. "This selection," an early writer states, "gave the original stock from which his own proceeded"; but we are not here informed whether his own proceeded from a mixture of breeds, or from a final selection of the best of those he had tested upon his own farm.

Mr. Bakewell saw much of the West of England. There he could see, carried into fairly extensive practice, the system of irrigation which his father had adopted, and which he himself was destined to extend. There, too, he found a breed of cattle—the Devon—which he pronounced incapable of improvement by a cross of any other breed. If we take this declaration in connexion with his own avowed principle of refining and reducing the bone as a means of getting a greater proportion of flesh to food consumed, and a greater tendency to fatten, may we not reasonably suggest the probability that the Devon served as his model for the improvement of the larger breed which he adopted as a breed already established in the Midlands, and perhaps as a breed capable of doing better in Leicestershire than any other breed he had tried? The same model would also serve his design of founding an improved breed of sheep, for the same principle of lessening the bone to increase the fattening propensity was applied by him to all classes of butchers' beasts. We shall see this as we come to the records of his practice and experiments.

Before, however, we consider the work for which he is recognised as a man of distinguished power, his improvement of sheep and cattle, we shall find a glance at his general husbandry useful in assisting us the better to gauge the man. His great prevailing idea, we should say, and that which lay at the very root and sources of his strength, was ECONOMY. If the Devon really was his model—and he assuredly admired it—he had in it economy both in structure and in the proportion of the cost to the quantity and quality of human food produced; or, say, in the return per acre. He maintained that he had secured such economy in the breeds established by himself as improvements upon all other breeds. The English farms he most admired were those of Norfolk, where he found "cheap, expeditious, and effective modes of husbandry"; the foreign farms—for he occasionally went abroad to enlarge his knowledge—those of Holland and Flanders, where he found that orderly neatness which is true economy, inasmuch as slovenly farming is wasteful. Upon the principles of management at these British and Continental

farms he is understood to have founded his own system of farming at Dishley.

We find, accordingly, as we follow the testimony of the different visitors at Dishley who have recorded their impressions, most scrupulous neatness, order, regularity; ingenious time-saving contrivances; the cheapest ways of doing efficiently the ordinary work of the farm; in short, at all points, rigid economy. When Arthur Young was at Dishley, in the course of his celebrated tour through the East of England in 1770, the farm comprised 440 acres, of which 110 were under the plough. The proportions of white and root crops were generally about 15 acres of wheat, 25 of spring corn, and not more than 30 of turnips. The rest of the farm (330 acres, less the sites of buildings, the yards, watercourses, &c.) was all grass land. Bakewell is classed by Marshall as having stood first in the kingdom as an improver of grass land by watering; and from Monk's *Agricultural Report* we learn that by means of irrigation he was enabled to cut grass four times a year. Young says that his irrigation is "among the rarest instances of spirited husbandry," much exceeding anything of the kind he had seen before, even in the hands of landlords. He describes the water meadows, from 60 to 80 acres, as having been, like the rest of the country, all in ridge and furrow, covered with ant-hills and disfigured by inequalities of surface. These Bakewell had ploughed up, thoroughly tilled, and laid down again to grass with a perfectly even surface; while the old-time farmers around stared at an operation which they said was "burying good land to bring up bad," and, filled with alarm lest his overflow should "poison" their rough, untidy lands, threatened, and one chronicler declares actually commenced, legal proceedings to restrain him. "Our farmer," Young remarks, "has expended large sums in these uncommon undertakings: he richly merits the enjoyment of their profit." The meadows seen by this authority when he first visited Dishley did not, however, comprise one-half of the land—200 acres—which was eventually irrigated.

After laying down the 60 or 80 acres as already stated, Mr. Bakewell cleaned to equal depth everywhere the brook supplying the water, using the heaps and ridges of earth and sand left by the stream as filling for the hollows in its course, without throwing any out upon the banks. This process was extended to the ditches and the water conveyed to other fields away from the brook, further ditches being used to take the water off after it had flowed over the land. He did not hastily either adopt or extend his system of irrigation, but felt his way as he advanced, trying various experiments to satisfy himself of the

efficacy and economy of the system before incurring further expense. Side by side he had plots of land: two plots, one watered, the other not watered; two again, one watered, the other manured; and again two, one watered from a spring, the other from the stream; so that he could form his estimates of the comparative value of irrigation as against other fertilising agencies, and of different modes of irrigation.

Mr. Bakewell's notion of economising the uses of everything within his control did not allow him to forget that water possessed other than fertilising power. One purpose to which he turned his brook was to make it a cheap and ready means of conveyance of crops of turnips and cabbages from the land to the buildings, and manure from the buildings to the land. He cut, with but little fall, a narrow, silently flowing canal, and against the cost had a large reduction of human labour and of the expense of horse-power. In the way of carrying out this improvement we have an instance of his singular ingenuity in devising cheaper and more expeditious methods than anyone else could suggest. Floating his turnips down on a flat-bottomed boat, he found that the attendance of a man with a pole was required to keep the boat from loitering on the way; so he one day hauled his boat on to the bank, discharged of its load, which went away easily with the stream and met him at the end of the barn on his return. There he placed a man to draw out the turnips as they arrived; but this plan was soon superseded by a still more self-acting method: a pit with a grate at the bottom of it, the depth of the water at its ingress to the pit being measured to the depth of the largest turnip below the water-line as it floated, so that roots thrown into the canal in the field where they grew were delivered in a heap, ready washed, down in the farmyard.

Economy in the use of straw was a great point with him, and he was strongly opposed to the practice of having it trodden down in yards, for he regarded it as of much greater value as a fertiliser after it had served the purpose of food. His stalls, therefore, were so constructed that the animals tied up could just stand upon the raised and paved floor with some difficulty, or at most with no room to spare. The refuse thus passed beyond the standing room to a lower level, and the animal lying down gathered itself up on the clean higher pavement, without litter. Barns, sheds, and other buildings were fitted up with stalls for this purpose, and the manure thus produced was kept pure. For some years Bakewell maintained that it increased in fertilising value with age, and that it should be applied in a dry, crumbled state (like peat dust); but in his

later life he acknowledged a change of opinion upon this question, and made a corresponding change in his practice.¹ His conviction of the superior value of this fertiliser over the mixed contents of a straw-yard was so strong that he was willing to take in his neighbours' cattle, so far as he had room for them, and to feed them on straw without further recompense than their returns towards the enrichment of the land.

The difficulty of inducing cattle to eat up straw without waste may occur to the reader. This was overcome by giving only a small quantity at each feed. The animal, eating with a keen appetite, would not leave any, and not having at one feed fully satisfied its hunger, was always prepared to clear up the next feed to the last straw. All lean cattle in winter—from November to the end of March—had straw as their only food; young cattle requiring to be kept in a growing and thriving state, and cattle in process of fattening, straw and turnips until the turnips were finished in spring, and afterwards hay as the sole substitute for roots. Neither hay nor straw was bought, yet the cattle always looked well, and the usual numbers of the different kinds of stock upon the farm were 60 horses, 400 large sheep, and 150 head of cattle, all sorts and ages counted. More than once 170 of the latter had been wintered.

On the planting of hedges, as on every other branch of farm work, Mr. Bakewell had his own strong opinions of the way how, and how not, to do it. He preferred planting on the level, three-year old quicks, with plenty of manure. On road-making he is said to have satisfied himself that if people would only make their roads concave, instead of convex, and mend them by watering, one shilling that way would go as far as five shillings the other way! By some of his watercourses he grew willows, which were cut every seven years, peeled, and reared in a stack for making handles of rakes, forks, and other tools, and fencing for newly-planted hedges.

We have seen in the instance of his irrigated land how Mr. Bakewell tested the worth of his notions by frequent and varied experiment. He did the same in every department of the farm. This was the grand source of his power. He did not try to make facts square with his opinions, but his opinions with facts. His animals in their lifetime were often submitted to

¹ See Mr. George Culley's notes upon a paper entitled *Observations made at Mr. Bakewell's in 1771*, communicated by the Duke of Buccleuch to the Board of Agriculture under Sir John Sinclair's presidency, and supposed to be written by a Scotch farmer (*Annals of Agriculture*, Vol. XXVIII. [1797], pp. 588-601).

experiment to prove their rate of increase in proportion to food consumed; and after their death, to examination of the quality of their flesh and proportion of flesh to offal. But that was not all. Skeletons and pickled joints of specimens of the best of the Dishley sheep and cattle formed a little museum at The Grange, for the comparison of one generation with another, ancestors with their descendants. The degree of fineness of bone, the size and shape of the frame, the thickness of the layers of muscle, and the depth of outside fat and quantity of inside fat were thus brought under notice, and any change for the better or worse was recognised in time to serve as a guide to the breeder, to whom the animals were known, alive or dead, inside and outside. Mr. Bakewell's *post-mortem* examinations of his cattle and sheep must have helped very much to educate the senses of sight and touch for use in judging the living animals, whilst enabling him the more accurately to estimate the intrinsic value of the latter for breeding purposes by their relationships to the different specimens seen in the shambles, or represented by relics in the private museum of The Grange.

The question of the principles recognised by Bakewell has been much discussed, that of his practice somewhat warmly disputed. In the volume entitled *Necrology* (1805), already mentioned, his principles are laid down dogmatically as (1) "Like will produce like," and (2) "Animal manure the main science of husbandry," which the author says are allowed to be just; but Bakewell's application of them, he adds, was far from incontrovertible. Now we know that the first is no more a Bakewellian than it is a Shakespearian principle, for we have evidence that in many familiar passages Shakespeare recognised it two hundred years before Bakewell's day; and if an earlier reference still be required, the first chapter of the Book of Genesis may suffice. The law of reproduction after kind has been known to man certainly from the dawn of his own history. Bakewell, like other great breeders, acted upon his own observation of the workings of that law among domesticated animals, more subject to variation than animals in their free state of nature. He maintained that by the exercise of intelligent care in selecting it is quite possible "to get beasts to weigh where you want them to weigh," in the roasting instead of the boiling pieces; that the shape should give "the greatest value in the smallest compass"; that the shape which does that is correlated with a hardy constitution and great readiness to fatten; that the shape of a barrel, swelling in the middle and gently lessening towards the ends, is the true model; and that "the smaller the bone the truer the shape," and the better, consequently, the return for food consumed. The breeder, he

declared, must find the best "machine" for turning the direct products of the land into products of higher money value as food for man. He scouted the old notion that the blood must be constantly varied by the mixing of different breeds, and challenged the world to show him a herd of cattle or a flock of sheep of high credit, bred on "the old system" for great bone, by the crossing of breeds, or from ever-varied blood. In his own herd and flock he showed, with natural feelings of pride and self-gratulation, the results of breeding according to "the new system," which differed from the old mainly upon those two points—small *versus* large bone, and permissible in-breeding *versus* perpetual crossing with strange breeds or strange families. In these two points we have the heart and marrow of his practice as a breeder, and upon these questions he was ever ready to maintain his position in friendly discourse.

Biographical faithfulness obliges us to consider the evil as well as the good associated with the name of Bakewell by writers whose own names are respected, and whose opinions and works are recognised as authoritative. Lightly-written detraction we may promptly dismiss. We read:—

The mystery with which he [Bakewell] is well known to have carried on every part of his business and the various means which he employed to mislead the public induce me not to give that weight to his assertions which I should do to his real opinion could it have been ascertained.¹

The words here reprinted are those of Sir John Sebright, in his letter on breeding, quoted by the Rev. Henry Berry in the first letter of his series upon the state of some of the improved breeds; and they are introduced by Mr. Berry, with the comment that they would show why he had preferred to look to Bakewell's *practice* rather than to what was said to have been his *declaration*. By the doubt thus cast upon Mr. Bakewell's word, Mr. Berry saws off the bough upon which he sits, and falls with it. He bases his argument upon the breeding of animals as *declared by Mr. Bakewell*, and calls that "Bakewell's *practice*." Having thus laboured to prove his own foundation false, he proceeds to show that Bakewell's system was not one of close and exclusive in-breeding, as was commonly supposed, but that it was a system of breeding mostly within his own herd and flock, occasionally from closely-related animals, and occasionally, also, from unrelated animals. His analysis is careful, and his reasoning upon it sound. The unsoundness is

¹ *British Farmer's Magazine*, 1827, Vol. I. p. 290.

down below, for he wastes his pains, because he has started with the assertion that Bakewell's declaration is unworthy of trust.

The case stands thus : Mr. Berry had declared against close in-breeding. Mr. Bakewell had declared in favour of in-breeding, and had referred to the in-breeding practised by himself. Mr. Berry does not call that, as stated, the degree of in-breeding to which he objected ; and if he had kept his hands off the reputation of Mr. Bakewell, who had died many years prior to Berry's controversy upon the subject, his position would have been a strong one. His argument stands or falls according to our faith in, or doubt of, Mr. Bakewell's word.

Of the justice, or unintended injustice, of Sir John Sebright's remark we can judge only from balance of evidence. *Prima facie*, it seems probable that if Mr. Bakewell desired, as Sir John says, "to mislead the public," he would have put his declaration of practice and his declaration of opinion, in perfect harmony, upon one common level of falsehood. If Sir John had confined himself to a single and specific charge against Mr. Bakewell, the answer would have been less obvious than it is. But his all-round charge of duplicity is too much. It dies of plethora. It affects the whole character of the man, of whom we have a very different account from his most trustworthy contemporaries.

There was one early writer, however, by whose statements, possibly, Sir John's estimate of Bakewell's character may have been unfavourably influenced. The author of the memoir of Bakewell in *Necrology* (before quoted ; see note, page 3) thus writes :—

A sort of monopoly was created among the fraternity of improvers, who adopted all the arts, and put in practice all the tricks, of jockeys and horse-dealers. Sham contracts were made by purchasers at wonderfully high prices ; puffers were regularly engaged to spirit up the buyers at auctions ; and a young lord or gentleman, with his pockets well lined and his senses intoxicated by the fumes of improvement, was as sure to be imposed upon by these as by the gentry at Newmarket. The pens of itinerant agriculturists, whose knowledge of live-stock originated merely in their writings about it, now took up the cause and blazoned forth the transcendent qualities of the "New Leicesters." In consequence of this the country began to consider these oracular decisions as orthodox. Not so the town. The sages of Smithfield, before whom the fatted animals of all counties pass in hebdomadal review, and who try the merits of all by the unerring standard of the balance, although they were compelled to purchase the commodity, never approved the *barrel shape*, or the Dishley improvements. They pretend at this hour that the original breed was more advantageous in point of public utility than the new one ; and that the Lincoln, a branch of the ancient family of Teeswater, is, in respect of form, superior to all. They do not even scruple to assert that the feeding of Dishley sheep has never fairly repaid the cultivator,

Surely "the cultivator" himself ought to be at least as good a judge on this point as "the sages of Smithfield," or as "the town." Even "the unerring standard of the balance" is unerring only so far as the *weight* of the product sent to market is concerned. The *quality* is proved by other tests, known alike to producer and consumer; but the *cost of production* is best known to the producer. The strictures of Lawrence or of "Benda," stripped of a certain amount of mock-loftiness of style and affectation of smartness, are reducible to little more than another old writer, scarcely observed because of unobtrusive manner, has said, to the effect that Bakewell's conduct was in some respects unpopular, and that the measure most so was the establishment (with its rules) of the "Tup Club," or Dishley Society, which was condemned, he adds, "exactly in proportion to the rise in prices."¹

The Dishley Society, an association (founded in 1783) for the preservation of purity of breed, had also the object—perhaps we should call it the primary object—of protecting and advancing the interests of the breeders of improved stock. They, at the cost of much time and pecuniary capital, had raised the standard of merit in the flocks of the country; they had established a breed capable of widening incalculably to other breeds the circles of improvement; and they had a just claim to recompense for their outlay and their time and skill. The club, therefore, was formed. Whether its proceedings, and those of its agents and friends, were always such as the enlightened and sensitive conscience could approve, or whether the meaner tendencies of human nature were sometimes exemplified in its transactions, and, if so, who were to blame, we cannot at this distance decide; but we can scarcely hesitate to allow that the existence of the club was justified by the certainty that the pioneers of improved breeding would be heavy losers unless they combined to protect themselves.

The Society flourished. Prices rose. Envy and jealousy rose with prices. Hence the attacks upon the associated breeders, and charges, possibly much exaggerated, of unfairness in the means employed to keep up the prestige of the new breed. Bakewell, the foremost man, was necessarily singled out as the man most responsible for the alleged knavery of the Dishley coterie, and his name more than any other is consequently associated with discreditable practices. But when we remember that men of the mental and moral type of Arthur Young were Bake-

¹ *Husbandry of Three Celebrated Farmers*; section on Bakewell. London, 1811.

well's friends and visitors, and that they have left on record respectful impressions of his character and work, we may discount most of what we read about Newmarket "gentry," jockeys' trickery, and the hired pens of those "itinerant agriculturists" who presumably were more familiar with the sound of Bow Bells than with the lowing of oxen and the bleating of sheep.

It appears that even before the days of railway trains, telegraphs, and cheap newspapers there was a class of hangers-on about the press, eager to "write up" a ram-letting or assist a prospective sale. If persons of that class sometimes sought interviews with Mr. Bakewell and his brother-breeders and followers, and from hospitable men, proud of their flocks and herds, obtained material for occasional notices, we can readily account for the development of a "mystery" about the Dishley system of breeding. The results of that system were sufficiently wonderful to support any hints of hidden knowledge and secrets of practice which such persons would be likely to assume as the only possible explanation of those results. To such questioners, and to farmers who came to him in the pride of deep-rooted prejudice as superiors, accounting him a man of new-fangled notions, Mr. Bakewell might not care to be very particularly communicative. But to men like Young, Holt, Nichols, Monk, and Marshall he evidently unfolded his views very freely. It is difficult to harbour the idea that he concealed either his real opinion or his real practice when we read their accounts of their visits to him at Dishley.

Bakewell's success, great as it was in one branch of his work as a breeder, cannot be compared with the success of his incalculably great work as the leader in the art of improvement by a new system. His most distinguished success, unquestionably, as a single breeder, was in the production of the Dishley or New Leicester sheep. The origin of the breed is usually regarded as uncertain. Professor Low says: "All presumption is that the basis of Bakewell's breed was the long-woolled sheep of the Midland counties, from which he may be supposed to have made such selection as suited his purpose." Young and Culley, however, who both had exceptionally great opportunities of learning the truth, concur in giving prominence to the Lincolnshire element in the origin. Bakewell himself admitted to Mr. Chaplin (as Low states) that at one time he had used Old Lincoln rams. What is meant by the term "the Old Lincoln breed" in Bakewell's day is a question quite worth asking. The Lincolns bred by Mr. Chaplin, Bakewell's contemporary, were certainly large sheep. From a passage, however, in the inaugural address of Sir John Sinclair, in

Édinburgh, to the Society for the Improvement of British Wool, established January 31, 1791, we gather that all the large breeds of English sheep were then of recent introduction, within half a century before that date, and therefore only newly imported or newly developed breeds when Bakewell began his work of improvement. Young says of the Dishley sheep: "The breed is originally Lincolnshire, but Mr. Bakewell thinks, and very justly, that he has much improved it." Culley, who, like Young, knew Bakewell at home and watched the development of his flock, describes the improvement effected in "a certain variety of the Lincolnshire," and promptly explains that he means the variety "first selected by Mr. Robert Bakewell, of Dishley, in Leicestershire, who, with singular discernment and great attention, has raised a breed of sheep unknown in any former period, and which surpass all other breeds in their propensity to get fat, and in paying the most money for the quantity of food consumed." He then describes the distinctive peculiarities of the breed, in its differences from other longwool breeds—the fine lively eyes, clean head, straight, broad, flat back, the barrel-like form of the body, fine small bones, thin pelt, and inclination to fatten early; the mutton, fat, fine-grained, and of superior flavour; wool averaging 8 lb. a fleece, and in length from 6 to 14 inches; wethers killed to best profit at two years old, when they made from 20 lb. to 30 lb. a quarter; if kept longer they get too fat for what he calls "genteel tables." James Bolton's three-year-old wether of this breed, killed at Alnwick, Oct. 20, 1787, cut straight through the ribs without any slope, measured 7½ inches of solid fat, and had a back like the fattest bacon, from head to tail. This shows the character of the breed several years before Bakewell died, and within how short a space of years Bakewell's will and judgment had prevailed to produce properties "unknown in any former period." No wonder the man was looked upon as a magician, possessing a secret which he would not impart to anyone.

At the time when Culley wrote, the weight of wool had been less an object than the quantity and quality of mutton obtained at the least expense of food. The next point, he suggests, for rural philosophy to obtain would be the increase in the value of the fleece. Bakewell, according to his custom, had just stuck to his main design.

In another place Culley, writing on the old Teeswater breed, records the rapidity with which it was improving from the introduction of Dishley rams. The improvement was not only in the flesh and fattening properties, but also in the wool; for whilst the fleeces were not so heavy as those of the

large old breed, more wool per acre was grown. That was an illustration of one of Bakewell's points—the economy of his system—not the weight of the single animal, but the aggregate weight returned for so much grass. Young, however, says that Bakewell's sheep were individually as weighty as the individuals of nine-tenths of the sheep in the kingdom; and “his wool,” he adds, “is equal to any.” Marshall (in *Georgical Essays*, 1803, p. 386) shows that the breed was not greatly deficient in wool, wethers' fleeces generally going at the rate of 4 to the tod (of 28 lb.), and those of ewes about $4\frac{1}{2}$ —say, wethers' 6 lb. to 8 lb., ewes' 5 lb. to 7 lb.

The last-named authority also gives a minute description of the Dishley or New Leicester sheep, which is here selected from among many other descriptions for comparison with Culley's, as no two men were more competent than Culley and Marshall to describe the breed, and none, probably, have taken greater trouble to do so accurately and intelligibly. Marshall¹ takes his notes from “superior individuals, especially ewes and wethers, in full condition but not immoderately fat.” Head long, small, hornless; ears somewhat long and standing backward; nose shooting forward. Neck thin, clean towards the head, but taking a conical form, standing low, and enlarging every way at the base. Fore-end altogether short. Bosom broad; shoulders, ribs, and chine exceedingly full. Loin broad; back level. Haunches comparatively full towards the hips, but light downwards, and altogether small in proportion to the fore parts. Legs (“at present,” he expressly interposes, as if a new variation were probable) of a moderate length, with extremely fine bone; and the bone throughout remarkably light. Pelt thin; tail small; the wool shorter than longwools in general, but much longer than the middle wools, the ordinary length of staple 5 to 7 inches, varying much in fineness and weight.

Upon the question of utility of form, Marshall considers that the most distinguishing characteristic of the breed, the weight of its fore quarters, is contrary to the general principle of improvement, as legs and saddles, not shoulders and breasts, are the favourite joints. But, on the other hand, he quotes the arguments of the New Leicester breeders, that “eaters of mutton are of the poorer class,” and the increase of their supply is the great object in view. Also, that in proportion to bones and other offal a greater weight of meat may be grown upon the fore quarters than upon the hind quarters. His description of one peculiarity must be quoted *verbatim*.

¹ *Georgical Essays*, Vol. XX. p. 386

"The carcass, when fully fat, takes a remarkable form, much wider than it is deep, and almost as broad as it is long; full on the shoulder, widest on the ribs, narrowing with a regular curve towards the tail; approaching the form of the turtle nearer than any other animal." He remarks, moreover, as another distinguishing character, the smallness of bone in this breed compared with the old sorts, not of the legs only, but ribs and other bones. He had seen the rib of the New Leicester compared with that of the Norfolk sheep, the latter nearly twice the size of the former, the meat on the former three times the thickness of that on the latter, showing a very remarkable difference in the proportion of meat to bone.

The Dishley rams, Marshall observes, were often grooved along the middle of the back, and he refers to the belief that this was an evidence of the best blood. The notion, like many other popular fallacies, had a long life, for in the year 1830 Mr. John Wright, of Chesterfield, in his prize essay on sheep, presented to the Manchester Agricultural Society, took pains to show that the cloven back is not a mark of merit but rather the reverse. He, too, has remarks upon Bakewell which are perhaps sufficiently instructive for repetition in substance here. He takes the Leicester as the breed of sheep which had attained to early maturity in the highest degree, and asserts that under Bakewell's masterly management the breed had reached a height of perfection never exceeded since his day (he wrote 35 years after Bakewell's death); but how the original improvement took place was a question of imperfect history, "authors" having differed widely in their opinions, and Bakewell himself having failed to record the process. His most intimate friend, however, his most frequent travelling companion, had preserved the information that it was by selections from the Lincolns without any other cross. At one period, Mr. Wright says it is well known, Mr. Bakewell's sheep had become too small, fine, light-woolled, and what he calls "effeminate," a term by which, probably, he means that the masculine character of the ram had been lost. He assumes the probability that Bakewell effected the refinement from the coarser original type by the constant use of light-boned under-sized rams. The sure result of very long perseverance in this process would be that which he says actually occurred—diminution of the average size of the sheep of that breed. It is quite possible, too, that in the effort to realise and to fix his ideal form Bakewell had sacrificed somewhat of the character peculiar to the male sex. Mr. Wright infers that "perseverance in the

means which had been at first adopted for the improvement of large sheep did not preserve them in that improved state."

The statement immediately following is worthy of notice: "But at this juncture Mr. Bakewell, with his usual ability, made a judicious cross, and thereby produced a very great amendment. At his death he left two distinct characters of sheep, which breeds have been continued with various degrees of success by many very eminent agriculturists until the present day. The former sheep were called the Dishley, or New Leicester. But since the latter improvement took place, which has been designated the Improved, or New Leicester, the former are commonly called the Old Leicester." Mr. Wright proceeds to say that it is uncertain how that last improvement was effected, "as the secrecy with which every experiment was conducted by that able man is notorious." It scarcely could be otherwise. Mr. Bakewell was one of those men who would learn as long as he lived. *That* was the *secret*—the secret of his ability. Born at a time of great ignorance upon the subjects to which he early devoted his attention, he spent his professional life mainly in feeling his way out of darkness into light. Many of his experiments, in all probability, were neither expected nor intended by him to give improved results. If they answered certain questions in his own mind, they satisfied him; they gave him what he sought—an item of knowledge required. Step by step he must have toiled to gain the mastery of his art.

To the foregoing descriptions of the Dishley sheep we must just add Young's opinion and statement that better-made animals than Mr. Bakewell's rams and ewes could not be seen—bodies true barrels, backs broad, legs not more than 6 inches long, and fat on ribs just within the forelegs (where common sheep are never examined, because they carry none there), indicating the kindly tendency of the Dishley breed to fatten. This may be instructively compared with the following measurements recorded by Young:—

I have this day measured Mr. Bakewell's three years old ram, and find him as follows:—

	feet	Inches
His girt	5	10
His height	2	5
His collar broad at ear tips	1	4
Broad over his shoulders	1	11½
Ditto over his ribs	1	10½
Ditto over his hips	1	9½

Dishley, 17th March 1770. H. Sandford.

This day measured a two years old barren ewe :—

Height	:	:	:	:	:	:	:	feet	inches
Girt
								1	11
								5	9

Breast from the ground, the breadth of four fingers.

N.B.—I would have measured her breast but for a fall of snow.

Dishley *ut sup.*—H. S.

An anonymous writer, perhaps borrowing from one of the authors whose names appear, observes very truly that the quiet disposition of the Dishley sheep was favourable to their maturing and fattening at less cost than other breeds.

Vague, rambling stories about the crosses introduced by Bakewell into the composition of the New Leicester sheep very probably had their flimsy foundations in the sight of mixed breeds and crosses presented to strangers who went to Dishley and were taken into the fields to see the various agricultural improvements. Bakewell's rule, we learn from several sources, was to introduce his animals to his visitors always in the yards and buildings, and not in the fields. But besides the animals shown there were others out at grass, some which were not worth showing—ordinary farm stock. Among these, no doubt, were animals under experiment, which sometimes were shown to privileged friends, not to any casual caller. One who went over the farm saw a miscellaneous lot, including three sheep (which must have been pointed out to him and their history told), all the produce of "a Ryeland ewe," by which the visitor who tells the story may mean, perhaps, three different ewes all of the Ryeland breed. One was by a Ryeland ram, one by a Spanish ram, and one by a Dishley ram; and the difference was very great, the offspring of the Dishley sire being far superior to either of the others. This was probably an experiment, not with a view to a further infusion of strange blood into the Dishley breed, but to prove to the satisfaction of Mr. Bakewell himself the comparative merits of different crosses; testing the worth of the Dishley sheep for crossing other breeds.

Another experiment, seen by a friend of Bakewell's, was tried with five or six pure Dishley ewes turned out into the highways at May Day for a summer's range there without other food. The roads were narrow in those days, and the hedge-sides were bare; yet the ewes, at the close of their term of probation, were in excellent condition—nearly fat.

That experiment, probably, was intended by Bakewell to serve as one of the illustrations of a theory which he seems to have held from about the beginning of his experiments to perhaps the close of his life. Young mentions it in both his 1770

and 1785 notes on visits to Mr. Bakewell at Dishley. It was this: "The poorer the land the more it demands a well-made sheep"; that no land was too bad for a good breed of sheep; and that in places where a large-boned animal would be almost useless, a well-made one of smaller bone would do well. This opinion he was prepared to support by a moderate wager, "that his own breed—each sheep of which is worth several of those of poor sorts—would do better on poor soils than the stock generally found on them." This, no doubt, is true, certain conditions granted; and attentively examined it enables us the better to understand what Bakewell's work really was, and to appreciate his improvement. It was improvement obtained not so much by what he put into the animal as by effective modification of the animal's structure; not so much by generous feeding (although he kept his best breeding-stock in high condition) as by the production of an animal capable of turning any food into the most profitable product. You cannot eat bone, he argued; therefore substitute for bone the muscle and fat which you can eat. The same cost of food for your stock will give you either bone or flesh, and the food diverted from the production of the one can be directed to the production of the other.

The advance of improvement upon Bakewell's lines, since Bakewell's day, and the application of his system in the modification of many breeds, have opened and solved further questions. Whilst we still grant that on the poorest lands the stock may be improved *up to the sustaining capability of the land*, we are obliged by the overwhelming proofs afforded by later experiment to qualify the theory of Bakewell. If a breed of cattle, or of sheep, so highly improved that it can do full justice to the richest land, be kept through several consecutive generations with no better support than that of very poor land, much of the improvement is wasted and lost. The quality of the breed drops down to the level of the quality of the land.

Arthur Young, on the occasion of his second visit, in 1785, records an experiment conducted by a young Russian living at Dishley, Bakewell not having time to attend to it himself. On March 19 six rams, respectively of the Durham, Wilts, Norfolk, Dishley, Charnwood Forest, and Herefordshire breeds, were weighed, tied up in the sheep-house, and fed on turnips, their food weighed to them, and they again weighed at the end of the experiment on April 2. Particulars of the results as given by Young are incomplete, but the incident seems worthy of this notice as showing Bakewell's habit of acquiring knowledge, even to a late period of his life, by experiment, and not merely by rough guessing.

Bakewell was opposed to the practice of folding. Of the health and comforts of his flock he was most careful. We read that his sheep were kept as clean as racehorses, and were sometimes put into body-clothes. On the subject of foot-rot he had opinions based upon his personal observation. He thought it was caused only by *floods*, never by wetness from rising springs, nor from rains which do not *flow* over the land; and he ascribed it to what he termed the "slashy" nature of the grass grown under flowing water. One of the facts he had noted was that the flooding was not followed by lameness before the end of April, and that after the middle of May, and through the summer, the disease came, as surely as ever effect followed cause, after the water had been turned on the land. He was so certain of this that in a manner highly characteristic of his habit of turning misfortunes to useful ends, if not quite consistent with his kindness of nature, he made use of his discovery. When his best-bred sheep, superannuated, were to be fed for the butcher, and he thought he had reason to fear that the purchaser would resell them to a breeder, he simply flooded a field or two, confined them to that part of his land in the summer, and invariably found them, when fat, in a sufficiently advanced state of foot-rot to prevent their transfer from butcher to breeder.

The story of "Bakewell's black ram" is purposely excluded from the foregoing scraps of tradition about the origin of the Dishley breed of sheep. Mr. Valentine Barford, for whose flock unbroken descent from that of Mr. Bakewell was claimed upon the evidence of a carefully-kept private register of pedigree, referred to it in his controversy with the Rev. Henry Berry in 1828, saying that at that time more than fifty years had passed since Mr. Bakewell, as stated by Mr. Astley,¹ had used his black ram, yet no breeder's flock had produced more black lambs than his (Mr. Barford's) own flock, although none of them had been retained for breeding. Mr. Barford had interbred his flock very closely from that of Mr. Joseph Robinson, one of the members of the Dishley Club from its foundation in 1783, and Mr. Robinson's flock had been as closely interbred from Mr. Bakewell's. This allusion to the existence and alleged use of the black ram at Dishley may suffice for the present purpose of recording, without prejudice, a statement believed

¹ The authority mentioned by Mr. Valentine Barford, I presume, was Mr. Bakewell's neighbour, Mr. Richard Astley, of Odstone, one of Mr. Bakewell's associates as a prominent breeder, and one of the founders of the Smithfield Club in 1798.

by at least the one breeder most lastingly interested in the purity of the Dishley breed of sheep.

Mr. Bakewell, as already shown, had rams of many breeds upon his premises, but we have no authentic record of their use, otherwise than for experiments outside the New Leicester flock. On one occasion, as told by the Rev. Henry Berry, he obtained, surreptitiously, from the shepherd at Holkham a couple of Norfolk rams, during Mr. Coke's absence, and when Mr. Coke, who exchanged visits with Bakewell, next called at Dishley, there was the expected parade of the splendid Dishley rams, which were led out, as usual, from their house; but after them, by way of contrast, a sight for which the visitor was scarcely prepared. Each wearing a neck-collar, his own two formidable-looking Norfolk rams, with thick spiral horns, black faces and legs, high-carried heads, and long bodies, were led past. "At a given signal, away they bolted, at the top of their speed, each clearing the hurdles in high style, and then, returning, accomplished the same feat." No one enjoyed the practical joke more than Mr. Berry's informant, Mr. Coke himself.

One of the many anecdotes of Mr. Bakewell illustrates the estimate of the value of his sheep in his own time and neighbourhood. A Dishley ram, already let for 25 guineas for the season, had not been delivered to the hirer, when a farmer of the old type of the district took a great fancy to that particular sheep, and wished to buy him. Mr. Bakewell, knowing his man, readily offered to sell the ram to him for twenty-five shillings. The farmer, as promptly, said he would give him eighteen shillings.

Mr. Bakewell's inspection of the Old Lincoln flock of Mr. Chaplin, in the year 1788, in the owner's absence, had a less pleasant sequel than his dealings with the shepherd at Holkham when Mr. Coke was away. An angry correspondence ensued.¹ The personalities, the charges, retorts, and explanations are somewhat sad reading when more than 100 years are past and gone. Bakewell's style of letter-writing does not tell us much more of him than we know from other sources. It is no better, nor perhaps worse, than might be expected of a man of his day and vocation. That part of the correspondence which most concerns us, in examining his work as a sheep-breeder, is the passage of Mr. Chaplin's letter in which he says:—

¹ The letter of Mr. Chaplin to Mr. Bakewell and Mr. Bakewell's reply are printed in a foot-note to Professor Low's account of the Old Lincoln breed of sheep in *Domesticated Animals, &c.*

The small sheep that have no cross of the Durham kind, which you have had the address to impose upon the world, without size, without length, and without wool, I have always held to be unprofitable animals ;

and the answering passage in Mr. Bakewell's, saying—

And now I take the liberty of asking you to explain what you mean by "sheep without size, without length, and without wool," which you say I have "had the address to impose upon the world";

and continuing, in one long, gasping sentence, to inform Mr. Chaplin that he, Mr. Bakewell, was fully persuaded that ten rams without a Durham or any other cross had been in that same season let "for 1,000 guineas more than the same number of the true Old Lincolnshire breed, of the long staple," &c. The same sentence goes on through several more lengthy clauses, of which the extracted cream is the assertion that some of the highest-priced of those rams had gone into the counties of Lincoln and Nottingham, to breeders who had used Dishley sheep for twenty years, and had already offered, for future seasons, higher prices than they had yet paid, and might surely be supposed to be capable of knowing the value of the sheep which Mr. Chaplin had "always held to be unprofitable animals." Here Mr. Bakewell has fairly run himself down to a full stop, after which, in two short sentences, he asks whether, unless to their own interest, they would persevere, and observes that his own address must be extraordinary to impose upon such men against their interests and long experience.

The ram-lettings, which Mr. Bakewell is said to have been the first to establish as a recognised trade, began in a small way. In 1760 rams were hired for a few shillings for the season; ten years later prices varied up to 25 guineas; and within a few years Mr. Bakewell's aggregate was declared to be 3,000 guineas for rams hired from him in one season. His celebrated ram, Two Pounder, was let one season for 800 guineas in cash, with reservation of his use to Mr. Bakewell for one-third of the total number of ewes specified in the contract, which was reckoned as making the payment equivalent to a rent of 1,200 guineas. The enormous prices obtained by other breeders belong rather to the history of the breed than to a memoir of its founder.

The shows of the Dishley sheep in the hands of Mr. Bakewell and his followers and supporters began annually on June 8 (Marshall states), and lasted nominally until Michaelmas, or until all the rams offered were let; but on October 10 the private shows closed with a public sale and letting. For a few weeks after those shows began each breeder

kept open house. But few rams were sold compared with the numbers let. The principal ram-breeders saved 20, 30, or 40 ram lambs, which were "chosen more by blood than by form," weaned in July or August, and then indulged in keep to the utmost and "pushed forward" for show. Each of the principal breeders, by common consent, showed forty rams, one-shear to five-shear, comparatively few being serviceable after that age, although some retained their vigour to the sixth or seventh year. Even at that age, Marshall remarks, decay is not *natural*, but is brought on by unnatural fatness. The ewes are prolific to a greater age. The females, however, of this breed enter the stage of decay sooner than those of other breeds, because they enter the stage of fatness sooner. In the choice of rams, some farmers observed a distinction between sheep suitable for ram-breeding and those for wether-breeding, the former "cleaner and finer," the latter having more strength. Some breeders refused to recognise this difference, and Marshall held that if there was no danger of breeding too fine they were right. From this remark it would appear that they took the more refined rams as sheep of the higher and truer improved type. Their wether-breeding could be adjusted, if more strength were required, by the choice of coarser ewes for that particular purpose. But Bakewell, as we have seen, left two types of sheep, the finer, and the stronger, the latter established late in his life.

Bakewell's work of improvement in cattle, as most probably also in sheep, was expended upon what we may truly enough call the breed of his own district. As in his sheep-breeding, whatever crosses he may have taken, he certainly took the Longwools, already introduced, and perhaps we may say established, with local variations, as the prevailing race of sheep in his own and neighbouring counties, so in his cattle-breeding, however far he went to bring together different branches of the breed, he took the Longhorn, the prevailing breed of the Midlands, when he began his work of improvement.

The material he had to work upon, however, was already greatly improved from the flat-sided, coarse-shouldered, old Longhorn of Ireland and the western side of England, a slow grower, slow mover, light in the hind quarters and lean-fleshed, a fair but not extraordinary milker. That breed, in some parts of the North of England, particularly in North Lancashire, the adjoining part of Westmoreland, and the Craven district of Yorkshire, had risen to a considerable degree of excellence, both as a beef breed (time allowed) and for dairy purposes; whilst successively in Derbyshire Sir Thomas Gresley, of Drakelow, and

in Warwickshire Mr. Webster, of Canley, had also effected much improvement. The reason why these two names stand out in the history of the Longhorn as an improved breed is perhaps questionable. Without detracting in the least from the excellence of their work, as compared with anything else in the same direction done in those days in the Midland counties until Bakewell came upon the scene, we may be allowed to doubt whether they excelled some of the forgotten breeders in the Northern counties. The bull Bloxedge, called by Youatt the Hubback of the Longhorns, was the son of a Lancashire sire. Thirty or forty years ago Lunesdale retained traditions which have nearly died out with old inhabitants whose memory reached back to their childhood, when their grandfathers in the chimney-nook told of the grand herds of Longhorns all up that valley and on the fell farms of Barbon and Casterton and all through the dales over Skipton way. "The Craven heifer," as portrayed on the board swinging over the doorway of many a village hostelry, displayed a degree of *embonpoint* worthy of Canley or of Dishley. But the signboard painter came again, and went, and as his American prototype in *Rip van Winkle* had dexterously metamorphosed "The King's Head" into that of the immortal Washington, the Yorkshire artist, although he left behind him, indeed, the name unaltered, had "touched up" the white back and brindled sides to a bloomy roan, and for the old-fashioned horns had substituted a dainty little pair of a waxy-yellow colour.

The original portrait may be supposed to have represented, with or without exaggeration, the Longhorn of the North of England at the time when Robert Bakewell founded his herd by the purchase of two heifers from Mr. Webster and a bull from Westmoreland. From these pure Longhorns he bred the whole of his herd; but how many others he ever had as tributaries of different but equally pure blood we have no evidence to show. The writer is not aware of the existence of any evidence to show that he crossed his Longhorns at any time with another breed. There are, however, in the imperfect records of some of his Longhorn pedigrees which have come down to us through Marshall blanks which possibly may be filled by Longhorns unrelated to his original three. One of the Canley heifers was Comely. She was slaughtered at the age of twenty-six years, and historically is known as Old Comely. Some parts of her were seen in pickle at Dishley, years after her death, among Mr. Bakewell's relics of his most remarkable animals, and it is recorded that the fat on her sirloin was four inches thick. The celebrated bull Twopenny was a son of Old Comely, and of the

Westmoreland bull. Arthur Young, writing in 1771 of his tour in 1770, says he then saw Twopenny, a very big bull, most truly made, on the barrel principle, circular, but broad across the back. Mr. Bakewell would not take 200 guineas for him. He had several cows for which he would not take 30 guineas each. The fee for Twopenny (at home) was five guineas, but his sons were let out for the season at rents varying from five to thirty guineas. In describing his visit to Mr. Bakewell in 1785, Young noticed in the cattle considerable "improvement," which in these days would be questioned. It consisted in the enormous development of masses of fat over the hip-bones and at the end of the hind quarters. Whereas Mr. Bakewell had been formerly contented to grow beasts heavy in the hind quarters, he had not until recently attempted to produce those excrescences of fat. Now, he had produced a remarkable disposition to fatten on those parts; "and I measured"—Young proceeds—"the hip-bones of one buried in a mound of fat 14 inches in diameter," with other protuberances to match, "yet she has a calf every year."

A bull named D., doubly grandson of Twopenny, and otherwise closely in-bred, was allowed to be a still better bull than Twopenny, and he became the sire of the celebrated Shakspeare, bred by Mr. Fowler, of Rollright, from a daughter of Twopenny, thus further complicating the much-entangled relationships. Shakspeare was the bull described by Marshall (whom Youatt quotes) as a striking specimen of natural varieties. Although so closely in-bred from the original purchases of Mr. Bakewell, "he scarcely," Marshall observes, "inherits a single point of the Longhorn, his horns excepted." In the description which follows, Marshall mentions "some remarkable wreaths of fat formed round the setting on of the tail; a circumstance which in a picture would be called a deformity, but as a point is in the highest estimation." Thus Marshall agrees with Young in regarding this gross extravagance of the development of fat as desirable. The difficulty had been, up to Bakewell's day, to breed animals disposed to fatten readily. The reaction from Bakewell's too ample results of his efforts to overcome that difficulty had not then begun.

An anonymous journalist, writing his impressions of Dishley soon after Mr. Paget's sale in 1793, says: "The famous white bull is a noble animal, but I found there were many who preferred that sold at Mr. Paget's sale." This man's style is more that of a town newspaper reporter than of one expert in the matter of live stock. The description as "white," therefore, may be taken for what it is worth from such a source. Possibly

a large proportion of white, as compared with the characteristic Longhorn colours and marking on the sides, may account for the use of the term. The same writer records a remark of Bakewell's that "the only way to be sure of good offspring is to have good cows as well as good bulls." He mentions also a heifer, sold at Mr. Pearce's sale for 80 guineas, as being valued when driven through Leicester at 8 guineas by a party of farmers in the street.

John Lawrence gives, as seeming to accord as nearly as possible with Bakewell's ideas, the following general description of the Dishley Longhorns. Round, tight, cylindrical carcass; wide in the hips, but very little prominence in the huckle-bones; straight back, well filled behind shoulder; neck long and fine, without any superfluous skin or dewlap; horns long, taper downwards, and of a deep yellowish colour; head fine and smooth. The barrel form, gradually tapering towards the ends, was the model, as in sheep. Another authority says that his Longhorns, like his sheep, were remarkable for the fineness of their bone, and for their flesh. Marshall describes a rich mellow touch when lean, firm when fat.

Youatt, taking Marshall's remarks upon the principles of breeding as no doubt faithfully representing Bakewell's views, although Marshall, with commendable delicacy towards Mr. Bakewell, introduces them with the explanation that he does not intend to deal out Mr. Bakewell's private opinions nor to attempt to recite his particular practice, draws from them the inference that Mr. Bakewell kept four principal points steadily in view: (1) breed; (2) utility of form; (3) quality of flesh; (4) propensity to fatten, the three latter depending upon the first, and really comprised within it. Marshall's words are certainly suggestive of inspiration from Dishley; and this impression of the source of their substance is confirmed by the remarks of those other writers who, like Marshall, had frequent access to the same source of knowledge. Utility of form included fineness of bone, light offal, and the greatest weight in the best parts. Propensity to fatten, at first favourable, when excessive became unfavourable to the production of the best quality of flesh.

One of the uses to which Bakewell turned his three-year-old heifers was an example of his prevailing notion of economy throughout his business, whether in the form of an animal, the feeding of stock, the use of straw, the saving of labour, or any other way in which the most could be got out of the least. His heifers, in later years, were made to do the draught-work previously done by oxen. They lived on straw, and as soon as ready for breeding were put into the team, bringing their first

calves when they were well forward in their fourth year. As the Dishley Longhorn was not an early-maturing breed, an earlier age was considered too soon for the health and strength of both the calf and its dam. Bakewell would not have taken 120 guineas, he said, for one of his teams of six "cows"—or heifers, if we must so call them until they become mothers.

Bakewell tried many experiments with cattle, as with sheep, to ascertain the return for food consumed, testing his own with other breeds. With regard to these experiments, the results being in favour of his own, he certainly did not seek publicity, and Young doubtless followed Mr. Bakewell's own sentiments in his reason for withholding the facts of which he had full knowledge. "Accuracy in such experiments," he said, "is impossible, from differences in certain beasts in feeding, fattening, &c. Besides, even supposing accuracy, other people would not give credit to such comparisons unless the breeders of each had selected specimens to represent their different breeds in the trial; nor does Mr. Bakewell's breed want such experiments to recommend them." High condition was the rule of the breeding herd at Dishley; but this, no doubt with much truth, was by Mr. Bakewell declared, and by Mr. Young believed, to be due to the superior breed of the animals, their hereditary fineness of bone, and correlated disposition to fatten rapidly. Young says: "The general order in which Mr. Bakewell keeps his cattle is pleasing; all are as fat as bears." Again he remarks: "If the degree of fatness in which he keeps all these cattle be considered, and that he buys neither straw nor hay, it must appear that he keeps a larger stock on a given number of acres than most men in England." Lawrence, in a less friendly tone, writing after Bakewell's death, says: "His animals were made to look well by high keep," and significantly adds that Bakewell himself had "shrewdly observed that 'the only way to have capital stock was to keep the price high.'" The prices, however, with which Bakewell appears to have been satisfied were generally very moderate compared with some of those realised by breeders who obtained their stock from him and hired his bulls. This, however, if pursued, takes us out of the line of Bakewell's immediate work.

On one occasion Bakewell had let a bull for the season to a gentleman who died before the animal was due to return to Dishley. The executors sold it for 8 guineas to a butcher, who retailed its beef to his customers at $2\frac{1}{2}d.$ a pound. Bakewell thereupon brought an action and recovered 200 guineas as the value of the bull and 50 guineas for the season's hire.

If Bakewell made any secret of his practice in the improve-

ment of sheep and cattle, he was open at least in respect of his horses. George Culley authoritatively relates the circumstances; the return of the Earl of Huntingdon from an Embassy to the States-General with a set of black coach horses, mostly stallions, which became sires of horses of a capital stamp, bred by the Trentside tenantry; the excursion of Bakewell, many years afterwards, with Mr. George Salisbury, in search of the breed on the Continent; their return with Dutch or Flemish mares, and Mr. Bakewell's use of some of the imported mares to improve the old black breed of Leicestershire carthorses. In the year 1785, as we learn from several sources, he had the honour of exhibiting his famous black horse to the King in the courtyard of St. James's Palace; but a horse named K., which died at the age of nineteen years in the same year in which he took the "famous" horse for his Majesty's inspection, is described by Marshall as a far grander animal, "the fancied war-horse of the German painters," a horse under whose magnificent forehead "a man of moderate size seemed to shrink, and whose head and neck were carried so high that his ears stood, as Mr. Bakewell said every horse's ears ought to stand, perpendicularly over his fore feet." Derbyshire, the same writer stated in 1796 (the year after Bakewell's death), had been for some time indebted to Leicestershire for the best black cart-horse stallions. So recently as the year 1858 an animal was exhibited at the Chester Meeting of the Royal Agricultural Society of England as a descendant and representative specimen of Bakewell's stud.

Bakewell appears to have extended to his horses the letting system adopted for the disposal of his surplus bulls and rams. He is said to have let stallions for 100 guineas and upwards; another authority says from 25 to 150 guineas. At home the fee was 5 guineas. One of the leading chroniclers remarks that he bred the horse like the ox in form, thick and short-bodied, with very short legs. Bakewell himself used to say that bad drawing horses were made so by bad management. All his were perfectly gentle and willing workers, slow, but of great power. The general practice of the country was to use from four to seven horses to the plough. He never used more than two, and these, with a Rotherham plough, without a driver, turned four acres in the day—four times the work his neighbours did with the same strength.

His pigs are variously described as of Berkshire breed and as "a mix breed sort." They were bred in-and-in very closely, until one observer, either by sight or by hearsay, found that

they were "all rickety," another that they were "all fools." Bakewell and his admirers were of a different opinion, and considered the sort much improved under the working of his system. There was at Dishley an experiment-sty, where pigs, nine at a time in sets of three, were weighed, fed on weighed food, and so forth, the weights duly chalked on a board, and the complete notes finally transferred to Mr. Bakewell's book of experiments and results.

Mr. Bakewell's farming and breeding do not appear to have proved, in the aggregate, financially successful. Several authorities refer to straitened circumstances, and one writer goes so far as to say that Mr. Bakewell had become bankrupt in November 1776. As neither his flock nor his herd was ever dispersed during his lifetime, but both were bequeathed by him to his nephew, Mr. Honeybourn, who for some years after continued to breed at Dishley the descendants from his uncle's original animals, the story of failure needs confirmation and explanation. It is clear that at the time of Mr. Bakewell's death the Dishley herd comprised lineal representatives of Old Comely, the cow calved at Canley in or about the year 1765 and purchased as one of the original pair of heifers from Mr. Webster. His lavish hospitality, however, was enough to account for some measure of pecuniary trouble.

Thus, in each department of farm practice, we have traced, from widely scattered fragments of evidence, the work of Robert Bakewell, of whom it was justly said by the author of the memoir published on the announcement of his death, that "every branch of agricultural art was more or less indebted to him, his fortunate genius, and his original mind." While we remember the benefits which he has conferred upon the nations in the substantial results of his work, his breed of sheep having effected, in various degrees, through many well-known crosses and how many unacknowledged crosses no man can tell, the improvement of other breeds, we must remember to his credit the wider distribution of the good originated in his discovery of a shorter and surer way than before was known to enlist in man's service the laws and powers of nature. Had he been a man of higher education, we should have been the richer, no doubt, by his contributions to the literature of agriculture. But like other men of his educational level, he was more apt to act well than to tell clearly how he acted. There he was, perhaps wisely, silent. Yet others gleaned, and indirectly told, the secrets he was accused of studiously concealing. The correlation of form and certain propensities was one discovery upon

which he is known to have acted; the fact that under some conditions consanguineous breeding might be practised with most advantageous results was another. Upon these two principal rules all the other parts of his system appear to hang. They are sufficiently known, and are indicated in the foregoing notes. Men have been really, for a century past, following Bakewell's words and practice whilst denying that he had ever disclosed the "mystery" of his success, and breeds superseding his own have risen from the use of the knowledge which the world owes to Robert Bakewell.

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ECONOMY IN CULTIVATION.

At a time like the present, when farming generally is at a lower ebb than at any other period during this century, when corn-growing seems impossible, and land is going rapidly out of cultivation, owing to low prices and increasing cost of labour, we, whose living depends on farming, have to consider whether we have to abandon the pursuit of a lifetime, and take up we know not what—for most of us, from one cause or another, are unfit for any other employment—or whether we should pack up what little yet remains, and try our fortunes in those countries where rent and taxes are not, whence flow those inexhaustible streams of corn and meat that have driven us to such lamentable straits.

But many of us are too old for such a change, and none of us like being beaten by anybody, whether a foreigner or of our own kin; and before taking this last desperate step, I think we should fully consider the situation, and endeavour to find some means by which the struggle against foreign competition can be successfully maintained until the tide turn.

Farming, as I do, on a very considerable scale, both as to stock and corn, my mind has been much exercised on this subject. One naturally first looks for higher prices as the remedy, but hopes in this direction seem only born to die young; bad crops in this country seem to produce a fall in prices, owing to inferior quality of grain and abundance in other lands. If we anticipate that America will soon be consuming all she grows, are there not other new fields of virgin soil, in the Argentine, South Africa, and elsewhere, all being rapidly opened up by the aid of British capital? Hope in this direction will, I fear, only make the heart sick.