

# Some Traditional Farming Beliefs in the light of Modern Science

By SIR JAMES SCOTT WATSON

I CAN lay claim to no competence in folklore. However, like others who have moved among farmers and dipped into the older farming literature I have, from time to time, stumbled upon a variety of traditional beliefs and have speculated about their origins and meanings.

At one time most human affairs, and many phenomena that science has since clearly explained, were believed to be subject to supernatural influences; and since astrologers and fortune-tellers still continue in business today, it would be rash to suppose that even in the so-called advanced countries all traces of superstition have disappeared. In any case, there are many interesting examples of superstitious beliefs in the older literature.

One of the more amusing comes from Aberdeenshire where, up till the eighteenth century, there was to be found on many farms a corner of land, generally good land, that was left uncultivated and commonly grew a luxuriant crop of docks and thistles. This plot was known as "The Goodman's Acre." The Goodman was the devil; he was so designated because, being prone to eavesdropping and very ready to take offence, it was well to speak of him in terms of respect. It was the devil who planted the docks and thistles in the farmer's corn, and the best known means of inducing him to desist was to give him a field of his own, where he could grow his favourite crops without interference. The basic notion was thus the propitiation of an evil spirit.

Belief in magic—both white and black—was once universal and it still remains a powerful influence on the minds of primitive cultivators. The witch doctor commonly combines veterinary with human medicine and may also trade in rain-making and other sidelines. The modern Agricultural Officer, working among such primitive folk, may all too easily acquire an embarrassing reputation as a magician. For example, a particular District Agricultural Officer in West Africa was given the task of estimating the allocation of land, as between the various crops, in a group of villages. In order to limit the weight of his equipment he was accustomed to use dead millet stalks in lieu of survey poles. On revisiting one of his villages a year or two later, he found his improvised poles still standing, carefully propped up, on the sites where he had left them. It had happened that the crops, in the

year following his survey, had been exceptionally good, and it seemed that the millet stalks were the instruments of a good magic that he had made.

In our own country, at least up till the eighteenth century, outbreaks of livestock epidemics were ordinarily regarded either as punishments from heaven for the farmer's sins, or else as the work of some ill-disposed person skilled in witchcraft or equipped with the evil eye. Suspended over the door of many a cowshed in the Yorkshire Dales there used to hang—and may perhaps still hang—a 'ring stone', and the current view is that this was a charm against contagious abortion, which was generally believed to be produced by witchcraft. The round perforated stone was a sure protection against the evil eye.

Another widely used measure, against the same disease, is more difficult to explain. This was the keeping of a billy-goat in the cowshed. The practice was widely prevalent within very recent times, and may still survive. One rather far-fetched theory is that since a single abortion is often the start of an epidemic, it was to be supposed that the epidemic was essentially psychological; that the smell of the dead foetus exercised a kind of trigger action; and that the overpowering aroma of the billy-goat masked all others. Perhaps a more likely explanation is that the epidemic was regarded as a punishment from heaven for the farmer's sins, and that the billy was the 'scape-goat'.

One of the most widespread of surviving superstitions, especially among gardeners, is that the germination of seeds, and the establishment of seedlings, is influenced by the phase of the moon at the time of sowing. Well over a score of scientists have carried out controlled experiments on the point, and the evidence is overwhelmingly to the effect that the idea is without foundation. One may recall that the belief in the influence of the heavenly bodies on farming affairs goes back to prehistoric times. The priestly class in Egypt discovered that the onset of the Nile flood coincided with the first appearance of the star Sirius in the morning sky. This observation, as is well known, made possible the construction of the calendar, and it is noteworthy that the error in the original estimate of the length of the solar year was only six hours. But it would also seem to have been supposed that Sirius actually controlled the Nile waters. And it has been suggested that the priests cashed in on their discovery by pretending to intercede with Sirius (for a suitable consideration) and ensure that the flood, upon which the crops depended, would not fail.

Another group of traditional beliefs seems to be explained as due to the refusal of the human mind to accept the fact that certain occurrences are matters of 'pure chance'. The best example is the sex ratio in farm animals.

It is understandable that a farmer will look for a specific reason why a particular cow should produce heifer calves in each of four successive years; or why, in one particular year, a calf crop of twenty should consist of sixteen males and only four females; or why a particular setting of a dozen eggs should yield nothing but cockerels. There have been many prescriptions to ensure the production of heifer calves, and one can still purchase a device which will unfailingly distinguish the egg that contains a potential pullet from that which must produce a cockerel. But nothing of all this has borne examination under the cold light of science.

A third type of erroneous belief is essentially a misinterpretation of evidence, a wrong hypothesis. The distinguished biologist Vavilov examined the belief, widely held by peasants in certain parts of Russia, that wheat is very prone to degenerate into rye; he found that, in fact, the proportions of the two, in a mixture, did rapidly change—rye increasing at the expense of wheat; and since most of the so-called wheat contained an admixture of rye, and since rye is markedly more hardy than wheat, the outcome was the same as it would have been if the supposed transformation had actually taken place.

A parallel belief, till lately very prevalent in the Yorkshire Wolds, was to the effect that, under the prevailing conditions, ryegrass is prone to degenerate into couch-grass. The facts are that the common 'commercial' ryegrass, when sown on thin dry chalk soils, has a low competitive power and is short-lived; that couch-grass grows vigorously; and that the plants are not very dissimilar in appearance.

Most errors of this kind have had no particular ill consequences; but in some few instances they have led to misguided action. One of the oddest cases is that of an ailment in lambs formerly known in Yorkshire as Double Scalp, so called because one symptom is a thinning of the frontal bones of the skull, to such a degree that they break under relatively slight pressure. The recognized treatment, up till twenty years ago, was in fact to crush the frontals by tapping the head with a conveniently sized stone. Investigation showed that this particular symptom was only one of the many evidences of extreme malnutrition, the root cause being almost invariably a mass infestation of stomach worm.

We may conclude with a few examples of the many old beliefs which, viewed with scepticism or even blown upon by the early 'book farmers', have in the end been fully vindicated.

One of the oldest rules of crop rotation is that wheat must not follow wheat. It was reasonable to argue that wheat is an exhausting crop, and that it should be succeeded either by a restorative one, such as beans or clover,

or by something—barley or oats—that made lesser demands upon the soil, or else by a compensating application of fertilizers; and the early results of the continuous-wheat experiment at Rothamsted seemed to support this hypothesis. With adequate annual applications of fertilizers a succession of tolerably good wheat crops was grown over a long period. Then Mr Prout, of Sawbridgeworth in Hertfordshire, based a farming system upon the obvious lesson of Rothamsted. Over a period of decades he broke the 'rules of good husbandry' by having three parts of his farm in wheat, keeping no livestock, and selling the straw. He encountered no disaster but at the time found no disciples. The general run of farmers continued to be guided by tradition; and the tradition proved in the main to be well founded. In the 'thirties, with a guaranteed price for wheat and with little else in the way of security, many farmers attempted to do what Prout had done, but came to grief, not indeed by exhausting their soil, but through a build-up of soil-borne disease. Soil conditions at Rothamsted and Sawbridgeworth had been exceptional.

A colleague, Mr T. E. Miller, relates that when he took up his first post as Adviser in the East Riding of Yorkshire, he encountered what seemed to him to be a mistaken notion. This was in the days of strict four-course farming, with wheat following clover. But there was the old bugbear of clover sickness, and it appeared to him that a ryegrass-clover mixture would, as elsewhere, be a useful measure of insurance against a complete failure of the 'seeds'. But the farmers were not to be convinced; ryegrass was a bad preparation for wheat. Miller consulted his chief, Professor Seton, who advised silence; and eventually it transpired that the farmers were right. Both ryegrass and wheat are among the hosts of the frit fly, and in autumn, when a ryegrass ley is ploughed, the maggots migrate from the grass to the wheat seedlings, often with devastating results.

It would be an interesting exercise, for any one with the necessary leisure, to collect and analyse the proverbial wisdom of a tolerably homogeneous farming region: homogeneous because what makes sense under one set of conditions may make no sense elsewhere.

For example, Northumberland has a proverb which runs: "A sheep's worst enemy is another sheep, and the sheep's best friend is the plough." This is explained by the fact that where excessive numbers of sheep are kept under a system of free-range grazing and where the leys are left down too long, parasitic worms tend to multiply; and despite our modern armoury of anti-helminth medicines, there is still truth in the old saying. But, so far as I know, there is no comparable proverb in East Anglia where, under the traditional folding system, the flock was moved to clean ground before

the sheep could be reinfected with parasites from their own droppings.

I hope the reader of this sketchy introduction may be persuaded that our traditional farming lore is an interesting field of study; and I would add that its interest is more than academic. Today's farming is indeed partly founded upon scientific principles, but modern science is far from providing a complete guide. Its other foundation is the accumulated experience of two hundred generations of practical men, and there is something to be gained by trying to separate the grain from the chaff.

## Notes and Comments

### A FOLK MUSEUM FOR THE WEST RIDING

In July Halifax Corporation opened Shibden Hall, Halifax, as a Folk Museum for the West Riding. Shibden Hall itself, a fifteenth-century house, forms the central feature of the display, and the barn and outbuildings have been used to house agricultural equipment and craft workshops. There is an interesting collection of transport vehicles and a well equipped harness room. Of outstanding importance in the agricultural section is the late eighteenth-century threshing machine with its great three-horse wheel. The craft workshops are representative of those to be found in the neighbourhood of Halifax and include among them a smith and farrier, wheelwright, nail-maker, clogger, and file-cutter. One building has so far been removed and re-erected in the park, and that is a fifteenth- or sixteenth-century cruck-timbered barn from Wharfedale which was presented to the Museum by the duke of Devonshire. Halifax is to be congratulated on an excellent start to a brave and far-sighted venture.

### THE AGRICULTURAL ECONOMICS SOCIETY

This year The Agricultural Economics Society has celebrated its twenty-fifth birthday under the presidency of our own treasurer, Professor Edgar Thomas. At the society's summer conference, held in Cambridge, Professor Thomas appropriately gave his presi-

dential address on the history of the society. His account of the early days is very reminiscent of the period through which our own society is now passing. Promoting the study of the history of agriculture has been from the beginning one of the objects of The Agricultural Economics Society and a number of papers on the subject have been given at its conferences. It is interesting to note that the first president of the society in 1927 was Lord Ernle, that Dr C. S. Orwin was chairman of its first executive, and our own president, Sir James Scott Watson, was a member of the committee.

### SUMMER SCHOOL IN LOCAL HISTORY

The University College of Leicester announces a Vacation School in English Local History, to be held at Leicester from Wednesday August 4th to Saturday August 14th next. The school, which will be conducted by the Department of English Local History under the direction of Mr H. P. R. Finberg, will offer two concurrent courses dealing with the agrarian and urban history of England. Details of lectures, excursions, and fees will be announced in due course.

### THE PURCHASE OF LAXTON

The report of the Agricultural Land Commission for the year ended March 1952

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