

ANIMAL PRODUCTION

JOHN HAMMOND—THE MAN

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THAT Sir John Hammond's early years were spent on a farm is almost self-evident, and when one learns in addition that his grandfather, great-grandfather and an uncle were all veterinary surgeons, in their day well-known and highly regarded, it seems one has gone a long way to explain the essential practical basis of the scientist which he has become. His father was a tenant farmer of Lord Hastings on the Melton Constable estate, at Briston, a small village six miles south of Holt, in Norfolk, and here he was born on 23rd February 1889, the eldest of four children, and christened John, like his father, grandfather and great-grandfather before him and his son and grandson after him.

His grandfather as well as being a veterinary surgeon was also a farmer and a well-known breeder of Red Poll cattle, and was a man of unusual ability and determination. He farmed at Bale, only two or three miles from Briston. He was President of the Eastern Counties Veterinary Medical Society, one of the founders of the Red Poll Cattle Herd Book, and a well known exhibitor and prize winner at cattle shows. Sir John recalls that the start of his long association with Smithfield's Meat Market was when, as a boy, he would accompany his grandfather to the Christmas Fat Stock Show to see what prizes Bale-bred cattle might have won.

John's mother was also an unusually able woman, the daughter of a man who owned a school at East Dereham, and who was such a believer in Scottish educational standards of the day that he sent all his children north of the Border to be educated. John's own schooling started in the village. Later he went daily to Gresham's School, Holt. He was good at school work, usually coming top of the class and finding most of the work easy and interesting. His homework was done neatly, cleanly and in short time, and it is reported that he set off each morning, somewhat unboylike, in a clean collar. He was also athletic and useful in the games field and played cricket and football for the school teams.

In 1906 the family left Briston and Mr Hammond became tenant at Brampton Hall, a larger farm near Aylsham. John was now 17 years old and having moved away from Holt was no longer eligible for free education at Gresham's School. He was sent to the Paston School at North Walsham, but here his formal education was somewhat neglected while his athletic abilities were exploited by practice games and frequent matches. His father decided that something more directly educational was desirable so he and his brother were sent daily into Norwich to attend the Edward VI Middle School. It is remembered that never once did John miss his train: his brother missed it, on an average, about once a week.

This was a different type of school from either of the two previous, catering for the sons of Norwich business men and successful tradesmen.

Sir John attributes some of his success in meeting and handling people to this wide variety of schooling during his impressionable years.

John's interests and abilities did not seem to lead as directly as his brother's into the farming world. It was therefore thought he might do well to consider the other traditional family occupation and train as a veterinary surgeon with a view to joining his uncle. He did, however, always help on the farm in the holidays and was particularly industrious about the garden and interested in natural history. The two brothers both kept hens and it is perhaps significant that while John's hens, owing to superior feeding and attention, always laid more eggs, it was Burrell Hammond who, as the keen young business man and farmer, made the greater profit.

Entry to a Veterinary College required Latin as a subject, but John failed the Latin paper. The morning the results were announced, T. B. Wood of the Cambridge Department of Agriculture, a friend and neighbour of his parents, came to call, and suggested that, as an alternative, John should go up to Cambridge to take the Agriculture Diploma with a view to joining the recently established Agricultural Department there. Although Greek as well as Latin was required for Cambridge entrance this idea pleased John, and also his mother, who thought that a Cambridge degree might lead to better things for her clever son.

So he set to work willingly at his classical studies; but it was only at the third attempt that he passed Cambridge entrance, going up to Downing College in October 1906 with a grant from the Norfolk Educational Committee.

Agriculture not being a Tripos subject Hammond read Natural Sciences, taking physiology, chemistry, botany and geology—all sciences basic to agriculture. He also rowed with enthusiasm, ability and success. After obtaining 2nd Class Honours (in spite of having German measles at the time of the examinations) he went on in his third year to take the Agricultural Diploma course.

Then he was ready to join Sir Thomas Middleton, T. B. Wood and F. H. A. Marshall in the infant Cambridge Agricultural Department, at that time established in two dark, cellar-like rooms in the basement of the old Chemical Laboratory. He therefore applied for a Ministry of Agriculture Research Scholarship.

While waiting to hear if he had been successful he taught for a few weeks at Chelmsford Technical Institute. Here he was approached by E. Gurney, the then Lord Mayor of Norwich and a great ornithologist, to investigate the feeding habits of rooks and starlings. Farmers were asked to kill specimens and send them in with notes of when and where shot, and John Hammond, with help from specialists, identified the plant and insect remains in the birds' crops. He still retains a Sherlock Holmes-like knowledge of the appearance of beetles legs.

He then returned to Cambridge with his Ministry Scholarship and worked with Marshall on fertility and milk secretion. Also, on his own initiative, he collaborated with a brilliant young geneticist called Bailey (who was later killed in the 1914–18 war) in applying Mendel's principles of inheritance to wool and mutton qualities in sheep.

On the outbreak of war the work was broken off and Hammond joined the 7th Norfolk Regiment. In April 1915 he was sent to France and was

at the battle of Loos where the 7th Norfolks suffered heavy losses. At the end of the year he was invalided home with rheumatic fever. During sick leave he married the daughter of a farmer near Aylsham, Mercy Goulder, whose kindness, hospitality and warm heart all his students remember affectionately in the Hammond home at 1 Luard Road, Cambridge. There are two surviving sons of the marriage.

John Hammond, by now a Captain, was never fit for active service abroad again, and he was appointed Assistant Staff Officer to the Garrison at the Harwich Naval Base. Here, among other activities, he organised a Pig Unit fed on scraps from the Base, which made such a handsome profit for the Mess Funds that the whole matter was closely investigated by higher authority. To less expert minds such profits could only imply catering extravagances or worse. Hammond got off with a reprimand.

As soon as the war ended and before his demobilisation papers came through, Professor T. B. Wood applied for Hammond's release to help with the urgent reorganisation of milk production. He was sent by the Ministry of Agriculture first to the Bristol area and then to the Eastern Counties where he worked mainly on milk records. His report showed that wastage in dairy herds was from two main causes, low milk yield and sterility, and he marked these down as subjects on which research should be done.

After official demobilisation he returned to Cambridge and started the work which laid the basis of his fame and reputation. Facilities for keeping livestock were, to start with, quite inadequate. He began work with a few rabbits in a tin shed, and it was years before he acquired a group of half a dozen heifers; he bought his first sheep himself—a specimen he wanted for dissection. He began by buying rabbits from dealers, but found the quality uneven and unsatisfactory; so he started breeding them and soon had established the famous inbred strains which were to be continued unbroken for the next thirty years. While convalescing during the war he sent for copies of the Smithfield Show catalogues, and, working on these with the help of statisticians, he brought out during the early 1920's a series of papers on growth rates of cattle, sheep and pigs. He realised that this was only a beginning of all he wanted to know about growth rates, and change in shape and composition of an animal as it grows, and he initiated an extensive study into these problems, bringing out many papers and articles over the next thirty years. He was also laying the foundation for work on meat quality, planes of nutrition, artificial insemination, maternal influences and so on.

Soon students were attracted to his department and he seized on this fact to guide them to work out many of his ideas—never in any way forcing them, merely throwing out suggestions and allowing them to shape their own course and pick their own projects. But he was always ready to guide, advise and encourage. Never did he force what he knew to be the best approach to a problem—'As I see it' he would say, or 'In my opinion', leaving it clear that other opinions were to be considered.

From 1920 to 1943 he was a Physiologist in the Animal Nutrition Department in the Cambridge School of Agriculture, and was employed partly by the University and partly by the Development Commission, a body directly responsible to the Treasury. The head of this Department was Dr. F. H. A. Marshall. On Marshall's death in 1943 Hammond

himself was appointed to succeed him as Reader in Agricultural Physiology, and he held this appointment until he retired in 1954. Many of the staff under him were University Lecturers and were paid for this duty by the University. In 1946 the Institute of Animal Nutrition was re-formed as an Animal Reproduction Unit under the Agricultural Research Council. By employing some of the members of the Unit part time and by making use of the Research Students working under a variety of grants, he was able to dedicate a good proportion of the limited funds to keeping research animals and providing other useful facilities.

Hammond frequently acknowledges a debt to his great predecessor F. H. A. Marshall. It was from him that he learnt that gentle approach to people, that encouragement of growing initiative and confidence, and the theory that, in all cases, people matter more than things or theories.

Consequently, his department was always a happy place in which to work, with a loyal, friendly, family-like atmosphere. And it was the fecundity of his ideas, together with the philosophy that 'people matter', which made for the unusual generosity with which he insisted that students in his department should put their names to papers in which their part in a collaboration was, very possibly, a minor one. Many overseas students passed through the department, and the work being done at any one time was wide and varied. Occasionally the whole department would be drawn into some work of immediate importance, such as dissections associated with planes of nutrition, when Hammond, booking the weights at the end of the table, would preside over perhaps 15 or 20 people all dissecting away at the carcass being investigated. Meanwhile the conversation would be a fruitful discussion and exchange of ideas from the different research fields—always illuminated by Hammond's own clarity and breadth of outlook and knowledge.

John Hammond's life is a many-sided affair. Appointed to do research and to teach agricultural students at Cambridge, he has never limited himself to these duties in any narrow sense. As he sees it, the agricultural scientist must make it his job to know what work is being done in associated fields and let it be known in turn what is new in his own particular field. Therefore, it is not a waste of time to attend conferences but an essential ingredient of taking a wide and practical view of science. Agricultural scientists, he finds, need the help which biochemists, geneticists and others like them can give with agricultural problems. On the other hand there is the necessity of keeping in touch with the purely agricultural side—the practical farming world—and so he welcomes the time spent at agricultural shows, livestock markets, butchers' conferences, or in talk with the ordinary farmer.

He is an active member of many scientific societies, some of which, e.g. the Nutrition, Experimental Biology, Animal Production and Animal Behaviour Societies he helped to found. He is on the Editorial Board of the Empire Journal of Experimental Agriculture, the Journal of Agricultural Science, the Journal of Dairy Science, the British Journal of Nutrition and the Zeitschrift für Tierzüchtung und Züchtungsbiologie. He has written a number of books, edited others and is a constant contributor to farming journals, believing that an agricultural scientist must be prepared to rewrite his work in popular form, not once but probably many times, in order that the largest number of interested people may know of it. In scientific circles

overseas his name has long been admired and honoured. He has been elected foreign member of agricultural academies in Argentina, Sweden, Czechoslovakia, France, Italy, and of animal production societies in Spain, Italy, Japan and Germany. He holds honorary doctorates from many universities, including Iowa, Vienna, Louvain, Durham, Copenhagen and Leeds. In this country the Royal Society made him a Fellow in 1933; he was made a C.B.E. in 1949 and received a knighthood in the New Year Honours of 1960. Downing College regards him as one of their most distinguished members and he has been a Fellow of the College since 1936, serving during the war years as College Estates Bursar.

In 1930 Hammond was asked by the Empire Marketing Board to go out to the West Indies to investigate difficulties met with when breeds of cattle which milked well in temperate climates were taken to the tropics. It was the first of many such investigations and advisory journeys which Hammond was to make, and with other visits abroad to take part in international scientific conferences, or to receive honorary degrees, decorations or memberships from bodies such as Universities and distinguished Societies, few are the years when he has not been abroad, and few the countries of the world he has not visited.

When in 1954 the time came for John Hammond to retire from his position as Reader in Agricultural Physiology at Cambridge, on reaching the age of 65, there was considerable consternation in scientific and agricultural circles. While some aspects of his work could be continued by others it was the wide area of research over which he had worked which was necessarily going to be curtailed. Most of his research animals had to be got rid of, including a herd of Dexter \times South Devon cattle with which he had been carrying out work on maternal influences, nor would more students come to work under his unique guidance.

However, retirement did not mean resignation to old age and armchair inactivity. Hammond was retained in an advisory capacity by a number of organisations and he continues to travel about Britain and the world giving lectures and advice on an even wider range of occasions than when he had teaching and research duties.

From this short summary of his activities it must be clear that John Hammond's life has always been a busy one. The days are never long enough to do all that there is to do, and rare moments of relaxation are enjoyed with the same intensity as the work it has momentarily replaced. On fine Sunday afternoons he would play bowls or croquet on the not very large, or smooth, lawn at Luard Road with the young students who had dropped in for tea. During the Lent and May Boat Races he would appear without fail on his bicycle to follow the Downing College boats from the towpath.

But at other times when at home he would be sunk deep in his enormous armchair, his feet on the mantelpiece, a board across his knees, a cigarette pinched between his lips, writing up work urgently awaiting his attention. His chief hobby is his garden, an interest which, starting in boyhood, continues always to give satisfaction, pleasure and relaxation.

Listening to him lecturing one is conscious of the great clarity of his mind: only a really clear thinker could express complicated conceptions so directly and so understandably. In discussion and general conversation the depth and wide-reaching mastery of the relevant and associated knowledge

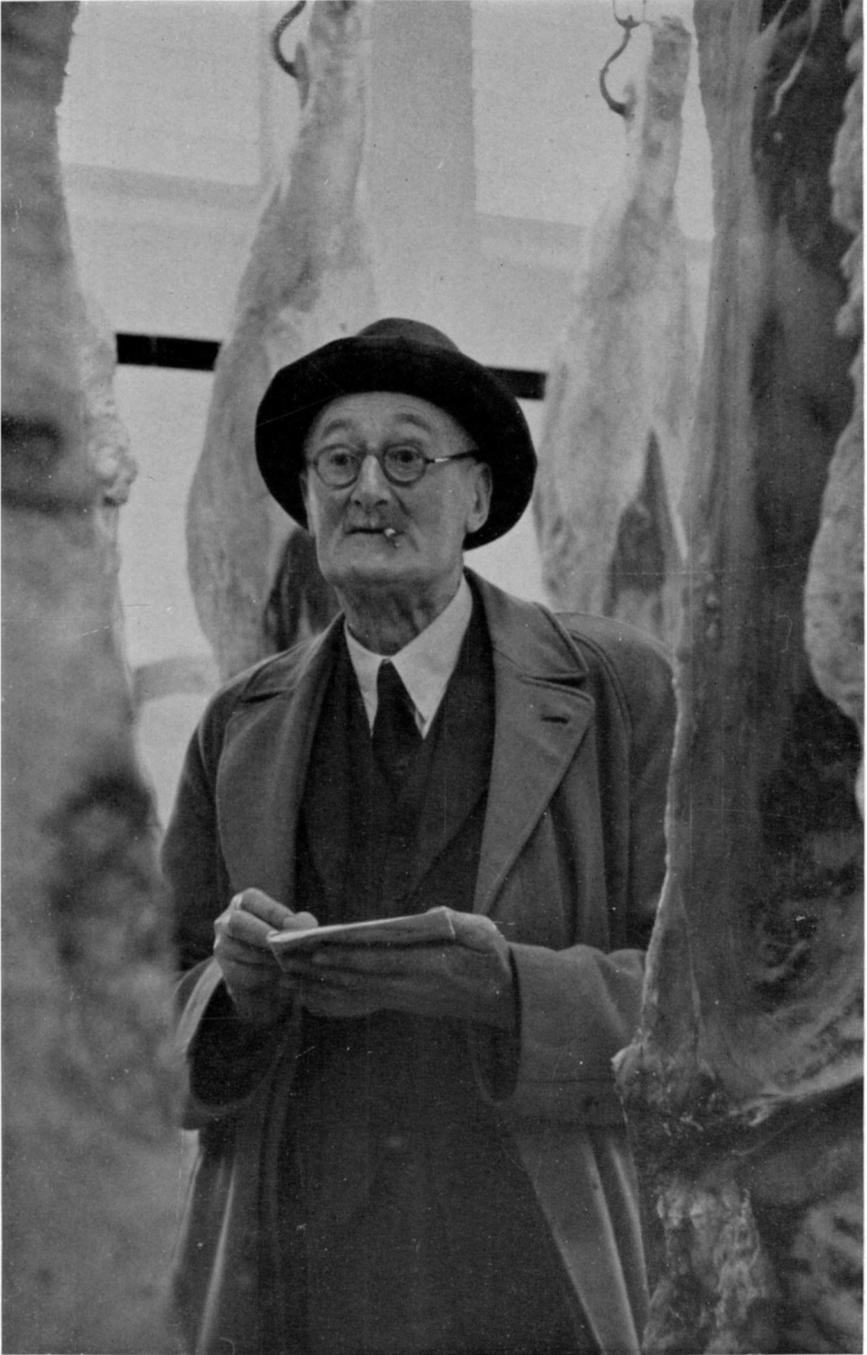
are what impress. He never takes a narrow view; one fact works on another and the whole may be different from the sum of its parts, and it is this broad outlook on scientific problems which he has tried to instil into the present generation of research workers in his field, so many of whom have come under his influence.

In scientific circles, in gatherings of butchers or farmers, at agricultural shows he is instantly recognised, abroad, every bit as much as in Britain. With his generous, friendly nature he is a man utterly without an enemy: more positively, he is met, wherever he goes, with affection, admiration and respect. The value of his life's work can never be estimated in money terms, but to Sir John his work is what makes life interesting and one cannot picture him as a rich man enjoying expensive tastes and hobbies, or retired to a vegetative existence. His high, old-fashioned bicycle with its outsize basket is one of the features of Cambridge, and, having no mechanical ability, he has never learnt to drive a car. With the bicycle goes the characteristic old waterproof with the bulging pockets. He is utterly unself-conscious of his appearance and has a tall, athletic figure with a kindly forward inclination these days. He is still, in his seventy-third year, travelling about the world, his enthusiasm and interest unabating, finding the world a fascinating place. But at the back of all lies the memory of the closely knit, self-sufficient life of the farming community of Norfolk, where he grew up in surroundings which had only slowly altered for hundreds of years, and to which, in its modern form, he still enjoys returning.



Farmer & Stock-breeder photograph

John Hammond arriving at Downing College, Cambridge, for dinner arranged by past and present students on his retirement (December 1959)



Farmer & Stock-breeder photograph

John Hammond examining carcasses at a demonstration of the
Shropshire Fatstock Society (March 1957)