DISEASES of the PIG

FIFTH EDITION

D. J. Anthony
and E. F. Lewis

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A Handbook of the Diseases of the Pig with an Introduction to its Husbandry

DAVID J. ANTHONY
M.R.C.V.S., D.V.S.M., F.R.S.H.
Chief Veterinary Surgeon, Brierley Hill, Staffs.
Examiner in Meat and Other Foods to the Royal Society for the Promotion of Health.
Onetime Examiner in Anatomy to the Royal College of Veterinary Surgeons.

E. FORDHAM LEWIS
M.R.C.V.S., F.R.S.H.
Department of Medicine, Royal Veterinary College, University of London.
Examiner in Veterinary Medicine to University of London
Examiner in Meat and Other Foods to the Royal Society for the Promotion of Health.

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PREFACE TO THE FIFTH EDITION

WHEN this book first appeared in 1940, the general interest in pig-rearing was confined to the agriculturist and the veterinary surgeon. Since the second world war, however, and in particular during the last decade, vast strides have been made in the development of the pig industry. Elaborate research by many organisations has resulted in an enormous advance in our knowledge of the pig and its problems and many different facets of human endeavour have become involved in the general pattern. The man farming pigs on a large scale, the cottager, the veterinarian, the meat inspector, the public health officer, the medical officer of health, the agricultural, medical and veterinary student, all require information on a wide range of topics associated with pig-rearing. It is hoped that this book will be of value to these several groups of people.

In the preparation of this new edition we have made an extensive revision and included a considerable amount of new material. The most important changes are as follows: the descriptions of methods of therapy have been brought up to date. The various sections have been pruned and rearranged for greater convenience of reference. Many have been rewritten. A new chapter on diseases of newly-born and young pigs has been included to mark the economic importance of this aspect of the subject. Some of the less informative illustrations have been replaced by new photographs and the lists of reference have been greatly enlarged. Details of the technique of tuberculin testing are given in the first appendix and to avoid unnecessary repetition in the text, posological details of the commoner preparations used in the medical treatment of pigs are listed in the second appendix.

The task of preparing a new index was kindly undertaken by Mrs. M. B. Bailey, A.L.A., to whom we are greatly indebted. Our thanks are also due to Dr. Aage Thordal-Christensen for his work on Enzootic Paresis of pigs in Denmark, and to the publishers, Messrs. Baillière, Tindall and Cox in the person of Mr. R. F. West, for unfailing help throughout. We trust that the

innovations and improvements in this edition will enable the book to be of practical value to all those persons interested in the subject, who have not had the opportunity of recent post-graduate study to familiarize themselves with the principles of current advances. At the same time the needs of the practical pig-keeper in countries abroad as well as in the United Kingdom have been kept in mind.

DAVID J. ANTHONY.
January, 1961 E. FORDHAM LEWIS.

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INTRODUCTION

THE modern pig has evolved from the rough, long-snouted, heavy-shouldered wild hog, *Sus scrofa*, and a cross with the Chinese white pig, *Sus indicus*, together with a black offshoot of the latter known as the "Neapolitan" pig. *Sus scrofa* is described as being larger, leaner, coarser in bone and hair than the white Chinese pig, whilst the wild boar was described as being of a russet grey colour when young, becoming dark brown with some grey hairs in old age, very active and dangerous. Some wild boars are said to have existed in Staffordshire up to about 1683, and up to 1593 in Oxfordshire.

The antiquity of the pig is beyond question. It has figured in mythology and religion, and although references to the pig have not always been complimentary, it is safe to say that nowadays the porcine species is regarded as one of the most useful and valuable of the domestic animals, being a prolific breeder, good scavenger, and with its small omnivorous stomach well adapted for concentrated feeding. To so high an art has pig feeding been carried that feeders can now estimate the amount of flesh the animal will produce from a given quantity of food. A pig is said to increase 1 lb. in live weight for every $3\frac{1}{2}$ lb. of food consumed, or to use a rough calculation a score (20 lb.) of pig flesh (dead weight) means a hundredweight of food.

In olden days the pig's home was the great forests, where he derived nourishment from acorns, roots and beechmast. Nowadays pigs have forsaken the forests for the great grain lands and dairy countries. The corn belt of the United States of America produces the famous "lard hog," the dairying districts of Europe and Canada and the barley and potato growing areas of the world produce the pork and bacon pigs of to-day. Of all the "food animals," the pig gives most value for money, as there is no waste matter in the pig industry. The flesh is consumed as human food, and so is part of the offal, whilst the "non-edible" offals can be utilized for the production of excellent quality fats, animal foods, and fertilizers. The

skin of the pig needs no advertisement, but the custom of leaving the rind on the bacon deprives us of a valuable by-product as the difficulty of skinning such a fat animal, and the small demand for pig-skin leather, has led to the devising of machines for mincing pig skin and " rind " so fine that the product can be used for the questionable purpose of helping to act as a sausage " filler." The long back bristles of the pig make useful brushes of all sorts, whilst the shorter hairs covered with a fine layer of latex help to provide us with comfortable seats in our homes and motor-cars. The endocrine glands of pigs form valuable medicinal agents, whilst that one waste product of the pig, " the squeal," has been eliminated owing to the introduction of humane methods of slaughtering. Thus one can safely say that the pig is indeed a most economical animal.

If any criticism has to be made of present methods of pig rearing, it is that there is a tendency to regard the pig as more of a machine than a live animal, and, furthermore, an animal with peculiar idiosyncrasies. A too rapid adaptation of scientific knowledge to pig feeding and rearing has its dangers, and leads to a breakdown in the animal's metabolism with the appearance of certain disease conditions which were comparatively unknown in the pre-" scientific feeding " era. Nature exacts a penalty for any violation of her laws, and for successful rearing and feeding one must avoid extremes and try to adopt scientific methods whilst still having due regard for mother Nature.

Chapter I

SOME BREEDS OF PIGS

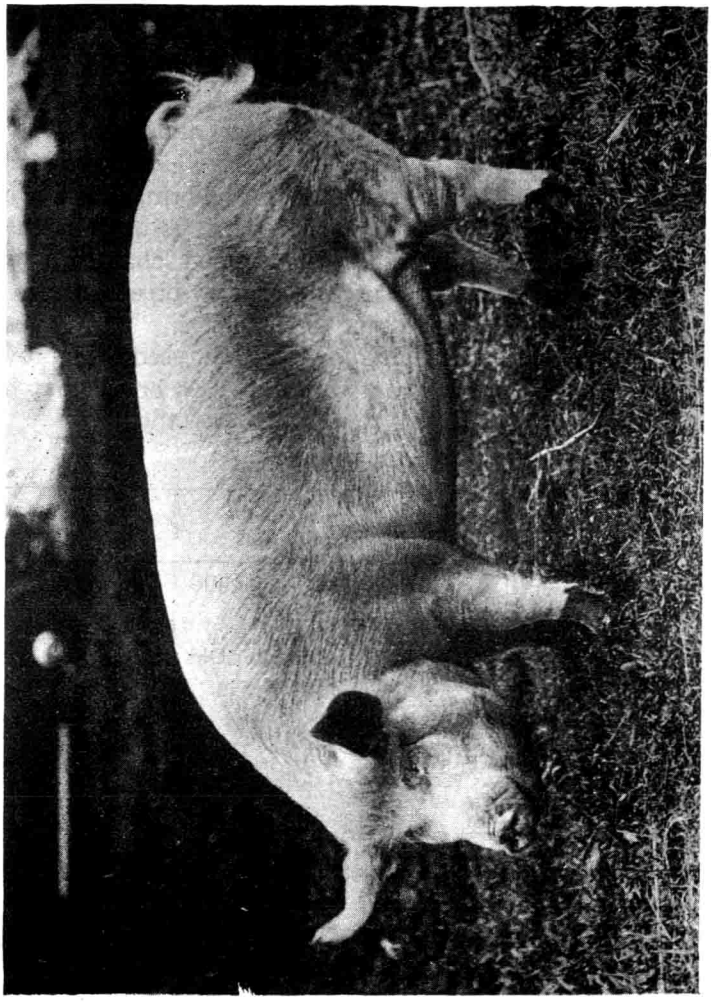
MANY years of careful breeding, selection and feeding have resulted in a variety of pig breeds, all of which have their good points and their bad ones, and, as the prime purpose of pig production is to provide human food, it is obvious that commercial requirements rather than breed characteristics will determine the future of many present-day breeds of pigs.

There are fourteen breeds of British pigs. Many types have been exported and they have often been used to improve native breeds. To simplify matters the British breeds may be divided into groups according to their colours, thus:

BRITISH BREEDS OF PIGS

White.	*Black.*	*Black and White.*	*Sandy Red.*
Large White. Middle White. Welsh. Cumberland. Long White Lop-eared. Lincoln Curly-coated. Large White Ulster. British Landrace.	Large Black. Berkshire.	Wessex Saddle-back. Essex. Gloucester Old Spots.	Tamworth.

The Large White Pig.—This is sometimes known as the Large White Yorkshire, and is said to be descended from the native Yorkshire breed. It is a very popular bacon-producing breed, especially when crossed with other suitable types, as it conforms to the bacon industry's demands for a " commercial pig " with long deep sides and wide deep hams. This breed has been exported to many lands. The excellent Danish commercial pig is a cross-bred pig—the Large White and the Danish Landrace—whilst that other good type of bacon pig, the " Irish pig," is also crossed with a Large White strain.



[*Sport and General.*

FIG. 1.—A LARGE WHITE SOW.

The characteristics of the breed are: A white colour. Head moderately long with slightly dished face and broad snout, not too turned up. Ears long, thin and slightly inclined forward and fringed with fine hair. Neck long and fairly full to shoulders. Deep and wide chest, with shoulders not too wide. Back long, level and fairly wide, with tail set high. Sides long, averaging 15 pairs of ribs at least; belly full with straight underline. Thick and well-let-down flanks. Hams broad and full. Legs straight and well set; action firm and free. Skin free from wrinkles with long and moderately fine coat.

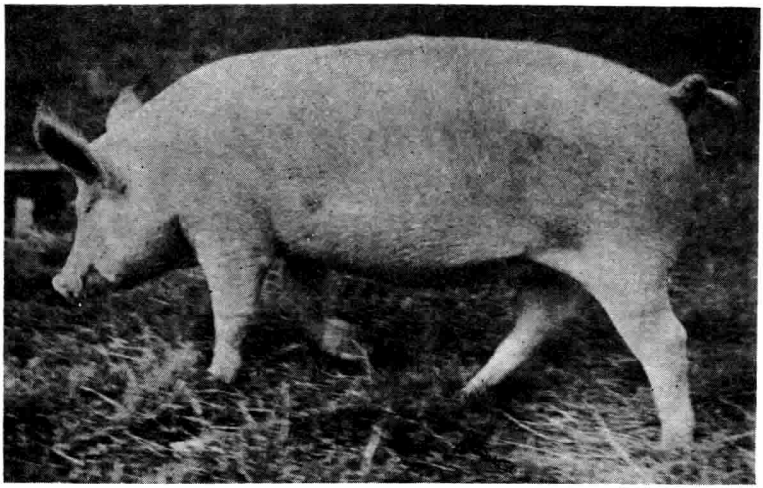


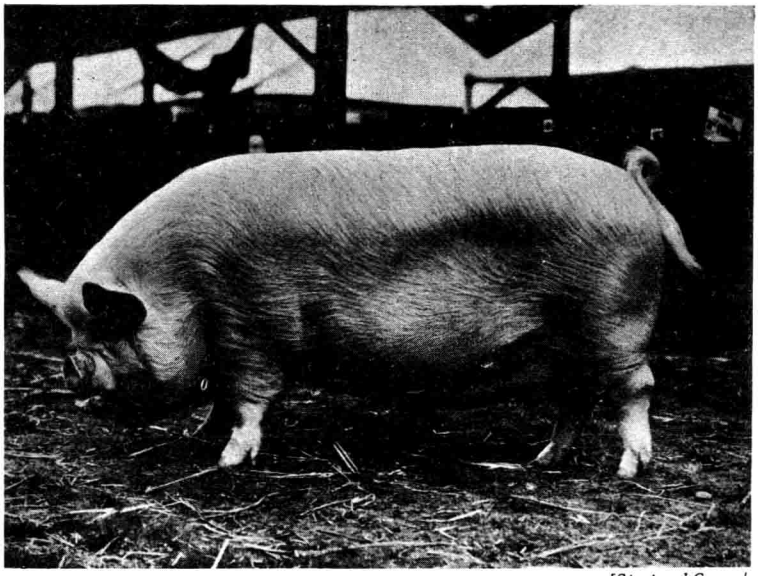
FIG. 2.—A YOUNG LARGE WHITE GILT.

Objectionable features are the presence of black hairs and pigments, a curly coat and coarse mane, hollowness at the back of the shoulder, too long or too short snout, and inbent knees.

The Middle White Pig.—This breed is also a very old one, and is said to have been evolved from crossing the Large White Yorkshire and the Small breed. Whilst the Large White is considered an excellent type of pig for bacon purposes, the Middle White is regarded as being primarily a good pork-trade pig, its small bone ensuring a good dressing percentage.

The chief characteristics of the breed are: A short head with turned-up dish face, wide between the ears. Neck full

to shoulders, which are wide with long level back. Tail set high; hams broad, full, and deep to hocks. Sides deep and level, with well-sprung ribs and full but not flabby belly having a straight under-line. The flank should be thick, with the quarters long and wide. The coat should be plentiful and of fine quality over a fine skin, free from wrinkles. Black spots and a wrinkled skin are objectionable features in this breed.



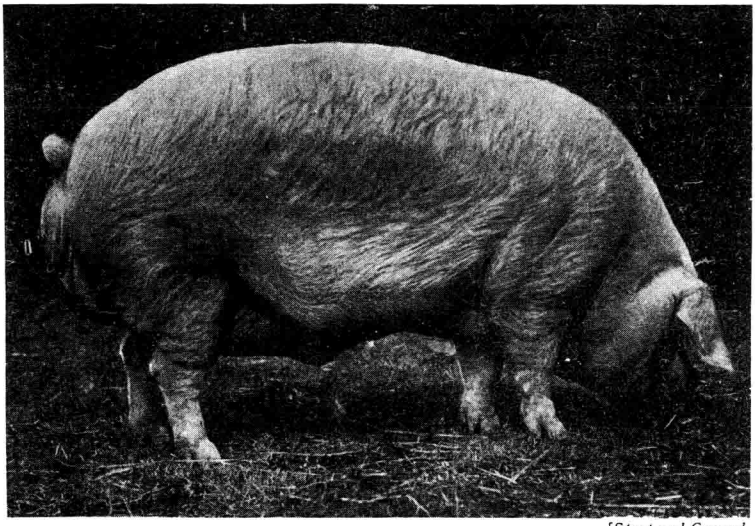
[Sport and General.

FIG. 3.—A MIDDLE WHITE SOW.

The Welsh Pig.—This was once known as the "Old Glamorgan," and is the only surviving distinct Glamorgan breed of farm animal. The Welsh pig is white in colour, and has been extensively used for crossing with other breeds, notably with the Large White, for bacon purposes. Although the average pig has about fourteen pairs of ribs, the Welsh tend to exceed this number, and so give a good lengthy side of bacon. The Welsh pig's head is of medium length with long, thin lop ears inclined over the face as far as the nose. The tail is long, and reaches below the hocks; eyes brown or preferably blue. Coat has a moderate quantity of straight silky hair. It has a well-

formed body, good quarters, and short straight legs. The sows are notably good mothers, and it is a first-class grazing pig of early maturity, in great demand for crossing, and has, like other breeds, been exported for that purpose. From a commercial angle, the Welsh—Large White cross-bred pig is one of the best bacon pigs in the world.

The Long White Lop-eared Pig.—This breed hails from the West of England and from Wales, and in appearance is not unlike the Welsh and the Danish Landrace breeds. It is



[*Sport and General.*

FIG. 4.—A WELSH BOAR.

pure white in colour, with a head of medium length; ears inclined well over the face. The back long and level with deep flanks. Hams large and well filled to the hocks. The hairy covering should be moderate, straight and silky. Objectionable features in this breed are a narrow forehead, dished nose, curly coat and wrinkled skin. The breed is no longer confined to its original home, and as the National Long White Lop-eared pig it is now recognised as a valuable animal for both bacon and pork production. Crossed with the Large White it produces a first-class commercial pig.

The Cumberland Pig.—This breed has hanging ears, a