

Black's
Agricultural
Dictionary

D. B. Dalal-Clayton

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Foreword

Farmers are generally very busy people, working in our oldest industry but caught up in a tide of progress and technological change which is without parallel.

Communication is vital, but you need words to communicate—and the meaning of the words is changing all the time. I hope this book, which is long overdue, will help us all.

RICHARD BUTLER

*President
National Farmers' Union*

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Many individuals and organisations have helped and have given freely of their time and advice, and have made suggestions or checked entries. Space does not permit them all to be mentioned individually, but to them a very great debt of gratitude is owed.

Authors, publishers and copyright holders have been generous in allowing the reproduction of the illustrations. The sources are listed on page viii. In the course of compiling this dictionary, the author has consulted many texts. In all instances, the sources of quotations are given.

Preface

This book is intended as a reference source for farmers, students of agriculture and all those involved in or associated with the agricultural industry in whatever capacity. It is concerned essentially with agriculture in the U.K. and embraces such horticultural, botanical, geographical, biological, physical, geomorphological and chemical terms (including formulae) as may be needed to provide adequate information and to avoid the necessity of consulting other works. Entries also include the most common and agriculturally significant diseases and pests of farm animals or crops, with their symptoms.

The extent of each entry has been determined by the need for definition of meaning, function and agricultural relevance. Statistics are quoted where they are considered important, sometimes in the form of tables. Historical terms add colour and flavour to farming language, but traditional names vary endlessly from region to region. It has therefore been difficult to choose which terms of a historical nature should be allowed in. Photographs and line drawings illustrate entries where words alone are inadequate to convey meaning. Common abbreviations, acronyms and initials used in the industry are presented as a separate glossary in the form of an appendix.

Agriculture in the U.K. today is affected by the Common Agricultural Policy of the European Economic Community and its regulations; the E.E.C. vocabulary appears increasingly in documentation and in conversation. It is therefore appropriate that a range of terms should figure in this dictionary.

Much specialist advice has been sought and offered during the compilation of this dictionary and the writing of individual entries. Nevertheless no-one is likely to agree completely with the author's selection of entries and there may be disagreement over certain definitions. The author would welcome comment and constructive suggestions.

D. B. DALAL-CLAYTON

April 1980

A note on cross-referencing

Within the definitions, words set in SMALL CAPITALS indicate other entries in the dictionary.

When set within parentheses and preceded by a symbol, they signify an entry of particular relevance to the subject, thus: (♣ LUCERNE).

Relevant illustrations and tables are cross-referenced in italics, thus: (*see p. 292*).

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A

A - Horizon ♦ SOIL HORIZONS.

Abaction. The stealing of cattle.

Abattoir ♦ SLAUGHTERHOUSE.

Aberdeen-Angus. A breed of black, hornless beef cattle, developed using INBREEDING from a mixture of breeds in East Scotland. They have a long, deep body and recently have increased their size very considerably. An early maturing breed, fattening on low energy feed, producing carcasses much favoured by butchers. Cows yield enough milk to rear their calves. Valued in Britain as a cross for beef, and also widely used on dairy HEIFERS to produce black progeny with no calving problems (due to their small heads), the cross from this being highly favoured in the hill districts as a hill cow (*see p. 89*).

Aberystwyth Strains. Herbage plant varieties developed by the Welsh Plant Breeding Station at Aberystwyth. The most well known are the 'S' strains which were the first to be bred.

Ablactation. The cessation of milk production by mammary glands when an offspring is weaned.

Abomasum. The fourth stomach of RUMINANTS, lying close to the OMASUM or third stomach, in which digestion is completed by the supply of digestive juice. Also known as REED STOMACH, RENNET STOMACH, and sometimes called MAW.

Abort. To miscarry in birth. For plants and animals in general - to become infertile, to fail to develop or to wither away.

Abortion. Miscarriage, slipping, or premature delivery of partially developed offspring. (♦ CONTAGIOUS ABORTION)

Abreast Parlour ♦ MILKING PARLOUR.

Abscess. A swelling in some part of the body caused by an accumulation of purulent matter.

Absolute Drought

Absolute Drought. A period (in the U.K.) of at least 15 consecutive days during which less than 2.54 mm (0.1 in.) of rain has fallen on any day. Not an internationally accepted definition. (♦ DRY SPELL, PARTIAL DROUGHT)

Absolute Weed. One of no use to farmers under any circumstances. (♦ RELATIVE WEED)

Abstraction Licence. A licence issued by a Water Authority for the abstraction of water from a water source for domestic or commercial use, often for irrigation purposes.

Acaricide. A chemical used to kill MITES (Acarina) as distinct from insects.

Access Agreements and Orders. Access Agreements may be made by a local Planning Authority, under the National Parks and Access to the Countryside Act 1949, with landowners and occupiers, providing for public access to open country for recreation, involving the possible payment of compensation for resultant land capital value depreciation and for extra costs (e.g. extra shepherding, damage caused, etc.). There are no restrictions on ploughing. Where an Agreement cannot be negotiated an Access Order may be made, which requires Ministerial confirmation, prescribing a public right of access to open country. Compensation is payable and there may be restrictions on ploughing and other improvements. (♦ MANAGEMENT AGREEMENT)

Acclimatisation Value. The extra worth of a flock of sheep acclimatised to a farm, over an imported flock which may stray, with loss of sheep. (♦ HEFTED SHEEP)

Acclimatised Sheep. Sheep which are long accustomed to their local environment. They will normally not stray beyond the farm boundary, unlike an imported flock.

Accredited Herds Scheme ♦ BRUCELLOSIS (ACCREDITED HERDS) SCHEME.

Accredited Milk. Milk sold by a producer-retailer from a herd accredited as free from BRUCELLOSIS.

Achene. A small, dry, one-seeded FRUIT formed from a single CARPEL, which does not split open on ripening but rots gradually with seed germination. The pips on strawberries are achenes.

Acid Soil. A sour soil, having a pH of less than 7.0 due to an excess of HYDROGEN ions (H^+). Most British soils, other than those over limestone, are more or less acid, as a result of the fairly heavy rainfall which leaches (♦ LEACHING) out the salts, especially CALCIUM. Typical acid soils are the heather moors of the north and west. (♦ ALKALINE SOIL, NEUTRAL SOIL, LIMING)

Acre. A measure of land. 4 840 sq. yds. Equal to 4 RODS, or 10 square CHAINS. (Scottish acre, 6 150.4 sq. yds; Irish acre, 7 840 sq. yds – both obsolete.) Also equivalent to 0.405 HECTARES. Originally, the amount of land that could be ploughed in a day by a team of oxen.

Acre-inch. A unit of measurement used in IRRIGATION works. The amount of water required to cover an acre to a depth of 1 in. (25.4 mm per hectare) equivalent to 101 tons or 22 460 gallons.

Actinobacillosis. An animal disease mainly of cattle and pigs, caused by bacteria (*Actinobacillus lignieres*) causing swelling and hardening of tongue and face. Also known as Wooden Tongue. The disease also occurs in sheep and is sometimes called 'Cruels'.

Actinomycosis. An animal disease caused by the microscopic 'ray-fungus' (*Actinomyces bovis*) which penetrates through small mouth wounds (caused by barley awns, foreign bodies, during change of teeth, etc.) resulting in the swelling of the jawbone with ultimate suppuration. Also known as Lumpy Jaw.

Additives. Substances added to FEEDINGSTUFFS or CONCENTRATES during manufacture, which are not principal nutrient sources. Examples include VITAMINS, minerals, TRACE ELEMENTS, certain ANTIBIOTICS, etc.

Addled Egg. A fertile egg in which the embryo died between the seventh and fourteenth day of incubation. Also a rotten egg in general terms. (♦ DEAD-IN-SHELL)

Adipose Tissue ♦ FATS.

Adsorption Complex

Adsorption Complex. The group of substances in the soil capable of adsorbing other materials (such as applied fertilizers). Organic and inorganic colloidal substances form the greater part of the adsorption complex. Non-colloidal materials, such as sand and silt, exhibit adsorption to a much lesser extent than the colloidal materials. (♦ BASE SATURATION PERCENTAGE, CATION-EXCHANGE CAPACITY)

Adulteration. The adding of water to milk.

Adventitious. Arising in an abnormal position. Adventitious roots develop from parts of plants other than the roots, e.g. from stem or leaf cuttings. Adventitious buds develop from parts of plants other than in the axils of leaves, e.g. from roots.

Advisory Council for Agriculture and Horticulture. Established in 1973, succeeding the Agricultural and Horticultural Advisory Councils, to 'consider and report on agricultural and horticultural matters within the field of responsibility of the Ministry of Agriculture, Fisheries and Food which may be referred to the Council by the Minister or Ministry'. In 1979 the Government announced its disbanding. The Council, comprising twelve members eminent in agriculture and horticulture, published a number of reports, its final one being on the future water needs of the agricultural and horticultural industries.

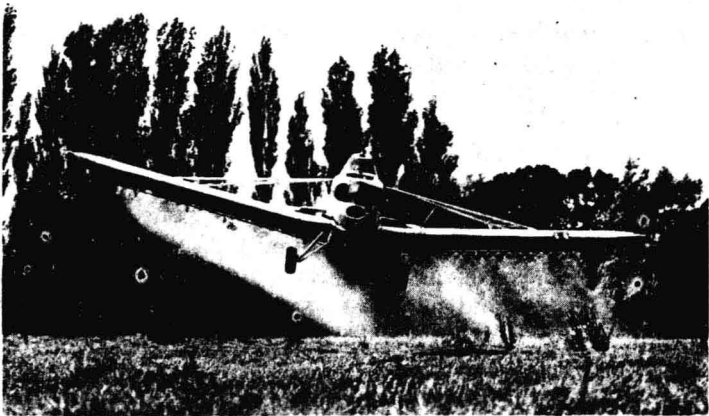
Adze. A tool consisting of a thin arched blade with its edge at right-angles to the handle like a hoe, used for slicing off the surface of a piece of wood, e.g. in fencing work.

Aerial Spraying. There has been an appreciable increase in aerial spraying (by aeroplane and helicopter) in recent years involving pesticides, fertilizers and seed. According to the Seventh Report of the Royal Commission on Environmental Pollution, 'Agriculture and Pollution' (H.M.S.O. 1979), 628 000 hectares (c. 1 552 000 acres), excluding woodland, were sprayed in 1977. The report also roughly estimated that about 200 000 hectares (c. 494 000 acres) are sprayed annually with fertilizer. Aerial spraying of pesticides on forests is rarely practiced in the U.K.

Aerial applications are advantageous in various circumstances, e.g. when land is too wet, or when crop height, scale of infestation or the area of land involved is such that the use of ground machines is impractical. Techniques such as TRAM-

LINING may reduce the need for aerial application.

Aerial operators must be certified by the Civil Aviation Authority under the Civil Aviation Act 1971, and are required to observe various safety precautions, and have regard to such factors as the likelihood of SPRAY DRIFT, and danger to farm animals, bees, wildlife, etc. Only pesticides cleared under the PESTICIDES SAFETY PRECAUTIONS SCHEME may be used. A Code of Practice produced by the NATIONAL FARMERS' UNION and the National Association of Agricultural Contractors also covers the activities of Aerial Operators.



Wet farmland, incapable of carrying a tractor-sprayer, being aerial sprayed against liver fluke-carrying snails.

Aerobes. Organisms, especially bacteria requiring oxygen for respiration. (♦ ANAEROBES)

Afforestation. The process of transforming an area into forest, usually when trees have not previously been grown there. (♦ DEFORESTATION, REFORESTATION)

Aflatoxin. A poisonous toxin produced by the fungus *Aspergillus flavus* and found in GROUND NUT MEAL. Causes a reduction in milk yield and growth rate in cattle, and sometimes jaundice in pigs eating the meal.

Afterbirth

Afterbirth. The placenta and membranes (also called 'cleansing') which are expelled from the uterus of a mother after the birth of its offspring.

After Crop. A second crop from the same land in the same year.

After-cultivation. Harrowing, rolling and other cultivations carried out in a field after the crop has emerged.

Aftermath. Grass which springs up again after the cutting of a crop of HAY, and can subsequently be taken as a second cut. Also known as eadish, eddish, rowen and lattermath.

Agent ♦ LAND AGENT.

Agglutination Test. A blood test used mainly to detect carriers of BRUCELLOSIS in cattle and BACILLARY WHITE DISEASE in chickens. Based on the principle that if a minute dose of blood serum from a carrier (i.e. an animal with organisms of the disease in its blood, but showing no symptoms) is introduced to a suspension of the organisms, then agglutination (i.e. grouping together of the organisms) will occur. The phenomenon does not occur if the blood serum from a disease-free animal is introduced. A positive test indicates the animal has previously had the disease and still has ANTIBODIES in its blood.

Aggregate. A group of soil particles cohering so as to behave mechanically as a unit. (♦ CRUMB)

Agistment. A contract arising when one person, the agister, takes livestock belonging to another person to graze on his land for reward, payment usually being at a certain rate per week on a headage basis. Unlike grass KEEP agreements, agistment involves no interest in the land itself and is usually agreed orally. The agister is required to take care of the livestock and supply them with food, and is liable for injuries to, or losses of, any animals arising from negligence. Agisted animals are also said to be 'on tack'.

Agrarian. Relating to land or landed property.

Agrarian Revolution ♦ AGRICULTURAL REVOLUTION

Agricultural Apprenticeship Council. The forerunner of the AGRICULTURAL TRAINING BOARD. (♦ APPRENTICES)