The recent growth of the organic swine industry has highlighted the fact that there is a current lack of scientific texts setting out the features that differentiate this type of production from conventional swine production. This textbook outlines in detail the current scientific knowledge of how swine should be fed according to organic principles and addresses all of the relevant issues in a comprehensive, informative, and well-researched way. All of the information presented is supported by scientific evidence.

The book is organized into eight chapters.

Chapter 1 is entitled ‘Introduction and Background’ and sets out the current state of the organic swine industry and the challenges facing it and the feed supply industry. Consumer perceptions and expectations in relation to organic pork are also set out.

Chapter 2 deals with ‘Aims and Principles of Organic Pig Production’. It gives a brief description of the overall aim of organic farming followed by a detailed outline of the regulations relating to organic swine production worldwide, including those established by IFOAM, the Codex Alimentarius Commission, the EU, USA and Asian countries. In addition, the chapter provides information on moves to harmonize these regulations and standards internationally.

Chapter 3 is on ‘Elements of Pig Nutrition’ and provides an overview of the processes of digestion and absorption of nutrients in the pig and on nutritional requirements of the various classes of swine (based on NRC 1998), highlighting those aspects of particular relevance to organic production.

Under the title ‘Approved Ingredients for Organic Diets’ Chapter 4 presents a large and comprehensive overview of feedstuffs suitable for use in organic diets. It includes a detailed and up-to-date outline of the most important feedstuffs for swine and their suitability as ingredients in swine diets. This chapter will be of great interest to those involved in both conventional and organic production. The benefits and drawbacks of different types of cereals and their by-products, oilseeds and legume seeds, tuber roots, liquid feeds, and forages and roughages are reviewed critically on the basis of extensive research findings. This information is highly relevant to organic production since this system aims to maximize the use of on-farm feed resources. The chapter also includes a database of feedstuff nutritional composition required in diet formulation, which will be of interest to those involved in both conventional and organic production.

Chapter 5 sets out ‘Diets for Organic Pig Production’. It includes information on how to mix and process feeds on-farm, conduct quality control procedures on feed batches (including tests for mycotoxins) and on feeding systems. Examples of feed formulas being used in various countries are presented, as well as diets formulated to contain specific ingredients. Recommended formulas for supplements and premixes are included, based on NRC (1998) recommendations. In developing standards for feed formulation the author recommends that the energy level of grower/finisher diets be set lower than in NRC, but that the ratio of protein and other nutrients to energy be maintained as in NRC. This adjustment is to produce a lower rate of gain as desired in organic production and to avoid excessive fat deposition in the genotypes being used.

Chapter 6 outlines ‘Choosing the Right Breed and Strain of Pig’ and summarizes current knowledge on the merits of...
the various breeds available for organic production, including information on consumer attitudes and perceptions of organic and conventional pork. Meat quality of the various genotypes is reviewed extensively.

Chapter 7 outlines how feeding programs can be integrated into satisfactory organic production systems, based on established and new practices that are relevant to organic swine production. The effects of environmental factors are summarized, together with a review of the influence of pasture and herbage on production efficiency. This chapter includes an excellent overview of the eating quality of organic and conventional pork, supported with references to scientific studies. Information from forage-based systems, which is of particular relevance to organic swine feeding, is included.

In a final Chapter on ‘Conclusions and Recommendations for the Future’ the author recommends that more countries follow the New Zealand example and publish lists of feedstuffs approved for use in organic diets. He also advocates a re-evaluation of the ban on the use of pure amino acids in organic production, since the ban results in an excess of crude protein in organic diets and the possibility of environmental pollution from the excess loading of nitrogen in the form of manure. He suggests also that the GM aspect of feedstuffs be considered further, in view of the critical shortage of organic feedstuffs in several countries.

This book can be recommended as a reference text for scientists, advisory personnel, feed manufacturers, veterinarians and farmers interested in organic swine production. It will also be of great interest to university and college personnel involved in teaching courses such as Organic Agriculture, Swine Production, Feeds and Feeding and Meat Production, and to those in the conventional swine industry who wish to provide services to the growing organic industry.

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Editor's Note
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