

## **Reproductive Management of Pigs: A Simple to Use CD-ROM for Accessing Information**

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Many swine producers indicate that they have problems finding practical sources of information that they can use to increase the reproductive efficiency of their operations. There is a great deal of research being conducted worldwide on pig reproduction but this information is largely disseminated in the scientific literature and is not accessible by the average pig producer. Until recently, no information source was available that covered all aspects of pig reproduction in a producer-friendly, practical format. This presentation provides a brief demonstration of a new state-of-the-art CD ROM designed to increase profitability by increasing reproductive efficiency.

The CD was produced by an international team of scientists located in the United States, Canada, Australia, Britain and the Netherlands. The authors were chosen not only for their knowledge of pig reproduction but also for their ability to translate that information into a practical context and then communicate that knowledge to pig producers. Most of the authors actively consult in the swine industry so the information contained in the CD is based on almost 200 years of practical pig experience and tested on well over a million sows. The eight authors and their areas of expertise are listed in Table 1.

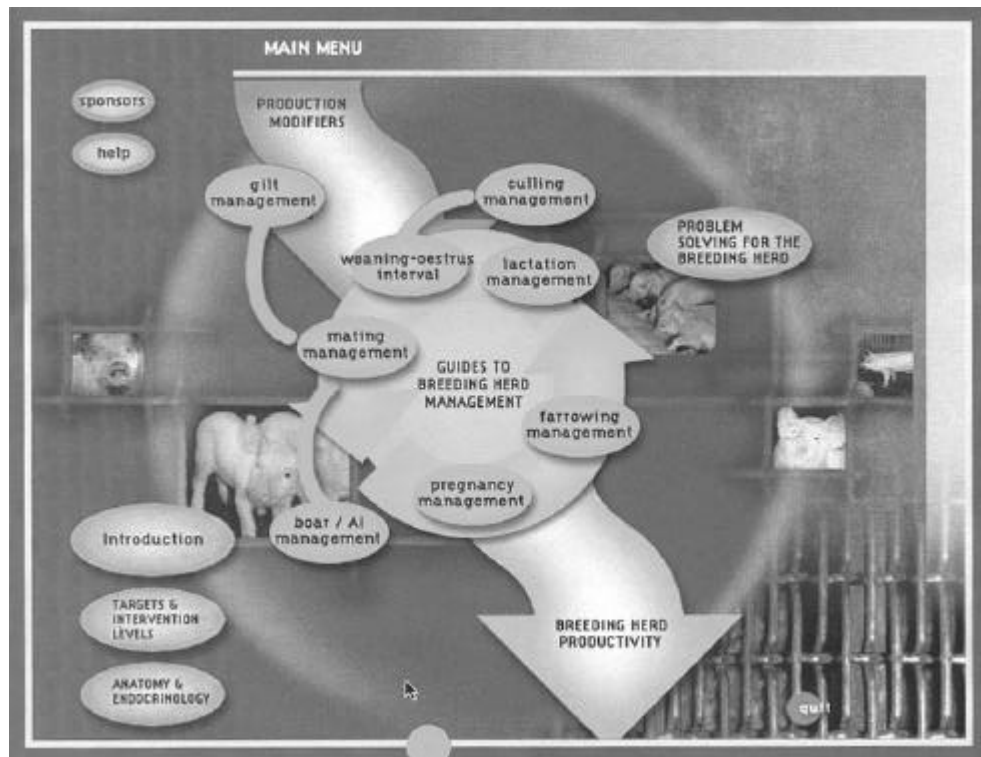
**Table 1. Areas of Expertise and Origin of CD ROM Authors**

<u>Author</u>	<u>Location</u>	<u>Areas of Responsibility</u>
Paul Hughes	University of Melbourne	Gilt Management Environmental Effects Non-Productive Days
Billy Flowers	North Carolina State University	AI Section Mating Management
Roy Kirkwood	Royal Vet College, London	Hormone Section Basic Endocrinology Farrowing Management
Don Levis	University of Nebraska	AI Section Boar Management Mating Management

Bas Kemp	Wageningen University	Boar Nutrition Pregnancy Management
Nicoline Soede	Wageningen University	Pregnancy Management Factors Affecting Litter Size
Jim Tilton	North Dakota State University	Lactation Management Weaning to Estrus
Phil Thacker	University of Saskatchewan	Nutritional Effects Prewaning Mortality Stillbirths Sow Culling

In putting together the CD, the authors were guided by three main principles. The CD had to be user friendly, comprehensive and practical. The CD format has many features that make it easier for producers to access information. The CD is menu driven and allows producers to move easily from one stage of production to another. A navigation tree is always available on the left hand side of the screen and clicking on an area brings up a set of headings covered under that topic. Clicking on a main heading brings up the sub-headings discussed in a given area. The navigational tree is shown in Figure 1.

**Figure 1. Main Menu of CD-ROM Showing Navigation Tree**



Two other features of the CD making it easier to find information are the “bookmark function” and the “search function”. The “bookmark function” allows producers to bookmark sections of interest and return to them later. The “search function” allows producers to type in key words to find out where in the CD those topics are covered. An additional feature is a glossary providing dictionary definitions for over 200 words important specifically to pig producers. Sliding the cursor over the text highlights the words defined in the glossary and clicking on the word brings up the definition at the bottom of the screen.

The CD is the most comprehensive information source currently available on the subject of swine reproduction. There are over 1400 screens of information covering all areas of the pig production cycle. The CD makes full use of the potential offered by multimedia applications by including video clips, photographs and diagrams to explain and reinforce key concepts. In addition, there are over 400 tables of data showing the scientific basis for many of the recommendations made. Each table comes with a source button allowing producers to see the scientific source of the information and to obtain further information if desired. All tables and diagrams are equipped with a zoom function to make it easier to read the detailed information provided by those types of screens.

The CD is divided into two main parts, a “Guides Area” and a “Problem Solving Area”. The “Guides to Breeding Herd Management” provides in-depth coverage of the management of each stage of the life of the sow and boar. It is divided into eight specific stages of production as well as a section on “Production Modifiers” and a section on “Breeding Herd Productivity”. The information contained in the Guides section is summarized below.

### **Information Covered in Guides to Breeding Herd Management**

#### **Gilt Management**

Covers all aspects of gilt management from selection/herd arrival through puberty to first mating.

#### **Mating Management**

Covers optimum estrus detection, timing and frequency of mating/insemination and maximizing the quality of natural mating.

#### **Boar/AI Management**

Examines how boar fertility and libido can be optimized. This section also covers all aspects regarding the use of AI including semen collection, processing and insemination.

#### **Pregnancy Management**

Covers optimum management of the mated sow to maximize farrowing rate and litter size. It also includes pregnancy diagnosis and an assessment of the causes of pregnancy failure.

### **Farrowing Management**

Covers all aspects of management of sows from the immediate prefarrowing period to 2-3 days post farrowing. It includes coverage of induction of farrowing and farrowing supervision.

### **Lactation Management**

Covers all aspects of lactating sows and includes a section on choice of weaning age.

### **Weaning to Estrus Interval**

Examines how the weaned sow can be optimally managed to stimulate an early return to estrus with optimum fertility and fecundity.

### **Culling Management**

Critically examines the reasons for culling sows and provides advice on development of a culling policy whereby the proportion of sows culled is reduced and herd productivity is enhanced.

## **Information Covered Under “Production Modifiers”**

### **Influence of Nutrition**

Examines optimum diets and feeding strategies for gilts, sows and boars.

### **Influence of Environmental Factors**

Covers the influence of season, temperature and photoperiod on the reproductive efficiency of gilts, sows and boars.

### **Use of Hormones**

This area looks at the use of hormone treatments to enhance reproductive efficiency of the breeding herd.

## **Information Available in “Breeding Herd Productivity Outputs”**

### **Litter Size**

Examines how the number of pigs weaned per sow per year can be maximized by raising litter size (total born) and reducing losses due to stillbirths and preweaning mortality.

### **Litters/Sow/Year**

Examines how farrowing frequency can be maximized by identifying and minimizing non-productive days.

## **Problem Solving Section**

To solve problems as they arise in a swine unit, producers can enter the “Problem Solving Area” of the CD-ROM where they will find straight forward solutions to the most common problems occurring in the breeding herd. If you can identify the problem you have, you can enter “Solving Known Problems” which will enable you to select a problem from a categorized list and investigate its most likely causes and solutions.

If you cannot identify the problem you have, you can enter “Identifying and Solving Problems” which will lead you through a decision-tree (where your current performance will be compared with target figures) in order to identify herd reproductive problems. Lists of likely causes and solutions are then provided.

## **Primary Target Audience for CD ROM**

The CD is primarily targeted towards managers of swine operations, swine industry consultants and veterinarians. It is designed for use in short-term problem solving, long term strategic planning and staff training. Information on how to order the CD or to access demo discs is available at [www.susmultimedia.com](http://www.susmultimedia.com)