

NEW TYPE OF CALF SCOUR REMEDY

George E. Staples

A recent report (1) estimated newborn calf losses due to calf scours at \$100 million per year. In North Dakota, placing calf losses at a conservative 5 percent means that 60,000 calves are lost each year. Any treatment which would reduce losses by even 20 percent would be worth millions to cattle producers.

Scouring calves often show anorexia and watery diarrhea. Numerous ingredients and ingredient combinations were tried on scouring calves in an effort to find something which would soothe the gut, slow the watery diarrhea and help the calf get back to nursing. Ingredients tested alone or in combinations included activated attapulgit, alum, aluminum hydroxide, alginic acid sodium salt, bentonite, activated charcoal, carob flour, casein, lecithin based fat, raw eggs, sodium propionate, wheat and zeolytes. Alginic acid and sodium propionate combined produced the best results in experimental calves.

In 1979 some of the alginic acid-sodium propionate mixture was dispensed to veterinarians cooperating on calf scour project 5140 sponsored by the North Dakota State University Veterinary Science Department. However, no reports of results were received from this.

In 1980 a veterinarian requested some of the product for clients experiencing severe scour problems unresponsive to other treatments. Both the veterinarian and his clients expressed enthusiasm for the product as an adjunct to other treatment. One client who used it on 50 calves stated that at least 12 very ill calves survived which would have died when he considered what was taking place before using the antidiarrheal. This veterinarian and his clients reported similar positive results in 1981 although scour problems among his clientele were less numerous and severe as compared to 1980.

During 1980 and 1981 a major complaint regarding the product was the difficulty in mixing and administration. The powder mixture supplied is mixed with warm water and forms a semigelatinous mass. If it is not properly mixed and thinned with warm water or oral electrolyte it may clog the esophageal feeder. Those using it suggested that boluses followed by water or oral electrolytes would be much easier to manage.

Staples is associate professor, Veterinary Science

In 1982 Veterinary Laboratories, Inc., was engaged to put the material into bolus form, which they were able to do without changing the formula. Both the powder form and the bolus form were dispensed to three veterinarians and a number of ranchers without cost to them. They were, however, asked to make a report on the number of calves treated and the results observed. Instructions suggested that the product be used primarily as an adjunct to other treatments and that it could be given mixed with water, oral electrolytes, or other medication. This testing was financed by the North Dakota State University Department of Veterinary Science as part of calf scour project 5140.

Results

Two veterinarians submitted written reports. Both these and the oral report from the third veterinarian were on the positive side and all expressed the opinion that the product was a definite aid to survival when treating calf diarrhea. One of the veterinarians reported that repeated use sometimes produced constipation, which he corrected with neo-stygmine $\frac{1}{2}$ cc at 12-hour intervals plus oral mineral oil.

Reports, some written, some oral, were obtained from the majority of ranchers who used the product. In most cases there was little veterinary supervision regarding use of the product and some failed to follow the directions which were furnished with the product. For example, some gave the antidiarrheal boluses without also administering oral fluids as instructed. In two cases this failure reportedly produced "a plugged calf which died."

Ranchers are reluctant to utilize control calves in this type of testing. If a treatment appears to be helping they tend to use it on every sick calf. Some individuals reported using the antidiarrheal alone on a few calves with better results than was obtained from the previous use of chloramphenicol. Some reports which would confound good experimental procedure were from those who reported that they used the product "on only the worst cases." Overall, rancher reports were also on the positive side. Reports received in 1982 showed 162 calves treated with the antidiarrheal with 143 surviving for an 88 percent survival rate.

Future plans for further testing include veterinary supervised field trials with survival comparisons be-

Continued on page 35

REVISED HANDBOOK ON SWINE FACILITIES

Dexter Johnson

The Swine Housing and Equipment Handbook, MWPS-8, is a completely revised fourth edition prepared by Agricultural Engineers from midwestern United States. Previous editions of this handbook have been widely used by swine producers and building suppliers. The new edition includes current developments and recommendations for swine buildings, related equipment, design and operation. Flush systems for manure handling, for example, have now been included, also recommendations for the Modified Open Front grower barn ventilation.

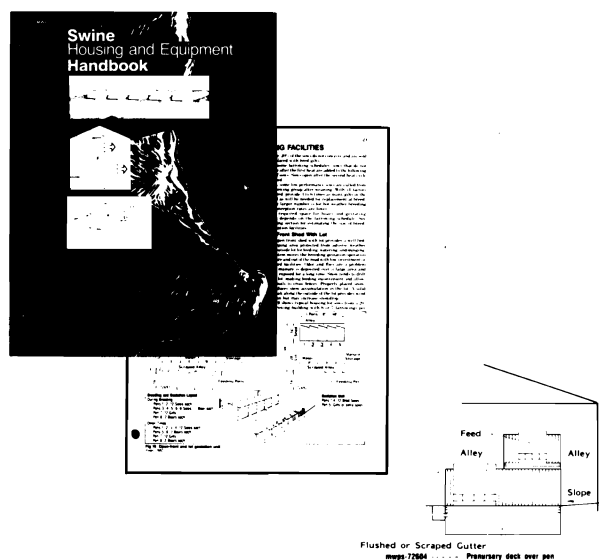
New chapters are now included about site selections, facility needs and swine production scheduling, handling animals, and use of facilities. Grain-feed centers, feed processing and conveying feed is another new chapter.

Production research and on-farm experiences from the twelve midwest states form the basis for the revision of the Handbook. This includes many different research projects, people and related resources. The Midwest Plan Service committee includes a research and extension agricultural engineer from each midwest Land Grant University.

Johnson is agricultural engineer, Cooperative Extension Service.

The 112-page Swine Housing and Equipment Handbook, MWPS-8, costs \$5.00 per copy. It is available from the Extension Agricultural Engineer at North Dakota State University.

MWPS-8 Swine Housing and Equipment Handbook, 4th Ed., 1983



Continued from page 34

6. McWatters, K.H. 1978. **Cookie Baking Properties of Defatted Peanut, Soybean and Field Pea Flours.** Cereal Chem. 55(5):853.
7. Satterlee, L.D., Marshal, E.F., and Tennyson, J.M. 1979. **Measuring Protein Quality.** J. Am. Oil Chem. Soc. 56:103.

8. Walker, A.F. and Kochhar, N. 1982. **Effect of processing including domestic cooking on nutritional quality of legumes.** Proc. Nutr. Soc. 41:41.
9. Yadav, N.R. and Liener, I.E. 1977. **Optimizing the nutritive value of the protein of navy beans by complementation with cereal proteins.** Legume Res. 1(1):17.

Continued from page 32

tween test and control calves. Also, a commercial company is presently in the process of evaluating the product using test and control animals. If the results prove satisfactory, the company plans on making it commercially available.

Reference

- 1 = Anonymous — Beef Magazine, p. 92, February 1982.