

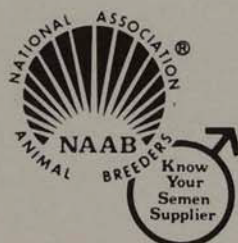
Proceedings of the

11TH



Technical Conference on Artificial Insemination and Reproduction

*April 25 - 26, 1986
Sponsored by the
National Association
of Animal Breeders*



PROCEEDINGS OF THE ELEVENTH TECHNICAL CONFERENCE ON ARTIFICIAL INSEMINATION AND REPRODUCTION



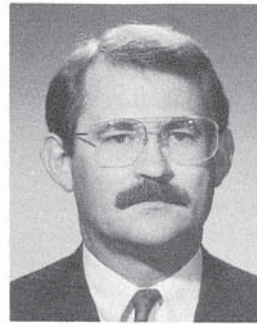
Sponsored by the National Association of Animal Breeders
and the
NAAB Technical Committee
April 25-26, 1986
Red Carpet Hotel
Milwaukee, Wisconsin

*COPYRIGHT 1986
National Association
of Animal Breeders*

Petitioner ABS Global, Inc. - Ex. 1015, Cover-2

CSS IMPLEMENTATION OF NEW ANTIBIOTIC COMBINATION

Gordon A. Doak
Certified Semen Services, Inc.
Columbia, Missouri



DOAK

Dr. Gordon A. Doak received his MS in Dairy Husbandry and Ph.D. in Reproductive Physiology from the University of Missouri in 1970 and 1974 respectively. Since 1976 he has been the Technical Director for the National Association of Animal Breeders (NAAB) and Service Director of Certified Semen Services (CSS), a subsidiary of NAAB.

The addition of antibiotics to the neat semen and extender has been part of the "CSS Minimum Requirements for Health of Bulls Producing Semen for AI" for a number of years and is part of the routine processing procedures of organizations participating in CSS. Other presentations in these proceedings have reviewed research on a new antibiotic combination that controls tested organisms better than the current antibiotic formula.

We have now reached the implementation stage. Implementation of changes in established requirements must be undertaken with direction and due consideration of participants in the program. Thus, the CSS Board of Directors has endeavored to keep all participating organizations updated on the new antibiotic research and results.

In June, 1985, the CSS Board received recommendations from the NAAB Technical and NAAB Sire Health Committees supporting inclusion of the new antibiotic combination in the CSS requirements, allowing time for individual organizations to conduct field trials. The Board then took action to begin phasing in gradually and systematically, implementation of the new antibiotic formula. CSS participating AI organizations may now incorporate the new antibiotic combination in processed semen

at such time as their field trials produce sufficient data on the safety of the new antibiotic combination with their extenders under field conditions.

With the successful completion of field trials, the CSS Board has now changed the CSS Minimum Requirements with respect to use of antibiotics. The use of penicillin, dihydrostreptomycin and polymyxin B sulfate has been replaced in the CSS Minimum Requirements with the new combination of tylosin, gentamycin and Linco-Spectin. The change is effective April 9, 1986. However, organizations can phase the new antibiotics into their procedures gradually.

In order to comply with the CSS Minimum Requirements, an organization must have the new antibiotic combination incorporated by January 1, 1988. It is expected the current CSS antibiotic formula will be used by many organizations until they are able to complete spermatozoa toxicity and field trials, and deplete supplies of current antibiotic inventory.

An Appendix will become part of the CSS Minimum Requirements outlining procedures for preparation of the antibiotic stock solutions, treatment of the neat semen, and cooling procedures.

Since research has shown that processing procedures, extender composition, and antibiotic combinations may affect efficacy of microbial control or fertility, deviation from the following may require the organization to conduct additional efficacy testing:

1. Use of an extender other than one approved by CSS.
2. Antibiotic/neat semen contact of less than three minutes.
3. Cooling of semen and non-glycerol fraction of less than two hours to 5°C.
4. Glycerol is not an extender component until after cooling to 5°C.

If there is deviation from any of these four points, a written request for an exception must be made to the Service Director of CSS. The Service Director will make arrangements for appropriate efficacy testing at the expense of the AI center involved. If the results show efficacy to be equal to or superior to that obtained by Shin et al(1), then permission to use the procedure will be granted. Specific testing procedures for efficacy are available from CSS.

The composition of tested and approved extenders will be on record with CSS. The CSS Service Director should be contacted to determine if your particular extender is included.

Obviously, a great deal is involved with a change such as this. It is not as simple as "Here are the new requirements — now everyone meet them!"

Regulatory authorities had to be made aware of this transition. Acting on behalf of CSS, Dr. Dave Bartlett contacted the state veterinarians of Mississippi, Montana, Virginia, Washington, and Wisconsin, informing them of the antibiotic research, and requesting their consent to incorporate the new antibiotic combination as an optional semen additive to the current formula. Each state approved the requested change.

The United States Animal Health Association's Committee on Infectious Diseases of Cattle unanimously approved a resolution allowing the use of the new antibiotic combination in lieu of the current formula. Subsequently, the "Uniform Certificate for Interstate or Intrastate Shipment of Bovine Semen for Artificial Insemination" was revised to incorporate the new antibiotics.

In the international area some countries specifically outline which antibiotics are to be used. Each country will be consulted individually concerning the change. Great Britain, Ireland, and the European Community already have this under consideration.

We expect considerable discussion and feedback from people attending this conference which will be taken under consideration. CSS will endeavor to alleviate any concerns well before the January 1, 1988 compliance date.

It is important to remember that the CSS Board is taking advantage of new technology and research to more effectively control certain opportunistic organisms that may be present in bovine semen. Recognizing the importance of this research and its application to the AI industry, the Board has incorporated the new antibiotic combination into the CSS Minimum Requirements. However, it must be pointed out that implementation of the new antibiotic combination in no way implies that semen processed using the current antibiotic procedure is now inferior. On the contrary, semen processed using the current antibiotic formula was processed using state of the art technology. We are now improving that technology.

REFERENCES

1. Shin, S. 1986. The Control of Mycoplasmas, Ureaplasmas, *Campylobacter fetus*, *Haemophilus somnus* in Frozen Bovine Semen. Proceedings of the Eleventh NAAB Technical Conference.