per conception, days open, incidence of follicular or luteal cysts, incidence of repeat breeders or number of reproductive culls. It appeared that the treatments in this experiment would not be economically beneficial as long as cows with reproductive tract abnormalities were promptly diagnosed and treated.

Results of Oral Selenium Supplementation in Cattle:

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Recent investigations by researchers at the University of Idaho Department of Veterinary Science have revealed extremely low tissue selenium levels in cattle maintained on forage grown on selenium deficient areas in Idaho and Washington. In these areas, white muscle disease is a yearly occurrence unless parenteral supplementation is administered to neonatal calves. The FDA has approved addition of selenium to feeds at the rate of 0.1 ppm and in salt at concentrations of no more than 20 ppm for cattle. We have placed pregnant cattle on oral selenium supplementation in salt at the rates of 20 ppm, 50 ppm, and 90 ppm, respectively, and monitored the whole blood selenium by using the glutathione peroxidase test prior to supplementation and at varying intervals thereafter. Significant elevations of tissue selenium were evident 60 days following initiation of selenium supplementation using levels of 50 ppm and 90 ppm. Very little or no response was seen at levels of 20 ppm. Calves from dams that had access to a 90-ppm selenium-salt mix were blood sampled within three days of birth and found to have adequate tissue selenium levels, suggesting that in the bovine animal, significant placental transfer occurs.

Our next research project will include monitoring calf weight gain and neonatal disease conditions associated with different levels of selenium supplementation.

Question: Were the blood levels measured beyond 6 months?
Dr. South: Yes, we have several herds on record and the blood levels tend to go down. Now, if you mean after the selenium is removed from the salt, they will peak regarding the consumption of salt but you can hold them practically at any level by this method — by either increasing or decreasing consumption.

Prevalence of Paratuberculosis (Johne's Disease) in Illinois Cattle Herds:

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There has been an increasingly severe clinical problem with paratuberculosis for several purebred beef breeders who are clients of the Field Service Section, Department of Clinical Veterinary Medicine, College of Veterinary Medicine, University of Illinois. Several approaches have been made to estimate the significance of the disease and its impact on both management and health status of these herds. These methods include direct staining of feces, fecal culture, intravenous johnin testing, biopsy and culture of gastorintestinal tissues and mesenteric lymph nodes, serological procedures, and necropsy. Preliminary studies to assess the significance of paratuberculosis in Illinois in herds without previous history of clinical Johne's disease indicated one third (5/15) had one or more cows shedding the causative organism. Based on this finding, a statistically designed random sampling study was begun to assess the extent of the disease in Illinois cattle herds. Partial results at this time indicate approximately 31% of Illinois herds sampled have one or more cows shedding *Mycobacterium paratuberculosis.*

Weight Changes of Male Dairy Calves Following Zeranol Implants

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Abstract

In a trial to determine the effect of zeranol implants on weight gains from birth to 180 days of age, 269 male Holstein calves were assigned randomly to one of three groups: a) 56 intact calves, b) 106 castrated calves implanted at birth and again at 90 days with 36 mg zeranol, and c) 107 castrated controls. All calves were weighed at 0, 28, 56, 90, and 180 days of age. Zeranol implanted steers averaged 9.2% greater average daily gain at 90 days and 9.5% greater at the end of the trial than control steers. Intact male calves' weight gains were intermediate between the two steer groups. There was no correlation between implant status, total protein of blood serum, mortality, birth weight, or parity of the dam. During the first 180 days of age, implanting Holstein calves with zeranol at birth and repeated at 90 days can return upwards of $14.89 per dollar invested. (Key words: Zeranol, dairy beef, total serum protein, colostrum, mortality, weight gain.)

Introduction

Most newborn dairy bulls are sold to commercial veal growers within a week of birth. Others are fed milk or milk replacer for 4 to 8 weeks and then pastured and grain fed until slaughter. Dairy bulls can perform as well as beef calves in the feedlot (17). Because most bull calves do not stay in the herd, dairymen usually have little interest in them and their colostrum intake is often inadequate.

To achieve maximum health and productivity, calves must receive adequate amounts of high-quality colostrum within 12 hours of birth. The benefit of colostrum in prevention of neonatal morbidity and mortality is