New Facilities for New Bolton Center Swine Teaching Herd

Construction of a new facility for the New Bolton Center swine teaching herd began in early September and completion is expected in January, 2001.

The swine teaching herd began in November, 1997 with reactivation of existing swine production facilities and the purchase of 60 sows from RPM Farms of Beaver Springs, PA by Drs. Pitcher and Parsons with the support of a University teaching budget. The herd functioned for two years, during which extensive teaching programs in swine production medicine, reproduction and neonatology were developed and student interest expanded exponentially. In addition, animal flow schemes were worked out which allow the herd to emulate one three times as large, thereby multiplying scarce teaching resources. Deterioration of the facilities forced deactivation one year ago and plans were implemented to construct the new building. Sixteen of the original sows, along with 26 of their progeny selected for high productivity, remain at New Bolton Center as a nucleus to populate the new facility when it is completed.

The new building is designed to both accommodate teaching needs and incorporate cutting edge swine husbandry technologies. A classroom will be located in the center of the barn from which many different phases of production can be easily observed, and lectures can be given with on-going swine production as the backdrop. Both novel animal-friendly housing systems and environmental-friendly automated feeding systems are also being imported from Europe. When the building is finished and occupied, it will not only be a teaching facility but will also serve as a building where Pennsylvania farmers can perhaps see their future. The facility aims to test the feasibility of new production systems that offer the opportunity for preeminent animal welfare, minimal environmental impact, and high productivity.

to keep it placed properly on her foot. In addition, the owner had to purchase a new boot every two weeks, as her vigorous lifestyle caused rapid breakdown of the rubber boot.

Dr. Christiansen was aware that Rob Sigafoos, the chief farrier at New Bolton Center, was successfully developing and building orthotics for horses. Mr. Sigafoos has refined production of these custom-made devices for over two years and they have helped countless horses with a variety of problems, including laminitis, hoof wall separation, and a host of orthopedic and musculoskeletal disorders in adults and foals. When Dr. Christiansen contacted Mr. Sigafoos about the idea of an orthotic for a canine patient, Rob responded enthusiastically and an appointment was set up at VHUP for Elsie so a mold could be made. Elsie was slightly sedated. She needed to hold still while her front leg was placed in a container full of dental alginate impression material, the same substance a dentist uses to take mouth impressions. "It's quick setting and pliable," explained Mr. Sigafoos. "It is also non-toxic." Once the material had set, Mr. Sigafoos very gently split the mold and now had a negative of Elsie's leg. He set the block of material back in the container, put a rod in negative space and poured plaster of Paris into the hollow. Once this set, he had Elsie's leg in plaster — he could return to New Bolton Center and fashion an orthotic from polyethylene that would fit Elsie. Her new footwear has Velcro® straps for ease in putting on and off, a non-skid sole, and vents to prevent moisture from accumulating within the brace.

When the new brace was placed, the dog was instantly able to run and play on it. It was approximately 50% larger than the rubber boot, but was light in weight. Repair or replacement could occur rapidly and easily with the test mold kept in stock. The owner was extremely pleased with the new boot and reported the dog was able to run as much as she wanted, and could even play and struggle well with their other dogs.

"Chris Curtin is to be given a lot of credit for his extensive physical therapy, including swimming and regular passive range-of-motion exercise, that contributed to her regaining function of the limb to the level of the elbow," relates Dr. Christiansen. "Early splinting of the leg below the elbow allowed her to use the leg, and prevented contracture of her shoulder and elbow which could have resulted in permanent loss of limb use." Elsie's rehabilitation is due to a true partnership between Chris Curtain the owner, Dr. Jeffrey Christiansen the veterinarian, Rob Sigafoos the farrier, and her own drive to recover.