

# Hoof Sealants for the 21st Century

Research and adaptation of human medicine help build a better barrier for hoof protection

*By Lynn Pyne Davis*

**TOPICAL HOOF CARE PRODUCTS HAVE** come a long way in the past 30 years, thanks to advances in scientific research. Not only have the developers of horse products undertaken their own research studies, they have also looked to human science for innovative developments that can be adapted to benefit the equine industry.

Researchers Dr. Richard Shakalis and Dr. John Paukenis founded the Florida-based **SBS Equine Products** in 1985 with the stated mission to "produce quality hoof care products that are based on sound medical principles and are safe for horses, humans, and the environment." Early on, they borrowed an idea from human dentistry—bonded sealants to prevent tooth decay in human children—to develop an equine hoof sealant that:

- Lasts for weeks,
- Seals in essential moisture, and
- Fills in nail holes and small cracks to protect against infection from bacteria, fungus and other contaminants.

The new generation sealant is based on urethane (a tough but flexible polymer) and contains microfibers for durability and to help fill holes. SBS' bonded hoof sealants are marketed under the product names Hoof Armor™ and Farrier's Hoof Sealant™, available either in clear or show black.

More recently SBS borrowed another idea from human medicine, copper peptides, to develop a hoof product that "switches on" the cells at the coronary band for faster hoof healing and growth. Copper peptides are microscopic proteins that human medical researchers have found to stimulate the production of human skin and hair by promoting healing, stimulating collagen production and enhancing the positive effects of antioxidants. In the human medical field, copper peptides are used in the treatment of burns, organ and

tissue transplants and skin irradiated during cancer treatment. The cosmetics industry uses copper peptides in anti-wrinkle creams and hair-growth preparations.

Today SBS uses copper peptides in its Toe Grow™ product, designed to be sprayed daily onto the coronary band to accelerate hoof growth and cellular repair. The spray also may be applied to cracked or damaged areas of the hoof and skin for repair and healing. In addition, there's good news for those who wince at the wasteful sight of precious hoof solutions dribbling down the hoof onto the ground—SBS has developed a Therapy Band™ that attaches like a miniskirt around the coronary band. The Therapy Band™ is made of fibers that hold topical preparations in place for longer application and less runoff.

Through the years, SBS has leveraged similar medical advances and research to develop a foot-centric product line that includes Hoof Patch™, Crack Filler Kit™, Thrush Stop™, Med-i-Sole Sponge Pad™, Starting Gate™ nutritional granules, general purpose BIO-

Hoof sealants fill in small cracks and nail holes and protect against bacteria and fungus.





SBS Therapy Band



SBS Sav-A-Hoof



Farnam  
Horseshoer's  
Secret  
Conditioner,  
Horseshoer's Secret  
Sealer. Shur Hoof,  
Rain Maker

CHECK™ anti-bacterial concentrate and a suite of Sav-A-Hoof™ products for fighting hoof disease and infections such as white line disease, seedy toe, thrush, Candida yeast, anaerobic and aerobic bacteria, mold and fungus.

**Life Data Labs Inc.**, founded in 1973 in Alabama by Dr. Frank Gravlee, is well known for its high-quality research into real-world problems involving nutrition and hoof care to benefit the horse industry.

Life Data Labs produces nutritional products that are manifested as healthier hooves, both on a microscopic level and to the naked eye. For topical application, the company offers Life Data Hoof Disinfectant®, designed to kill the bacteria and fungi that enter through nail holes and cracks to cause hoof problems, and The Right Step®, a hoof conditioner and dressing that consists of natural resins and plant extracts. Light and non-greasy, The Right Step is designed to maintain the natural balance of moisture inside the hoof capsule and allow oxygen to pass through the barrier.

Understanding the do's and don'ts of topical hoof care requires a certain knowledge of hoof structure and function, which appears simple from the outside, but in truth is astonishingly complex.

The hoof wall is a weight-bearing structure made of 95 percent protein, much like human hair and fingernails. Structurally it consists of rigid tubules (hollow fibers) that are closely packed and cemented together with the protein substance keratin. The tubules are aligned vertically from the coronary band to the ground surface of the hoof. Scientists say the tubules function like springs to absorb some of the concussive forces of a horse in motion. The hoof wall's effectiveness is dependent on the correct moisture balance—too little moisture and it becomes brittle and prone to cracking, too much moisture and it becomes soggy, flexible and structurally weak.

SBS Drs. Shakalis and Pautienis state: "The hoof is designed to receive at least 90 percent of its moisture from within, from the blood and lymph vessels, and a small percentage from the sole. Modern bonded sealants are so effective because they stop the evaporation of this essential moisture from escaping the hoof wall."

"Attempting to moisturize the hoof wall with grease or salve is mostly futile because the hoof wall is virtually non-absorbent. This is why using hoof conditioners and dressings that contain vitamins or proteins are a complete waste of time. To be of any benefit, proteins and vitamins have to pass through the digestive system and be broken down into useful building blocks by digestive enzymes. Put-

ting vitamins and protein on the hoof wall makes as much sense as trying to eat by sticking your hand in a bowl of soup."

The SBS researchers point out that the coronary band is the only place on the hoof wall where it is appropriate to apply conditioners or hoof growth products, and even then, it should be done cautiously because the coronary band needs to "breathe." Do not apply sealants above the hairline.

Next, let's take a look at some other leading topical products for hoof health and protection. Not all are based on the same principles and technologies, but all have their proponents, which is to be expected at a time when new, differing scientific findings and treatments are still being evaluated and discussed.

**Farnam Companies** advises applying Horseshoer's Secret® Hoof Sealant "for the prevention of cracks in hot, dry conditions or (prevention of) soft, mushy hooves in wet conditions," but not on the coronary band or heel bulbs.

Farnam also markets some time-tested products such as pine tar, "a natural, antiseptic, germicidal treatment," Rain Maker® hoof dressing, and Shur Hoof®, a mixture of pine tar, fish oil, turpentine and iodine. Farnam's Horseshoer's Secret® Deep Penetrating Hoof Conditioner contains no pine tar, but does have avocado oil, glycerin and mineral oil to moisturize and condition the hooves.

**Absorbine's** Hooflex® topical hoof dressings come in several different "flavors": Original, Liquid and All Natural. The basic premise is to create a breathable barrier to maintain proper moisture balance in the hoof and increase hoof strength and flexibility to prevent cracks. The All Natural dressing contains no petroleum distillates—only all-natural vegetable oils, with an ingredient list that includes tea tree, arnica and comfrey.

**Fiebing's** Hoof Dressing is a mineral oil-based product that has been around since 1895 and used by stage operators and the U.S. Cavalry and others up through the modern day. The product is advertised as helping to maintain hoof health when used regularly once or twice a week, and to heal hoof problems if applied when signs of corns, quarter cracks, split hoofs, or brittleness first appear. 

## HOOF SEALANT resources

**Absorbine (W.F. Young Inc.)**  
(800) 628-9653  
[absorbine.com](http://absorbine.com)

**Farnam Companies Inc.**  
(800) 234-2269  
[farnamhorse.com](http://farnamhorse.com)

**Fiebing**  
(800) 558-1033  
[fiebing.com](http://fiebing.com)

**Life Data Labs, Inc.**  
(256) 370-7555  
[lifedatalabs.com](http://lifedatalabs.com)

**SBS Equine Products**  
(239) 354-3361  
[sbsequine.com](http://sbsequine.com)

*Lynn Pyne Davis is a longtime horse owner in Arizona who studied equine health/disease management as part of a pre-veterinary curriculum in equine science. She is a frequent contributor to Western & English Today.*