

Food for FEET.™



Nobody understands better than Zinpro, the relationship between healthy feet, lameness, welfare, reproduction, longevity and overall productivity.

In addition to our research-proven patented performance minerals, such as Availa® Sow, we work closely with universities and experts around the globe to learn more about claw health and lameness in pigs. This vital research has resulted in break-through, world first programs like **Feet First**™ which is coordinating knowledge and finding solutions for sow lameness.

Like to know more? Visit Zinpro.com
or contact Chemuniqué, Tel: +27 11 789 2414
or Email: nutri@chemuniqued.co.za



RETURN • RESPONSE • REPEATABILITY • RESEARCH • REASSURANCE

Zinpro Minerals Improve Breeder Sow Performance

Maintaining high performance in piggeries is essential to sustained profitability. The performance of the breeder sow is an integral part of this objective. Whilst continuous improvements in herd health, nutrition programs, and general husbandry have been focused to get optimal performance from the most recent genetics available, often trace mineral nutrition is overlooked. Improving Zinc, Manganese, and Copper nutrition in the breeder sow will have dramatic effects on both the performance of sows within the herd, and the subsequent progeny they produce.

Organic trace minerals have been classified by the American Association of Feed Control officials (AAFCO) in to several categories. Within these groupings, Zinpro minerals are classified as metal amino acid complexes (Complex trace minerals). These have high solubility and stability within biological pH ranges, as well as important functional differences when compared with the other OTM's. Therefore the research generated for complex trace minerals cannot be extrapolated to the other groups of organic trace minerals.

Research has shown that feeding complexed trace minerals to breeder sows has resulted in:

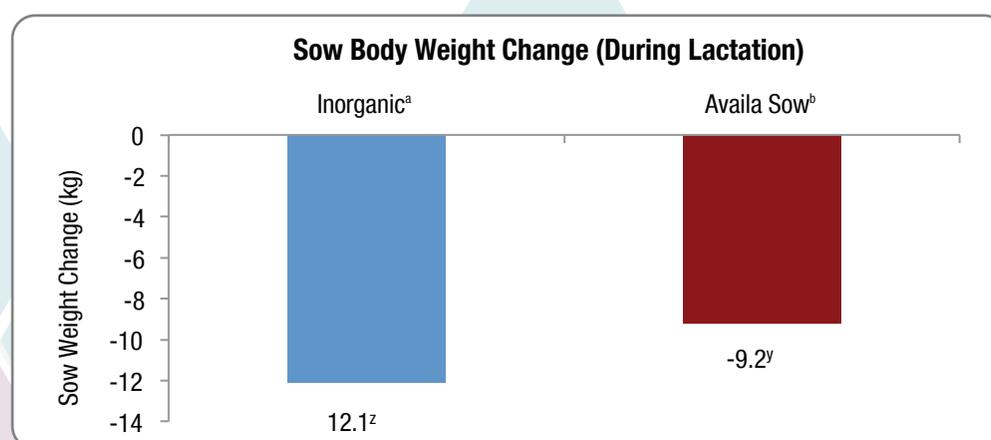
- Decreased claw lesions and lameness
- Decreased potential for small litters
- Increased feed intake
- Improved farrowing rate
- Decreased Wean to Eustrus Interval; and
- Reduced culling in the herd.

Further benefits passed on to the piglets produced by the sows fed complex minerals have been observed as :

- Increased weaning weight;
- Improved gut morphology; and
- Enhanced gut immune function.

The presence of acyclic ovaries in the sow is one of the more common causes of reproductive anomalies. It has been demonstrated that acyclic ovaries increased when body condition score in the sow decreased, and that there is a strong positive correlation between acyclic ovaries and rear-foot abscesses (Knauer et al. 2007). Several studies have shown significantly increased daily feed intake of lactating sows fed complex minerals, and a resultant decrease in body weight loss over this period. There are also numerous trials confirming that Availa Zn, Mn, and Cu fed in conjunction to sows reduced the incidence of lameness, and claw lesions. It is thus logical to assume improved fertility will result from feeding complex organic minerals to the breeding sow. A further aspect to consider is that sows under stress from inflammation caused by foot conditions will partition energy to mount an immune response before energy is partitioned to production parameters such as bodyweight gain, lactation, and reproduction.

Raised antibody concentrations have been shown in the milk of sows fed complex minerals. This, as well as improvements in gut morphology through higher intra-epithelial lymphocytes, and goblet cells result in improved immunity of the growing piglet. Increased villous height in the gut has also been demonstrated which will result in increased nutrient absorption capacity largely contributing to the significance of increased weaning weights noted in trials.



^a Inorganic: supplied 100 ppm Zn, 40 ppm Mn, 20 ppm Cu, as sulfates

^b Availa-Sow; Partial substitution with 50 ppm Zn as Availa[®]Zn zinc amino acid complex, 20 ppm Mn as Availa[®]Mn manganese amino acid complex, 10 ppm Cu as Availa[®]Cu copper amino acid complex

^{yz} Means lacking a common superscript letter differ, $P < 0.05$



PERFORMANCE MINERALS[®]