BioLogics DP-90 an organic drying product capable of absorbing more than its weight in liquid. A unique blend of organic plant extracts of natural origin, fine hectorite clay and diatomaceous earth which also act as natural desiccants (drying agents) combined with essential oils which are non-aggressive in action and do not burn.

Dunking piglets in DP-90 immediately after birth reduces the risk of chilling, speeds drying of the umbilical cord, promotes suckling quicker and leads to faster growth. The product helps keep creep areas dry, reduces ammonia and odors, and is said to substantially reduce fighting.

Often because of too tight management schedules or staff shortages, work procedures don't always run to plan. For example, sows sometimes farrow in wet pens which haven't had time to dry out properly.

Damp farrowing pens increase the risk of piglets getting chilled, which can predispose them to scouring. The damp navel cord of a newly farrowed piglet is an ideal route for infection to get into the piglet's body.

BioLogics DP-90 powdered litter conditioner can absorb more than its own weight in liquid and is very useful for reducing wetness with a pleasant aromatic powder. BioLogics DP-90 has shown excellent results when the piglet's navel is dipped in directly at birth. This has the effect of drying the navel and underside of the piglet, thus helping to maintain critical temperature.

59 % of umbilical cords drop at 48 hours of age versus 30 %
Reducing risk of piglets losses in farrowing unit (up to 15 % reduction)
Heavier piglets at weaning.
Reducing mortality at weaning (up to 50 % reduction)
Increased daily gain (up to 15 %)
Costs: Easy to handle and to apply BioLogics DP-90 is friendly for the animal and environment and remains in the penny category as far as using costs are concerned.

**BioLogics DP-90 applications**

1. **At birth by dipping new born piglets into a bucket** of BioLogics DP-90 for piglet chilling prevention to reduce time between birth and 1st colostrums intake to increase colostrum intake.

   - **To increase immunity of piglets** during first weeks of life
   - **To reduce risk of overlying**
   - **To reduce risk of infection through umbilical cord**

2. **In piglets nest by sprinkling daily a handful of BioLogics DP-90 in the nest**

   - **Increase time piglets spend in the nests**
   - **Reduce risk of piglets scours**
   - **Reduce piglets intake of sows feces**
   - **Develop a positive memory for the piglets**

3. **In the post weaning room : sprinkling BioLogics DP-90 on the floor the first week**

   - **Reduce Post Weaning Stress**
   - **Help piglets to locate place of the feed**
   - **Allow smoother mixing of piglets**
   - **Dry out properly after power-washed in case of time pressure**

4. **Around AI service time by sprinkling BioLogics DP-90 behind the sows**

   - **Avoid sitting sows**
   - **Reduce risk of pathogens to develop on the floor in contact with sows vulva**

   **Healthy Vulva : Is the** first step for breeding efficiency

**SPECIFIC APPLICATION : castration, cutting tails, mixing pigs, transport, boar pens, collecting room, odors and neighboring complaints.**
BioLogics DP-90 in the farrowing stable, partly in connection with watching of farrowings at night and as sprinkling in the piglets’ nests. In connection with 24-hour watching and dipping of the newborn piglets in DP-90 a perceptible reduction of navel and joint problems has been observed. Higher daily growth in the farrowing stable has increased the weaning weight and number of weaned pigs per sow.

1. **At birth the pigs are wet and pay a heavy toll** for the drying up themselves. A loss of energy of 600 cal. per gram of water. DP-90 reduces this loss significantly when being used quickly after birth. It brings out improved vitality among the smallest pigs and a better start of the sucking period with improved weight at weaning.

2. **BioLogics DP-90** helps to reduce the incidence of joint infections on sucking pigs. DP-90 minimizes the humid environment, gives quicker drying up of the navel and therefore reduces the intrusion of bacteria along this passage.

3. **By using BioLogics DP-90 the litter of piglets is closer** together and gets more homogeneous at weaning. The natural pleasant odor of DP-90 keeps the pigs in the nests longer beyond the sucking periods, and usage after weaning reduces the frequency of fighting, as the pigs connect the smell of DP-90 with the farrowing pen.
Swine Hog Drinking Water Enzyme Natural Nutritional Additive Product

Concentrated Liquid Water Injectable

Enzymes and Natural Plant Extracts Formula

**Ingredients:** *Swine Enzyme Solution SP-20* is a swine feed additive containing more than 20 enzymes combined with beneficial organic plant extracts of natural origin in a concentrated, easy to use and mix liquid form, as a swine drinking water additive for sows, piglets, starters, growers and finisher applications.

*Swine Enzyme Solution SP-20* Does not contain any synthetic growth hormones or mutating live bacterial cultures.

*Swine Enzyme Solution SP-20* Each enzyme and organic ingredient has a beneficial effect on swine growth, health and overall performance.

- Improves Average Weight Gain In Starters And Growers
- Improves Overall Feed Conversion With Increased Profits
- Less Mortality Stillborns and Improved Grading
- Reduced Phosphorus Ammonia and H2S Gases in Wastes

*Swine Enzyme Solution SP-20: Contains:*
A. Soluble Water Stable Enzymes

1. **Boost the immune system**: In a series of chemical reactions, the enzymes contained in PB-20 produce amino acids for the immune cells. These immune cells then produce interleukins, which play a critical role in fighting infection.

2. **Reduce water-holding capacity**, thus increasing dry matter content stimulating feed intake improving Feed Conversion Ration.

3. **Reduce dry matter outside the body**, thus having a great impact on excreta volume and composition

4. **Increase the effectiveness of host enzymes**, thus improving Feed Conversion Ration and promoting growth.

5. **Increases T-Cell production and activity** within a short period after digestion, raises white cell blood count thereby strengthening the immune system.

6. **Improve digestion / absorption of nutrients** required for proper immune system performance and proper production performance by increasing energy level

7. **Aid in digestibility by making nutrients** more bioavailable to the animal improving Feed Conversion Ration and promoting growth.

8. **Reduces flatulence.**

9. **Phytase for better phosphorus bioavailability**

B. Liquid Natural Plant Sarsapogenin: Glycocomponent fraction + Saponins

1. **Glycocomponent fraction binds to ammonia**, thus reducing ammonia levels in animal production facilities, this results in reduced odor and improves animal performance under wide variety of conditions by reducing environmental stress while enhancing growth.

2. **Saponins are effective in suppressing** rumen protozoa, again by reacting with cholesterol in the protozoal cell membrane, causing it to lyse, thus decreasing the impact of protozoal diseases (coccidiosis) on the performance of the animal such as diarrhea and malabsorption thereby increasing growth rate and feed efficiency.

3. **Particularly in situations of crowding and stress**, steroid saponins contained in SP-20 have been demonstrated to improve animal performance thereby acting as a Natural Growth Aid

C. **Laminaria Species Soluble Atlantic Kelp**: Amino acids + Trace & Macro Mineral+ Vitamins
1. **Amino acids are the building blocks of life**, joined together in chains that make up proteins. Proteins are a necessary part of every living cell in the body. Proteins are very important in the manufacturing of hormones responsible for a strong immune system and they booster the immune system by enhancing the production of T-cells and antibodies.

2. **Since the hogs digestive enzymes are made** up of amino acids, if enough amino acids are not provided, enzyme production will diminish and digestive function can become progressively more impaired leading to disease.

3. **Trace & Macro Mineral:** with high levels of essential immune nutrients such as Vitamin A (Essential for immune system), **Vitamin C and E-Benefits** immune system, **Vitamin B2** Creates body tissue and red blood cells, **Iron -Essential for immune function**, Selenium-Aids immune response, **Zinc- a critical nutrient of immunity.**

4. **Known as a great promoter of glandular** health, especially for the pituitary, adrenal and thyroid glands.

5. **Natural source of iodine**, which acts as an antibiotic to kill germs, increasing growth rate and feed efficiency.

6. **Acts as a receptor blocker** for many pathogens including Salmonella.

7. **Has also increased the protein** to fat ratio in animals increasing growth rate and feed efficiency.

**Swine Enzyme Solution SP-20:** provides synergistic effects from all its components, and the result is a healthy digestive tract efficiently providing nutrients for optimum health and performance, and an active immune system capable of overcoming the disease challenge.

**General Use Rates Methods:** Swine Drinking Water Applications

- **Prepare a stock solution of 10 ml** of Swine Enzyme Solution per Liter (1,000 ml) or (1 oz per gallon) of water and inject this concentrate into your water line through your medicator unit set at a ratio of 1 to 100 (As per illustration)

- **Use the above solution for the first 7 to 10 days** and then reduce the concentration of your stock solution by 50% until your growers and finishers are shipped for processing. **Swine Enzyme Solution SP-20:** Costs pennies per pig, resulting in savings and improved profits for growers. Our liquid concentrate will not clog water lines or filters and will actually keep them free flowing by breaking down and controlling organic blockers.

**Swine Enzyme Solution SP-20:** May also be sprayed on feeds and in swine / pig housing, please contact us below for details.