

HUARUI ANIMAL HUSBANDRY

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YES! Good News

**New products focus on gut and immune health,
addressing the reduced global use of prophylactic antibiotics**

Hereby,

**We actively recommend organic acids
as an alternative to inject vitality into the liquid or dry feed,
making the liquid feed with potassium diformate as an additive,
Safer, healthier and cost-effective.**



Sodium diacetate

Why can sodium diacetate increase milk production in dairy cows? A

Tel(Yang):0086-13287755638 E-mail:queridoyang@outlook.com

<https://twitter.com/QueridoYang> Skype:queridoyang@outlook.com

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Answer: The process of milk production takes place in the secretory epithelial cells of the acinar and small ducts of the breast.

The nutrients such as protein, fat and sugar in milk are synthesized by the mammary gland from the blood through the complex biochemical process.

Acetic acid, the decomposition product of sodium diacetate in the body, improves the internal environment of the tumor,

Conducive to the growth, reproduction and decomposition of various nutrients in the tumor boundary, digestion and absorption,

Improve the utilization rate of feed and provide the body with more nutrients (such as amino acids, glucose, organic acids, etc.) that are conducive to lactation.

At the same time, adding sodium diacetate to the feed can improve the palatability of the feed and increase the intake of dairy cows, which is conducive to the increase in milk production!

Prevention of cow heat stress:

High temperature is a period of high heat stress in dairy cows, which can lead to cow poisoning, mental excitement, mild cows cause anorexia, milk loss, reproductive disorders, severe cases cause heat stroke, fever, etc., and even death!

There are many measures to alleviate the heat stress of dairy cows, and prevention is urgent! ! !

Anti-heat stress additives should be used for prevention.

Sodium diacetate as a new type of feed additive, adding sodium diacetate is definitely one of the simplest, safest and most effective measures to prevent heat stress!

How to increase milk fat rate?

High temperature, increased drinking water for cows and decreased dry matter intake, accelerated metabolism, resulting in reduced milk fat rate.

About half of the milk fat in cows comes from the degraded fat in the feed, and the other half comes from acetic acid, the product of roughage fermentation in the rumen. Acetic acid is an important prerequisite for the synthesis of fat. Acetic acid can be absorbed by the mammary gland epithelial cells of the cow before use. Used in synthetic milk fat.

Sodium diacetate can be decomposed into a large amount of acetate and sodium ions in dairy cows, which is used to synthesize milk fat, so the milk fat rate is increased!

Sodium diacetate is a kind of feed mildew preservative, sour agent and improver with stable properties.

Sodium diacetate, molecular formula $C_4H_7NaO_4$, molecular weight 142 (anhydrous).

The appearance is white powder, with acetic acid smell, easy to absorb moisture, and very soluble in water.

content:

Acetic acid content 39.0-41.0%

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Sodium acetate content 58.0-60.0%

Moisture $\leq 2.0\%$

PH value 4.5-5.0

Formic acid and easily oxidized substances (calculated as formic acid) $\leq 0.2\%$

Arsenic (as As) ≤ 0.0003 Mg / kg

Heavy metal (calculated as Pb) ≤ 0.0001 Mg / kg

Lead (Pb) ≤ 0.2 Mg / kg

【Action mechanism】:

Mechanism of sodium diacetate antifungal agent:

Under natural conditions, sodium diacetate will slowly release acetic acid.

Acetic acid can effectively penetrate the cell walls of mold tissues, interfere with the interaction of enzymes between cells, and can denature intracellular proteins, thereby playing an antibacterial and antifungal effect.

The use of sodium diacetate not only maintains the bactericidal performance of acetic acid, but also does not cause the feed palatability to deteriorate due to the high acidity. Therefore, SDA can prevent mildew and spoilage of stored foods and beverages, thus having the effect of preventing mildew and keeping fresh

The mechanism of sodium diacetate to increase milk fat rate:

Acetic acid is an important substance involved in animal energy metabolism.

Acetic acid is absorbed in the digestive tract and transported from the blood to the cytoplasm of metabolic tissues. Under the catalysis of acetyl-CoA synthetase, it is converted into a "hub" substance "active acetic acid" for energy metabolism, namely acetyl-CoA, acetyl-CoA Sugar, fatty acids, amino acids break down into the active form of the respiratory chain. The above substances can also be transformed with each other,

Therefore, SDA can promote the metabolism of animal organisms.

Acetic acid is an important precursor substance for ruminants to synthesize fat.

It is beneficial to the formation of short-chain fatty acids in milk fat and improves the milk fat percentage.

Sodium diacetate:

Appearance: white powder

Smell: slightly acetic acid smell

Melt water: easy to absorb moisture, very soluble in water.

Product advantages:

The acidic flavor of sodium diacetate can mask the unpleasant smell of various drugs and a variety of trace elements added to the feed, which is beneficial to the feed intake of livestock and poultry.

Promote feed nutrient absorption, improve nutritional value,

Adjust PH value of gastrointestinal tract of livestock and poultry,

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Promote the growth of beneficial bacteria such as lactic acid bacteria,

Improve the activity of digestive enzymes such as pepsin,

Promote the digestion and absorption of nutrients.

content:

指标名称 Acetic acid	单位 unit	指标 index
乙酸含量 formic acid acetic acid	%	39.0-41.0
乙酸钠含量 sodium acetate	%	58.0-60.0
水分 moisture	%	≤2.0
Ph值		4.5-5.0
甲酸及易氧化物质（以甲酸计） formic acid	%	≤0.2
砷（以As计）	Mg/kg	≤0.0003
重金属（以Pb计）	Mg/kg	≤0.0001
铅（Pb）	Mg/kg	≤0.2

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Acetic acid is an important precursor for fat synthesis in ruminants. It is beneficial to the formation of short-chain fatty acids in milk fat and improves the milk fat percentage.

1. Feeding cows with 0.1% -0.15% sodium diacetate and silage can increase its feed intake by 10% -20%, milk production by 13% -20%, and milk fat percentage by 0.2%.
2. When feeding cows, broilers and piglets with feed supplemented with 0.1% -0.2% sodium diacetate, the weight gain can be increased by 6% -10%, the feed conversion rate can be increased by about 10%, and the survival rate of poultry during the brooding period can be increased by 10% .
3. Feeding fat pigs with feed supplemented with 0.3% sodium diacetate can increase the lean meat rate by 2%. Feeding sows with 0.2% sodium diacetate feed can increase the number of litters per year.
4. Feeding fish with feed supplemented with 0.2% -0.3% sodium diacetate can increase weight gain by 10%.

【Recommended dosage】 : Livestock and poultry 0.1-0.3% Fish 0.2-0.3% Dairy cow 40-100g / day, head Silage 0.2-0.5%

【Storage】 : Sealed, moisture-proof and sun-proof. Do not store with other toxic chemicals

【Shelf life】 : 24 months

Sow postpartum paralysis

Sow postpartum paralysis is a disease in which the postpartum physique is weak, the limbs cannot stand after the litter, and paralysis occurs due to unconsciousness. It is also called postpartum wind. It is a common and frequent disease of sows. Mainly due to insufficient calcium or phosphorus in diets or imbalanced ratio; long-term feeding of corn, cereals and legumes and other concentrates, inorganic phosphorus cannot be supplemented; due to factors such as excessive production intensity, sows usually give birth for 20 days after lactation. Around the body, the calcium and phosphorus losses in the body reached the highest point, and the most paralyzed sows were 15 to 35 days after delivery and several days before delivery.

Before paralysis, loss of appetite or refusal to eat, slow movements, general dry stools, like drinking fresh water, there are arched ground, abnormal eating phenomenon. Body temperature and pulse are normal. After paralysis, there was back arch, constipation, sluggishness, standing unsustainable, exchange of steps, hindquarters swinging weakness, loss of consciousness, lying down on the ground when severe, touching and screaming, decreased lactation, refused to breastfeed. If not treated in time, the sow will lose weight until death. Although the mortality rate of this disease is extremely low, it causes the sows to lose their breeding value, affects the growth and development of the piglets, and even causes the death of the piglets. The economic loss is very large and should be highly valued.

1 Cause

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Modern veterinary medicine believes that postpartum lactation affects the calcium content in the blood causing this disease. In addition, malnutrition and improper feeding and management, such as calcium deficiency or maladjustment of calcium and phosphorus during pregnancy; inadequate feed or nutritional deficiency; postpartum qi and blood loss; cold early spring climate, lack of exercise of sows; cold and wet pens, cold winds Meridian block can cause this disease. In addition, the lack of sunlight exposure, the fetus is too large, and sciatic nerve damage during midwifery can also cause illness.

2 Clinical symptoms

The sow is depressed after childbirth, decreased appetite, decreased lactation, accelerated heartbeat, unstable standing, weakness of both hind limbs, and walking and swinging. In the later period, he could not stand, often lying on the side with his head tilted downward, and his hind limbs were separated in a figure eight shape, and eventually became paralyzed. Muscle atrophy over time, sometimes bedsores.

3 Preventive measures

Normally, feed-grade calcium formate should be supplemented in pig diets; calcium formate should be supplemented after sows, high-quality hay powder, leguminous forage (alfalfa grass), and green feed should be supplemented in the winter, spring and rainy seasons; pig houses should be kept clean Drying; after the sows have litter, they must add more grass; prevent the cold wind from blowing, keep the house warm, spacious, and have sufficient sunlight; sows should get more sun during pregnancy, and keep the sows in the sun every day. Exercise for 2 hours to 3 hours, feed digestible, rich in protein, minerals and vitamins, calcium and phosphorus ratio is appropriate; for sows with a history of postpartum paralysis, add enough mineral calcium before birth to prevent The occurrence of this disease.

4 Control methods

1. Add 20 grams of calcium formate to the feed every day for 10 to 15 days.
2. Breast air supply method: Sterilize the nipple and the milk guide needle, use a 100 ml syringe to pump into the breast, and stop the air supply when the breast bulges slightly. The purpose is to reduce the amount of milk, thereby slowing the loss of calcium in the blood.

3 Application of sodium diacetate

3.1 Anti-mold effect of sodium diacetate

SDA has a strong ability to kill mildew, and is used to inhibit the mildew of cereals. According to literature reports, the addition of 0.1% to 0.8% of SDA to grains with a moisture content of 21.5%, the storage period can be extended from 90 days to 280 days, and the addition of 0.5 to 1.0% of grains with a moisture content of 17% to 33% The compound mold growth inhibitor composed of SDA77.6%, sorbitol 20% and anti-caking agent 2.4% was stored under the condition of 21 ~ 27 °C, humidity 70% ~ 85% for 90 days without mold formation. Liang Liang et al. (1998) proved

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that the ability of adding 0.75% SDA to the cereals with a water content of 22% was 20 times more effective than that without SDA.

Adding SDA to silage can effectively inhibit the growth of mold, improve the quality of silage, and achieve the purpose of preservation. Adding 0.2% to 0.4% of SDA to silage can extend the storage period of silage at pH = 4.08 for more than 3 weeks. According to Ge Zhenghua's report, about 0.2% of SDA was added to silage ryegrass. After 150 days of storage, the total number of molds in the test group was only 10% of that in the control group, and there was basically no mold in the use period.

3.2 Impact on production performance of livestock and poultry

3.2.1 The effect of adding SDA to cow feed

SDA can enhance the palatability of feed and improve feed utilization. In addition, SDA can increase the milk fat rate and milk production of dairy cows. Shi Chuanlin et al. 'S experiments with SDA-protected silage corn stalks for feeding cows showed that the SDA-protected silage corn stalks had a soft texture, less decay, and good palatability. The cows had a faster feeding speed. At the same time, the average daily milk yield of the experimental group increased by 8.5%, and the milk fat rate increased by nearly 0.1 percentage points. Yang Yan and others reported that in the feeding experiment of 33 black-and-white lactating cows for 40 days, the experimental group was fed SDA186g three times a day. The results showed that the milk fat rate of the experimental group increased by 10.25%; the milk production increased by 10.2%. Experiments by Lin Zhiwen and others show that feeding cows SDA improves milk production and milk fat percentage.

3.2.2 The effect of adding SDA to pig feed

SDA can increase the lean meat percentage of fat pigs, the weight gain of piglets and treat swine dysentery, and can improve the fertility of sows. The Shanghai Institute of Chemical Industry conducted a feeding experiment on 62-day and 85-day-old "President Maple" hybrid pigs. During the 71-day trial period, SDA0.3% was added to the feed of the test group. As a result, the pigs in the test group had a strong appetite, shiny hair and lean meat. The rate was increased by 2% compared with the control group, the fat thickness was reduced by 0.2 cm, and the bone marrow weight was reduced by 1.46 kg. According to reports from Huang Yude and Huang Jia, the experiment of feeding weaned piglets with SDA showed that the second group (adding 0.1%) increased weight gain by 12.2% compared with the control group. In addition, there was no diarrhea in the piglets of the experimental group.

3.2.3 Effect of applying SDA in chicken feed

SDA as a feed additive for feeding chicks, broilers, and adult chickens can inhibit mildew and prevent disease, and improve survival rate. Yang Xiaohong and others reported that SDA was added to chicken feed, and the test group (with 0.1% addition) had no diarrhea within 40 days. In addition, the egg production rate of the experimental group was increased by 18.8% compared with the control group. Du

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Xueqian and others reported that adding 0.5% SDA to the feed of egg chicks increased the survival rate by 2.34% after 8 weeks and 4.94% by 20 weeks; adding 0.5% to the feed of adult chickens can increase the egg production rate 4.94%; Adding SDA to commercial laying hen feed reduces the mortality by 0.79%, and the average egg production rate increases by 6.64%; adding SDA to broiler chicken feed increases the survival rate by 6.2% from 0 to 8 weeks, and the average body weight increases by 4.8%. The material is expected to decrease by 4.3%. In addition, adding 0.5% -1% SDA to chicken feed can also be used to control and treat hemorrhagic enteritis in turkeys.

3.2.4 Application of SDA in fish feed

Adding SDA can improve the palatability of bait, improve water quality and reduce the occurrence of diseases. Huang Yude and others reported that adding 0.1%, 0.2% and 0.3% SDA to carp bait increased the weight gain by 6.15% to 15.11% compared with the control group, and the bait coefficient decreased by 0.21% to 0.27%. Liu Yunxiang and other experiments have shown that adding 0.3% SDA to carp bait can increase the carp's weight gain rate and reduce the bait coefficient.

The egg shell of the egg accounts for 12% of the total weight of the egg, and the calcium content in the egg shell of each egg is about 3 grams. There must be sufficient calcium in the feed to meet this high demand. Insufficient calcium will lead to a decrease in egg production capacity of hens and an increase in egg breakage rate, endangering the profitability of the farm.

In the egg production process, the supply of calcium has two extremely important stages: the growing period and the late egg production period. As the age increases, the ability of the hen's gut to reabsorb calcium will decrease, which will worsen the problem of eggshell stability. It is estimated that about 7% of the eggs cannot reach their destination intact during transportation. In addition to factors such as age, house conditions, genetics, egg collection system and packaging, the main factor determining the quality of the eggshell is the feed. Animal nutrition experts can't just guarantee the adequate supply of calcium; it is also important to ensure the source of calcium.

Huarui organic acids can reduce the cost of raising chickens and increase profits

The role of organic acids in laying hen feed:

1. Calcium supplementation promotes nutrient absorption and prevents the reduction of egg production caused by salpingitis
2. Increase egg production, increase eggshell thickness, increase weight, and reduce the breakage rate of eggs by 30% during egg production and during transportation.
3. Add organic calcium to bid farewell to soft eggs, deformed eggs and hemp shell eggs.
4. A chicken can create more profits every day.

Organic acids have the functions of calcium supplementation, antibacterial and

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anti-inflammatory, improving reproductive function, prolonging the peak period of egg production, promoting multiple ovulation, and lowering egg cholesterol. Can optimize the absorption of calcium in laying hens. It is composed of highly available calcium source, organic acid and other compound packages. The effectiveness in calcium utilization has been confirmed by the results of two experiments.

A certain amount of organic acid (0.8%) was added to the hen's feed. After 21 days, the intestinal development was measured by estimating the depth of the crypt (intestinal gland) and compared with the positive control group.

Compared and found that the crypts at the end of the small intestine (jejunum and ileum) are more prominent. The prominent crypts increase the surface area of the intestinal wall and increase the intake of nutrients in the feed. Therefore, the organic acid prevents the quality of the eggshell.

Another study concluded that supplementing organic acids can reduce the breakage rate of eggs.

The experimental results show that organic acids can have a positive effect on intestinal tissues and can also improve the stability of eggshells. These research findings provide opportunities for modern egg products to improve production efficiency and profits, and thus to meet people's demand for high-quality products and to increase consumer recognition of products.

A chicken can create more profits every day, increase the thickness of the eggshell and the weight of the eggs, and reduce the breakage in laying and the breakage rate during transportation by 30%

[Usage and Dosage] Add 3kg for 1 ton of full price

[Notes] Stir evenly when mixing.

[Storage] Keep away from moisture and keep in a cool and dry place.

【Package】 25kg / bag

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