**500 eggs and still healthy?**

What does it take to keep laying hens for a 2nd laying period?

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Since the purchase price for young hens, especially in the organic sector, has risen significantly, farmers are increasingly asking themselves the question: "Should or must I really send my laying hens herd to slaughter with an output of around 80%, or does it make sense to keep the animals even longer?

This consideration has far-reaching consequences which result from the following questions:

- A: How healthy and stable have the animals survived the first laying period?

- B: What laying performance do they have at the age of 70 weeks?

- C: What is the percentage of broken and cracked eggs at this time?

- D: Which variant is suitable for my farm: **Laying through or forced mousing?**

Regarding point A: The wish of every laying hen keeper is a stable herd. This means: a calm increase in laying performance up to 94-96%, a laying performance curve as flat as possible, which only falls slowly after the 45th week, fully feathered hens, with good feed intake, calm character, no cannibalism and as few dead animals as possible. This is an enormously high expectation. In addition to optimal stable conditions, a good stable climate, a clean environment and sufficient light, optimal feeding adapted to age, laying performance and body weight is essential.

A first challenge is the conversion from raw fibre-rich rearing feed to the calcium and protein-rich **in the laying starter period.** This period is very stressful for the young hens. On the one hand, they have to adjust to a new stable, a new herd and a completely different feed, and on the other hand, their body is hormonally and metabolically adapted to laying eggs. This is a huge challenge. One is very well advised to support the animals in this phase in addition to the normal routine. There are two complementary ways of doing this.

The use of a homeopathic stall prophylaxis whose composition aims at the following aspects:

Reduction of the consequences of stress through transport > excitement, fear, cold wind, stress;

Reduction of the consequencestress of stress by catching, unloading, various injury possibilities;

Consideration of the entire constitution of the herd, also called constitution.

A highly efficient feed supplement is the use of bentonite, be it zeolite or mont morillonite, which acts as a binder for free radicals and faulty fermentation products - both are caused by stress in the digestive tract and by mycotoxins. The following also applies to laying hens: the intestine is the seat of health!

Immune-strengthening and anti-inflammatory plants are very helpful in this first phase in order to strengthen the young hens from the outset and lead them stably into the laying period. Plants such as rose hips and echinacea should be mentioned here as native examples, but there is also a wide range of Indian plants available. The application of such medicinal and spice plant mixtures, if they are, as usual, declared as supplementary feeds and therefore are not intended for the treatment of sick animals, is optimal to use in healthy animals in such a way that they, with the secondary plant ingredients contained in them, both strengthen the organs and stimulate the normal physiological body functions. The animals are thus strengthened and can cope better with germs from the environment and pollutants.

Next follows the phase of the laying power peak. Today's laying hybrids are absolutely outstanding high-performance animals. But they also have to endure their performance. After the 25th week of life, the hen's metabolism changes a lot again. The body weight increase curve, which until then had been in the foreground, now begins to flatten out. The laying apparatus is now fully developed and the peak of laying performance around the 30th week is imminent. This is a very sensitive phase in which the first failures and illnesses appear in many farms.

In order to prevent this, in addition to a suitable performance-related feeding, special attention must be paid to liver health, as the liver is the central detoxification organ and extremely stressed during the maximum production phase, especially in high-performance animals.

In this phase there may occur another problem: it is exactly the period of time when the feared e. coli infections occur. Since this pathogen also affects the liver strongly, strengthening this organ in this phase is a must! To achieve this, the use of herbal mixtures that promote and support liver health and the continued use of bentonite are highly recommended. Among the native plants, the milk thistle is particularly worth mentioning, but yarrow, sage or garlic would also be helpful. Here, too, we have a wide range of highly efficient Indian medicinal and spice plants at our disposal. The combination of different plants matching in the same direction of action increases the effect compared to the single plant or the pure substance and makes it possible to efficiently supply even large animal groups with small quantities via the feed. Dosages of 2kg per tonne of feed have proven successful.

Regarding points B and C: If the herd comes into the last third of the 1st laying period, animal health, the laying performance curve and number of broken and cracked eggs are decisive parameters. Usually the first signs of organ fatigue occur in this phase. On the one hand the liver of the animals is chronically overstrained, and on the other hand the absorption capacity of the intestine decreases. Sufficient pick feed, pregerminated grains and the possibility of absorbing natural material in the outlet improves the digestive performance of the intestine. One should never forget what the chicken eats naturally and this must be taken into account to a certain extent also in intensive husbandry.

In this third feeding phase the feed recipe should be changed again. The animals now need less protein, amino and linoleic acid, but more and better available calcium to ensure the stability of the eggshells.

The use of herbs is also very helpful in this phase. On the one hand it is now useful to strengthen the liver metabolism again, on the other hand special herbs are available which support the absorption, resorption and metabolic availability of the minerals and trace elements offered in the feed. This is very important because we now know that if the intestine does not work optimally a lot of the nutrients offered cannot be absorbed by the animal. If you support the animals from a laying performance of less than 90% with the appropriately composed herbal products, you can keep the proportion of broken and cracked eggs below 3-4%. Such a herd, with as far as possible intact feathering and few animal losses, is fit for a second laying period.

Regarding point D: Laying through or forced mousing? If one simply lets the herd go beyond the 72nd week of life, the average lower laying performance must be taken into account by slightly lowering the energy content in the feed. The crude protein content, added fat oils, methionine, should be slightly reduced to slow down the proportion of too large eggs, the minerals, especially calcium in quantity and grain size, must be optimally balanced and the intestine must be maintained healthy and active to achieve an optimal absorption performance. This can be effectively supported by the continued use of herbs during the 2nd laying period. So it is well possible to keep stable herds until the laying performance drops by 65%. This is the value from which the expenditure costs are no longer covered. The lower laying performance is compensated in any case by the investment saved for the purchase of a new herd. Therefore, in only two herds needs to be invested for three periods. Economically this is in any case worth considering and possibly an at least equally good sales argument for animal protection sensitized consumers, like cock fattening, if it were promoted!

The other alternative is the forced moult, where the animals with a remaining laying performance of about 80% are forced by short-term (2-3 days) feed and water withdrawal, then slow feeding with laying starter to reduce the laying performance to zero. This is achieved after about 3 weeks. From this point on, one starts again, as with a young herd, with constant support of the liver health through preventive herbal use.

However, it takes another 4-5 weeks until the herd has reached a stable level of 82-85% laying performance again. The percentage of broken and cracked eggs can be drastically reduced to less than 1%. It then rises again very slowly until it reaches 3-4% again after 7-8 months. Here, too, the fact that the laying performance falls below the 65% mark indicates the time for removing.

With both methods, life support performances of 450 eggs and more can be achieved. The goal of the 500 egg hen, which poultry breeders are striving to achieve with ever greater vigour, is therefore becoming ever more tangible, as long as the keeping farms are prepared to invest in absolutely optimised husbandry and feeding, as well as prophylactic health-supporting measures.

Even high-performance hybrids can live for several years in private extensive husbandry, so why slaughter these highly specialized animals only because they reduce their astronomically high performance? Vitality and the theoretical capacity for longevity could also become a selection characteristic in genetics in the future. In cattle it has already been recognised that an extremely high milk yield, if it is not coupled with the ability to maintain at least 4 or 5 lactations, is actually uneconomical and ethically questionable. Should these considerations perhaps also be taken into consideration for laying hens?