

New strategy for animal-friendly beak treatments in broiler breeders - 3

In the previous article in this series we looked at a test set-up with Natural Beak Smoothing at broiler breeder company Enterprise EARL Chevillard, where broiler breeders were monitored over 20 rearing weeks. Part 3 of this article looks at results during the production period up to week 64.

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www.roxell.com/natural-beak-smoothing

Every rearing group stayed together and each moved to a separate production house (Table 3).

	Hens from house A with IR	Hens from house B with Natural Beak Smoothing	Hens from house C with no treatment
Beak treatment during rearing	IR treatment	No beak treatment but 'smoothing' throughout the 20-week rearing period	No beak treatment
Type of feeding system in production	Feeder pan with no file texture	Feeder pan with no file texture	Chain feeding system (flat chain)
Location	Production house at contract grower A	Production house at contract grower A	Production house at contract grower B

Table 3. Production houses.



Mortality

In spite of the fact that the males were slightly too mature when introduced to both houses (grower A), this primarily caused problems with hens from House A with infrared treatment (IR).

The males caused stress, which resulted in more feather pecking. The hens from House A with IR had sharper beaks, which resulted in increased deaths. This did not affect the mortality rate of hens from house B with Natural Beak Smoothing. In conclusion, there is a low mortality rate among hens from house B with Natural Beak Smoothing compared with hens from house A with IR.

Between week 21 and week 56:

- Hens from house B: 4.24% mortality rate.
- Hens from house A: 6.28% mortality rate (Fig. 4).

Egg production

House B with Natural Beak Smoothing had the best uniformity at the end of the rearing period. This resulted in the hens starting to lay eggs earlier and being more productive in the other weeks (Fig. 5). During a six week period, the laying percentage is above 85%.

Between week 21 and week 56:

- Hens from house B: 87.1% laying percentage = 168.6 eggs per hen.
- Hens from house A: 85.5% laying percentage = 164.3 eggs per hen.

Fertility and day-old chicks

Hens from house B with Natural Beak Smoothing laid more fertile eggs. At the end of the production period (week 64), a hen from house B has produced eight extra day-old chicks. In total, for an entire flock that amounts to 78,300 extra day-old chicks (Fig. 6).

Continued beak evolution

In all three production houses, the beaks continued to grow and the tips became sharper, which meant a decline in the beak scores. A feeder pan with Natural Beak Smoothing in production would continue to keep the beak growth under control.

Between week 21 and week 52:

- Hens from house B: 94.86% fertile eggs = 126.1 day-old chicks per hen.
 - Hens from house A: 93.80% fertile eggs = 120.14 day-old chicks per hen.
- At week 64:
- Hens from house B: 155.20 day-old chicks per hen.
 - Hens from house A: 147.86 day-old chicks per hen.

It was concluded that hens from house B with Natural Beak Smoothing continue to gain high scores for beak shape in the production phase.

The head start they got in the rearing phase with Natural Beak Smoothing continues to benefit them. The beaks of the hens with IR treatment break off more frequently due to the formation of scar tissue.

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Fig. 4. Mortality rate in females with infrared treatment (IR) compared with Natural Beak Smoothing.

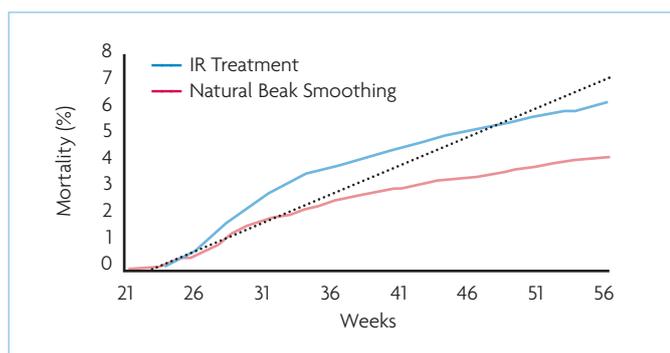
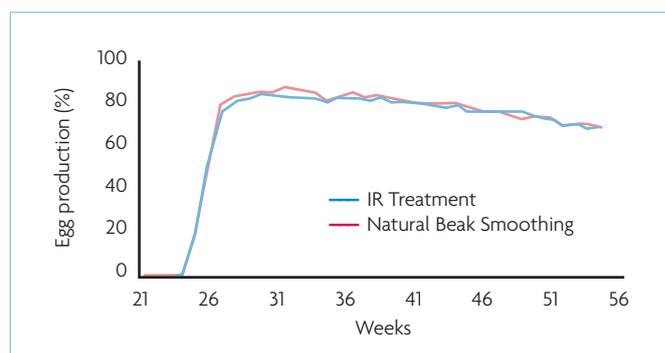


Fig. 5. Egg production of hens with infrared treatment compared with Natural Beak Smoothing.



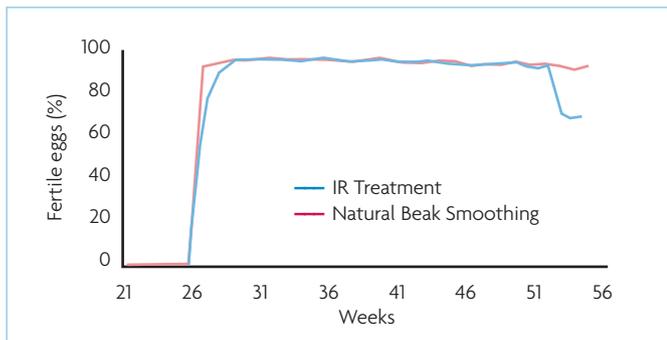


Fig. 6. Fertile eggs of hens with infrared treatment compared to hens with Natural Beak Smoothing.

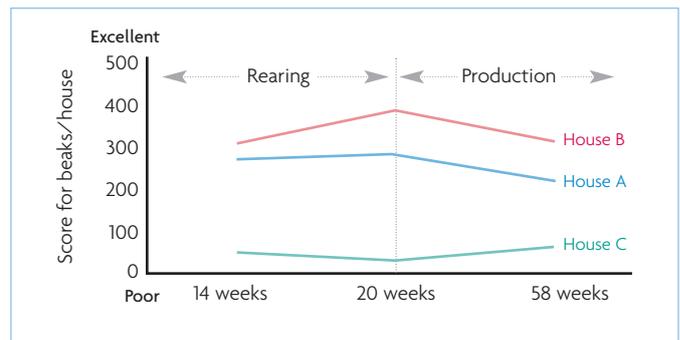


Fig. 7. Beak shape scores. House A: standard Vitoo/IR treatment, House B: Vitoo with NBS/not debeaked, House C: standard Vitoo/not debeaked.

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The chain feeding system in house C hardly improved the score for the beaks (Fig. 7).

Natural Beak Smoothing is a new, additional factor that helps bring about positive results in the production phase, alongside many other technologies.

Greater control can be gained over the following results:

- Less mortality.
- Laying percentage of 80% is achieved earlier.
- Average laying percentage per flock is higher.
- The laying percentage stays above 85% for six weeks.
- More fertile eggs and day-old chicks.

Return on investment after one year and higher return

Test results show that an investment in a Vitoo pan feeding system with Natural Beak Smoothing is recovered in one year. Just the savings on feed and debeaking were enough to justify an investment in an animal-friendly beak treatment.

Three quarters of the annual savings are the result of feed savings and one quarter is due to stopping beak treatments.

Feed savings of 6.3g/hen/day in the rearing phase seem negligible, however the figure per house on an



Infrared treatment

Natural Beak Smoothing in rearing period

Without treatment

Comparison of beaks in week 57.

annual basis is significant: 22 tonnes of feed savings. These savings made all the difference in the calculation of the return on investment time frame for Natural Beak Smoothing during the test in France.

There is also the fact that the investment in Natural Beak Smoothing is not an annually recurring cost. The effect of the file is guaranteed for at least 10 years, as long as it is used normally and cleaned correctly. During wear monitoring, the sharpness does not deteriorate quickly, which leads Roxell to believe that the file will last even longer.

Conclusion

Choosing a new strategy for beak treatments is one of the prerequisites for being able to call

your company 'sustainable' and 'animal friendly'. These are choices that the public is demanding ever more fervently from its food producers. Yes, investments are required, however, they do not always have to negatively impact your business models.

In the list of sustainable solutions, Natural Beak Smoothing scores high. The sustainability is inherent in the product. The strength and evolution of the sharpness of the file has been extensively tested in the design phase.

Roxell continues to measure the wear of the file at its pioneer customers on an annual basis. In addition, Roxell believes that the sharpness of the metal file is guaranteed for at least 10 years, and probably longer, as long as it is used normally and cleaned correctly.

Thanks to this strong, durable, and

efficient solution, you avoid wasting valuable raw materials, energy, and investments.

If you want to be sustainable, you also have to have a high standard of animal welfare. The use of IR and hot-blade debeaking is no longer good enough. In recent years, Roxell have seen awareness of animal welfare increase across the world, among all players in the sector. This is because healthy, stress-free animals grow better, and farmers enjoy a better return on their work. Many breeders have therefore set up test houses with Natural Beak Smoothing. These tests have been unanimously positive thus far. The poultry market is in agreement that it is the perfect alternative to traditional, painful beak treatment.

Furthermore, this solution is an affordable alternative for poultry farmers. The calculation of what you will save on feed and debeaking treatments is surely enough to justify the investment in an animal-friendly beak treatment. If you add in the extra gains, the returns are even higher. The mortality rate drops and other success factors improve: better fertility, more eggs, more day-old chicks, and so on. All this just by controlling beak growth in an animal-friendly manner. ■

References are available from the author on request