



## Experiences of training participants



**Training participant: Sven Groot Koerkamp**

**Training:**

**Introducton Basic Processes in Feed Production**

On 10 and 11 March I followed the training Basic Processes in Feed Production at Feed Design Lab in Wanssum. The two-day training was taught by Eric Vissers, Process Technologist at Feed Design Lab.

The first day was dedicated to getting acquainted with the production process of animal feed. First of all, we were instructed to put all machines in the right order in a feed factory. This was quite a challenge because you were forced to think about it. We were then given a number of raw materials and products that we had to match with the right machine. Together we could perform this. After this educational assignment, we went into the pilot plant with all the training participants. Here we received an extensive explanation from Eric about all the machines in a feed plant. The unique thing about this tour was that we were able to see all the machines from the inside. After the instructive tour, we were discussing the theory about grinding, mixing and dosing in the classroom. Eric told you at every step which machines you could use for it. In addition, he also went into depth about particle size, segregation and spherical particles. These factors are very important criteria in the first steps of the production process. After this theory part, we all went into the pilot plant to roll up our sleeves. We could apply the theory in practice because we were going to make a dog kibble and laying hen pellet. First of all, we weighed the ingredients. The ingredients were then ground with a hammer mill. After grinding, the ingredients were mixed. During mixing, the oil and premix were also added. The first day ended with a theoretical and practical part about mixing uniformity.

Day two started fresh and fruity at 9.00 am and we immediately started with a practical part in the pilot plant. Here we were going to extrude a dog kibble with the mixture of day one. It already appeared that this was not as easy as it seemed, because the mixture got stuck in the extruder. The operators were able to solve this problem quickly. We then coated the extruded kibble in the vacuum coater. After the practical part, we discussed the theory of conditioning, extrusion, expansion, pressing and cooling in the classroom. During these lessons I learned a lot about the different processes. In addition, I have learned that the particle size, the temperature, the amount of steam and fat has a very large effect on the hardness of the pellet. Then we went back into the pilot plant to press the laying hen pellet. First of all, the mixture was conditioned. After conditioning, the mash was expanded and then pressed through a die. After pelleting, Eric Vissers took us to the quality department. Here he explained in detail the quality measurements that are made on the ready product such as hardness and durability. He also explained about the cross-contamination within a feed plant. Finally, we were divided into groups and performed an ingredient puzzle. We received a form with the different machines and a number of (processed) ingredients. We had to indicate with each machine which ingredient goes in and how it comes out. Our group did very well except for one mistake. Afterwards, each training participant received samples of the produced feeds to take home.

I experienced the course as very instructive. I really liked the alternation between theory and practice. As a result, you could always immediately apply the theory you have learned in practice. Finally, I learned a lot myself in the field of process technology in a feed plant. This training is highly recommended.