

ProGress Broilers

The ProGress prestarter diet has been developed and designed through years of intensive research with the aim to produce feed for young chicks that helps development, copes with limited digestive capacity, and improves the immune system of young birds. All these factors have been included in the ProGress concept to protect birds optimally, to improve chick welfare and to improve broiler performance.

To show the effect of ProGress on immunity, birds were purposely infected with coccidiosis (*E. acervulina*) at day 7 and also with *Clostridium* at days 14, 15 and 16. The results showed a clear positive effect on feed intake and weight gain when ProGress had been fed during the first days post-hatch (Table 1).

Table 1. Results from an infection trial. + or – indicates whether chicks received treatment (+) or not (-). Improved performance of chicks (Ross 308) was observed when ProGress prestarter was fed compared to a pelleted control diet when chicks were infected with Coccidiosis (*E. acervulina*) on day 7 and *Clostridium* on days 15, 16 and 17. Chicks showed no reduced growth as a result of infection when ProGress was fed.

Coccidiosis	Clostridium	ProGress	Daily feed intake (g)	Body Weight (g)	FCR	FCR Corrected (1949 g)
-	-	-	89.7 ^b	2040 ^b	1.57 ^{ab}	1.53 ^{ab}
-	-	+	92.9 ^c	2094 ^b	1.58 ^b	1.52 ^a
+	+	-	84.8 ^a	1949 ^a	1.56 ^a	1.56 ^c
+	+	+	91.3 ^{bc}	2059 ^b	1.58 ^b	1.54 ^b

^{abc} Different letters denote significant differences within a column.

Conclusions

Final broiler weights increase considerably when Progress prestarter diet is fed while feed conversions improve as well. This leads to an immediate economical benefit. Furthermore, the uniformity of flocks has shown to improve and mortality was often reduced. The combined effects result in positive cost-benefit ratios for your farm.

The success of broiler rearing depends on many different factors. All factors will have their impact on production. However, our research and the performance of millions of broilers worldwide show that ProGress gives your broilers the best start possible. It is only when creating optimal dietary circumstances during early development that your broilers will reach their optimal performance.

Please contact your local Provimi representative to see how you can implement ProGress successfully!

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The challenge

Feeding young poultry properly is a challenge for several reasons. The intestinal tract is not fully developed when the first feed is ingested and the activity of digestive enzymes is low after hatch. That means that complex nutrients are not utilized efficiently during a period of which growth and development progresses rapidly and dietary needs are high. The limited digestible capacity during the first days requires a special diet that contains easily digestible protein and fat sources. The use of relatively low digestible protein sources like rapeseed meal or sunflower meal simply does not give optimal nutrient supplementation in this period. Use of such protein sources also leaves behind undigested protein in the intestinal tract. This presents a substrate for harmful bacteria like *E. coli* and *Clostridium* who

benefit from this undigested protein source, resulting in digestive problems and wet droppings. The key to success therefore importantly lies in the feeding method during the vulnerable and vital early developmental stage.

Nutrient requirements are especially high during the period of early development. This is to fuel developmental processes and to secure the presence of building blocks needed to develop a functional body. During the first week a broiler develops mainly its digestive tract, liver, heart and sensory organs (brain) while muscle and bone tissue are primarily formed during later stages. That is why the effect of optimal early development results also in long term growth improvements and increased metabolic capacity.





”The positive effects on growth and development”

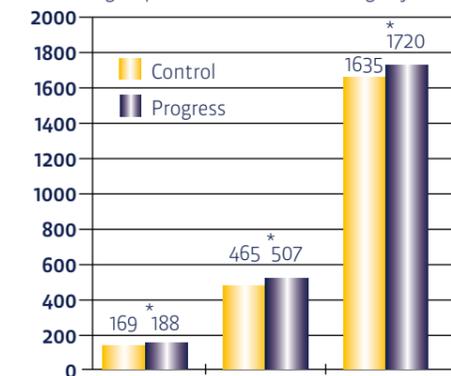
ProGress prestarter diet

The effect of feeding ProGress, Provimi’s prestarter diet, can already be observed after the first week. The positive effects on growth and development continue during the rest of the growing period. Studies have shown that supplying 100 grams ProGress per chick gives the optimal cost/effect ratio. Broilers consume this amount within 5 days, after which a transition to starter feed is advised. High early feed

intake is the result of an optimal pellet size. Pellet quality and size are important characteristics of a good prestarter diet. A 2mm “short cut” pellet has through intensive Provimi research, shown to lead to superior results. The ProGress pellet is durable and at the same time relatively soft/spongy, falls apart easily in the crop, and for that reason improves digestibility further. Enzymes can then work optimally and overall feed digestibility improves.

By allowing an optimal development of the intestinal tract in the first week, the possibility to absorb protein increases throughout the entire lifespan of a broiler. This forms the basis of faster growth during the entire growing period, leading to improved feed conversions as feed intake is higher with improved feeding efficiency as absorbance of nutrients is easier. It is therefore that ProGress has shown to result in better digestion and subsequent growth performance. This can be seen in the differences in Figure 1 where a control diet was compared with ProGress in the entire life cycle of broilers.

Figure 1. Experimental results (2010). Broiler weights at 7, 14 and 28 days (Ross 308) when a standard pelleted diet (control) or when ProGress prestarter diet was fed during the first days (100 g per bird in total). (*) significant improvement of weights in the ProGress group occurred at all measuring days.



ProGress & Developing the Immune system

Early intake of feed has shown to stimulate the digestion of the yolk sac (Nitsan,1996) resulting in lower incidence of yolk sac inflammation and a higher availability of nutrients in the crucial first days. It is important that chicks utilize their yolk sac since it contains high levels of unsaturated fatty acids needed for the formation of cell membranes (growth of organs). If diets are not fully digestible and energy levels are low, the chick will use this fat source as energy source. Then the

key fatty acids from yolk can no longer be used for the development of critical organs (brain, heart, lungs). That makes chicks more vulnerable to respiratory diseases or growth limitations. The same accounts for the presence of immune proteins (immunoglobulin) in the yolk sac. Those proteins should be available for immune response and should not be utilized differently, e.g. as protein for growth.

The components in ProGress influence the immune system both directly and indirectly.

Nutrients for the build-up of the intestinal tract come from two sources: yolk and feed. The positive effect of the presence of the highly digestible ProGress is therefore twofold; 1) it increases the availability of nutrients from the feed itself, and 2) it stimulates yolk sac absorption. The presence of highly digestible nutrients for energy and development from ProGress means that the essential nutrients from yolk are available for immune buildup and cell development. To improve cell development further, selected omega-3 fatty acids are included in ProGress so that the development of cell membranes occurs optimally.

A stable gut microflora is critically important in preventing intestinal disorders. The composition of the microflora develops during the first days and can be influenced with feed. ProGress contains Biacid, which stimulates colonization of the gut by helpful bacteria, and reduces the number of harmful bacteria. A well-developed immune system will increase the bird’s ability to fight disease and accelerates recovery in case it falls ill. This will lower negative effects on performance.