

Trial facilities and conditions

1. Trial facilities

Aviforum's trial facilities allow trials to be carried out that reproduce common production conditions in Switzerland (animal welfare standards, feed legislation). Specific procedures allow statistical evaluations by dividing the flocks into separate groups.

The following facilities for practice-oriented trials are available on Aviforum research centre:

- **1 pullet-rearing house** (aviary system with access to outdoor area, PAS [particularly animal-friendly stabling]) with 8 compartments for 600 pullets, total 4,800 animals: **Building No. 1**
- **1 layer house** (aviary system with access to outdoor area, PAS, and RAUS [regular access to pasture]) with 4 compartments for 355 laying hens and 4 compartments for 360 laying hens, total 2,860 animals: **Building No. 2**
- **1 layer house** (aviary system with access to outdoor area, PAS) with 20 compartments for 225 laying hens, total 4,500 animals: **Building No. 4**
- **1 broiler house** (with access to outdoor area, PAS) with 20 compartments of 20 m² surface each, for 270 chickens per compartment, total 5,400 animals: **Building No. 3**
- **1 broiler house** (with access to outdoor area, PAS) with 4 compartments of 31.5 m² surface each, for 440 chickens per compartment, total 1,760 animals: **Building No. 6**.

Production aspects are included in the trial costs. A possible trial-related productivity loss is charged to the client (p.ex. lower chicken density per pen)

2. Trial conditions

2.1. Broilers

The day-old chicks put in place at Aviforum originate from a Swiss hatchery chosen by the client. In general, the animals in building No. 3 and building No. 6 are housed "as hatched". On request, the chicks can be sexed and housed in a sex ratio of 1:1 (extra charge of 0.14 CHF per chick).

The broiler buildings allow performing feeding trials as well as testing of different drinking water supplements.

Building No. 6 is intended for simple fattening trials linked to rearing conditions (including the possibility of access to pasture).

The following trial parameters are recorded during a 37-day growing period:

- Live weight: for each individual group of animals
 - Building No. 3: full recording at the end of the trial, and in addition periodic automatic weighing using Fancom animal scales;
 - Building No. 6: full recording at the end of the trial;
- Feed consumption: for each individual group of animals
 - Building No. 3: at the end of the trial plus periodic recording,
 - Building No. 6: at the end of the trial;
- Mortality: Buildings No. 3 and No. 6: separately for each trial group;

- Litter evaluation: visual evaluation of litter quality at the end of the trial;
- Slaughter quality: a quality rating is made for each treatment according to the standard criteria of BELL AG, GB Geflügel, Zell; as well as carcass yield per treatment;
- Feed analysis: determination of crude nutrients (dry matter, crude ash, crude protein, crude fibre, crude fat, sugar, starch, energy, further analyses on request) in all starter and grower feeds.
- Footpad and hock burn evaluation:
Assessment of footpad lesions with 10 animals per compartment on day 29 and 37 of fattening (from 2020 on day 36).

Optionally (on request) the following parameters can be determined:

- Use of cameras
- Dissection (breast, thighs, wings) of the animals, at 6 francs per animal (2019)

The trial costs are composed as follows:

- a basic fee for trial realisation and evaluation (+ 7.7 % VAT):
 - Building No. 3 (20 x 280 broilers, 36 growing days): CHF 19'500.- / 18'000.-*;
€ 17'700.- / 16'400.-*
 - Building No. 6 (4 x 450 broilers, 36 fattening days): CHF. 5'000.- / 4'500.-*;
€ 4'500.- / 4'000.-*
- the invoiced analysis costs (crude nutrients, others on request) for the trial feeds;
- additional costs of feed mill for the production of trial feeds (~ 5 CHF/decitonne);
- A trial-related productivity loss with a mortality rate of > 3% and/or a feed conversion ratio of > 1.70 kg/kg and/or a live weight of < 2.0 kg after 37 days during the trial or for individual treatments. The productivity loss is calculated according to the shortfall in live weight in kg, multiplied by the current Bell AG live weight price, minus the reduced feed consumption, multiplied by the current price of loose feed (basis: 13.2 MJ metabolisable energy for poultry /kg feed). The reference values used are either the control group data or the average results from the Aviforum annual report.

2.2. Laying hens

In **Building No. 2** (aviary system with access to outdoor area and pasture, PAS, RAUS) the feed consumption can be recorded for individual compartments, and it is possible to deliver two different feed variants to the compartments. An aviary system is installed in each half of the building. Supplements can be added via the drinking water across two compartments.

In **Building No. 4** (aviary system with access to outdoor area, PAS) the feed consumption can be recorded for individual compartments, and it is possible to deliver four different feed variants to the compartments.

During the usual laying time of 11 to 12 laying periods of 4 weeks all the following trial criteria are recorded for each individual trial group:

- Egg production: daily;
- Feed consumption: for each laying period;
- Average egg weight: once per laying period;

- Egg classification (weight sorting into 3 categories: < 53 g, 53 to 70 g, > 70 g): once per laying period (on request also more frequently);
- Determination of egg quality (twice per trial): determination of shell breaking strength and yolk colour;
- Feed analysis: determination of the crude nutrients (dry matter, crude ash, crude protein, crude fibre, crude fat, sugar, starch, energy, additional analyses on request) of the feeds used in the trial (mixed feed sample per feeding phase);
- Feather condition scoring and recording of individual animal weight for 10 hens per trial group (on arrival, in the middle of the trial, at the end of the trial).

Optionally (on request) the following parameters can be determined:

- Determination of egg quality: Determination of shell breaking strength, yolk colour, shell thickness, blood and meat stains in the egg, Haugh Units and percentage of yolk, egg white and egg shell.
- Use of cameras
- Assessment of footpad health

The trial costs are composed as follows:

- a basic fee for trial realisation and evaluation (+ 7.7 % VAT):
 - Building No. 4 (20 × 225 laying hens), PAS:

– whole trial (min. 11 laying periods)	CHF	145'000.- / 142'000.-*
	€	131'800.- / 129'000.-*
– per laying period (min. 2 laying periods)	CHF	13'200.- / 12'900.-*
	€	12'000.- / 11'700.-*
 - Building No. 2 (4 × 355 and 4 x 360 laying hens), PAS and RAUS:

– whole trial (min. 11 laying periods)	CHF	70'000.- / 67'000.-*
	€	63'600.- / 60'900.- *
– per laying period (min. 2 laying periods)	CHF	6'400.- / 6'100.- *
	€	5'800.- / 5'500.-*
- additional costs of feed mill for the production of trial feeds (~ 5 CHF/decitonne);
- the invoiced analysis costs for the trial feeds;
- The trial-related productivity loss deriving from a mortality rate (>2% per laying period) and a reduced egg production (> 5% per laying period), compared to the results of the control group or the average results from the Aviforum annual report;
- If required: Further egg quality evaluation such as determination of the yolk colour, shell thickness, shell breaking strength, albumin height as well as blood and meat spots. A cost of CHF 1'000.- / 800.-* per 100 eggs analysed and reported is invoiced.

2.3. Pullets

The replacement management of Aviforum's laying hen population generally dictates the choice of hybrids.

The following trial parameters are evaluated during the trial period (minimum 16 weeks of rearing):

- live weight: automatic recording of weight using Fancom animal scales for each separate trial group, evaluation after the 4th, 8th and 12th weeks and at the end of the trial;
- feed consumption: separately for each trial group after the 4th, 8th and 12th weeks and at the end of the trial;
- mortality: separately for each trial group;
- feed analysis: determination of the crude nutrients of the trial feeds used (mixed feed sample for each feeding phase), further analyses if required.

The trial costs are composed as follows:

- a basic fee for trial realisation and evaluation (+ 7.7 % VAT):
 - building No. 1 (8 x 600 pullets) CHF. 30'000.- / 27'000.-*
 - € 27'300.- / 24'500.-*
- additional costs of the feed mill for the production of trial feeds (~ 5 CHF/decitonne);
- the invoiced analysis costs (crude nutrients, plus additional analyses on request) for the trial feeds;
- The trial-related productivity loss deriving from mortality, feed consumption and reduced egg production in the laying period, that are significantly (> 5%) below or above Aviforum's average results of the previous year.

2.4. General

- The trial capacity shall be allocated on a "first come, first served" basis. A trial series is definitively reserved once the signed agreement has been received by Aviforum.
- The trial feed is delivered bulk or in 25 kg sacks on pallets.
- Additional recordings are invoiced separately according to the amount of time spent on them or the costs involved.
- An animal trial authorisation will be obtained from the cantonal veterinary office for each trial. The client must provide all the information needed to obtain this authorisation.
- If feed ingredients are tested that are not yet authorized, a copy of a test authorisation issued by the responsible authority must be submitted to Aviforum and the use of the foodstuffs (eggs, broiler carcasses) must be clarified.
- The data recorded during a trial will be treated as internal/confidential until released by the client.
- In general, 50% of the trial costs are payable upon signature of the contract and the remaining 50% are payable when the trial report is issued.
- The results/data of the trial are property exclusively to the client. The client will receive a trial report once the trial has been completed. A short summary of the report is published in the Aviforum's annual report.
- The client decides whether to publish the report and whether the name of the tested products is to be mentioned or not. Further publication shall be by mutual agreement and shall be subject to mentioning of the names of the partners involved.
- Currency conversion rate: 1 € = 1.10 CHF; the conversion shall be adapted at the time of signing the contract.

* In each case the lower of the two prices applies to firms and organisations making an annual contribution of at least 3'000 CHF to the Aviforum foundation for the promotion of Swiss poultry production and farming.