

Test facilities and conditions – Aviforum 2023

(for new barns (1 & 2) valid from commissioning, until then the current conditions apply)

1. Test facilities

The Aviforum test facilities allow experiments to be carried out in the context of production conditions common in Switzerland (i.e. Swiss animal welfare standards, options for free-range and organic production). Each barn is divided into multiple compartments allowing to test, compare and statistically evaluate two or more procedures within the same barn (maximum number of treatments depends on the respective barn).

The following facilities are available at the Aviforum for practice-orientated experiments:

- **Barn 1: pullet-rearing house:** Aviary housing with access to a covered outdoor area (wintergarden), PAS [particularly animal-friendly stabling], 2 barn sides, each barn side with 4 compartments for 600 pullets per pen, in total 4'800 birds.
- **Barn 2: layer house:** Aviary system with access to a wintergarden (PAS), an uncovered outdoor area (for bad weather) and a pasture (RAUS), 2 barn sides, each with 4 compartments for 355 or 360 (depending on barn side) laying hens per compartment, in total 2'860 animals
- **Barn 4: layer house:** Aviary system with access to a wintergarden (PAS), 20 compartments with 225 laying hens per compartment, in total 4'500 birds
- **Barn 3: broiler house:** with access to a wintergarden (PAS), 20 compartments (20 m² per compartment) for 280 chickens each, in total 5'600 birds
- **Barn 6: broiler house:** with access to a wintergarden (PAS), with 4 compartments (31.5 m² per compartment) for 400 chickens, in total 1'600 animals. It is possible install access to a pasture (RAUS). Barn 6 is designed for simple experiments (e.g. performance of a specific hybrid).

The following barns are planned (replacement buildings):

- **1 pullet-rearing house** (replacing barn 1): Aviary system with wintergarden (PAS), BTS and uncovered run area, planned with 10 compartments for 480 pullets each, in total 4'800 birds (with the possibility of rearing pullets according to organic specifications with 220 pullets per compartment)
- **1 laying hen house** (replacing barn 2): Aviary with wintergarden (PAS) an uncovered outdoor area and a pasture (RAUS), planned with 10 compartments for 175 laying hens each according to organic specifications (in total 1'750 birds) or 230 laying hens each according to PAS/RAUS specifications (in total 2'300 birds).

The finalized description of the replacement barns will be provided after the start of construction.

Production aspects are included in the experimental costs. A possible productivity loss related to experimental procedures is charged to the client (e.g. lower chicken density or experimental feed)

2. Conditions

2.1. Broilers

The broilers arrive as Day-old chicks and are then housed at the Aviforum. Chicks are usually not sexed (as *hatched*) in barn 3 and barn 6, as it is common in practice. On request and after consultation with the hatchery, the chicks can be sexed and housed in the desired sex ratio (additional costs are approx. CHF -.20/chick and CHF 50 for the hatchery's labour costs).

The following parameters are typically recorded:

- Live weight: for each compartment
 - Barn 3: automatic weight recording with Fancom animal scales and a manual full recording at the end of the experiment
 - Barn 6: manual full recording at the end of the experiment; manual weighing during the experiment
- Feed consumption: for each compartment
 - Barn 3: regular recordings (according to agreement) and at the end of the experiment.
 - Barn 6: regular recordings (according to agreement) and at the end of the experiment.
- Mortality: Barn 3 and 6: daily recording for each compartment
- Health: Assessment of the presence and severity of footpad dermatitis and hock burns in 10 animals per compartment on the 28th and 35th day (or according to agreement)
- Litter assessment: Assessment of litter quality (encrustation and moisture) on the 28th and 35th day (or according to agreement)
- Slaughter performance: A quality rating is made for each treatment according to the standard criteria of Bell Switzerland AG, Zell
- Feed analyses: Determination of raw nutrients (dry matter, raw ash, raw fibre, raw protein, raw fat, sugar, starch, convertible energy and further analyses if required) in all feeds used

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

- Wintergarden or pasture use or behavioural assessments with the use of cameras
- Dissection (breast, thighs, wings), for approx. 6 francs per animal

The costs are composed of

- A basic fee for performing and evaluating the experiment (plus VAT):
 - Barn 3 (20 x 280 broilers, 36 growing days): CHF 21'500.-
 - Barn 6 (4 x 400 broilers, 36 growing days): CHF 5'000.-
- The feed analysis costs (raw nutrients in the feed, others on request)
- Feed mill surcharge for the production of experimental feed
- The reduced yield if the experimental procedures and treatments result in a mortality of > 3% and/or a feed conversion > 1.65 kg/kg and/or a live weight of < 2.0 kg with a fattening period of 36 days. The reduced yield is calculated from the missing kg live weight multiplied by the current kg live weight price of Bell Switzerland Ltd minus the reduced feed consumption multiplied by the current price for loose feed (basis: 13.2 MJ / kg feed). Either the data of the control group or average results from the Aviforum annual report are used as reference values.
- The additional costs for an extended rotation, semi- or extensive hybrids, feed with reduced contents.

2.2. Laying hens

In **barn 2**, feed consumption is recorded per compartment. Two different feeds can be used. Drinking water can be recorded per 2 compartments.

In **barn 4**, the feed consumption per compartment is recorded. Up to four different feeds can be used.

During the usual laying duration of 11 to 12 laying periods (4 weeks each), the following parameters are recorded for each compartment:

- Laying performance: daily
- Feed consumption: per laying period
- Average egg weight: twice per laying period
- Egg categorisation (weight sorting into 3 categories of under 53 g, 53 - 70 g and over 70 g): once per laying period
- Feed analyses: Determination of the raw nutrients (dry matter, raw ash, raw fibre, raw protein, raw fat, sugar, starch, convertible energy and further analyses if required)

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

- Health (e.g. food pad dermatitis, bumble feet, toe injuries), plumage assessments and individual bird weights for 10 hens per compartment
- Evaluation of egg quality: shell breaking strength, yolk colour, shell thickness, blood and meat spots, Haugh units, the percentage of yolk, egg white and egg shell
- Use of cameras, behavioural observations

The costs are composed of

- A basic fee for performing and evaluating the experiment (plus VAT):
 - Barn 4 (20× 225 laying hens), PAS:
 - Whole trial (at least 11 laying periods) CHF 160'000.-
 - Per laying period (at least 2 laying periods) CHF 16'000.-
 - Old barn 2 (4× 355 and 4 x 360 laying hens), PAS/RAUS
 - Whole trial (at least 11 laying periods) CHF 70'000.
 - Per laying period (at least 2 laying periods) CHF 6'400.-
 - New barn 2 (10 x 175 hens organic or 10 x 230 hens, PAS)
 - Whole trial (at least 11 laying periods) CHF 140'000.
 - Per laying period (at least 2 laying periods) CHF 14'000
- Cost surcharge of the feed mill for the production of experimental feed
- The feed analysis costs (raw nutrients)
- A treatment related productivity loss resulting from an increased mortality rate (> 1.2% per laying period) and a reduced laying performance (> 3% per LP), measured against the results of the control procedure or the average results of the previous years of the Aviforum.
- If desired: Further egg quality evaluations. Egg quality analyses that are part of an experiment will be charged at CHF 500 per 100 eggs, for external orders without an experiment CHF 1,000 will be charged (plus VAT).

2.3. Pullets

The replacement management of Aviforum's laying hen population generally dictates the choice of hybrids. However, the choice of hybrids can be discussed.

The following parameters are recorded during the rearing period of at least 16 weeks:

- Live weight: automatic weight measurement for each compartment with Fancom animal scales, evaluation after the 4th, 8th, 12th week and at the end of the experiment.
- Feed consumption: for each compartment after the 4th, 8th, 12th week and at the end of the experiment
- Mortality: daily, for each compartment
- Feed analyses: Determination of the raw nutrients of the experimental feeds used (mixed sample per feed phase), further analyses if required

The costs are composed of

- A basic fee for performing and evaluating the experiment (plus VAT)
 - Old barn 1 (8 x 600 pullets) CHF 30,000
 - New barn 1 (10 x 480 pullets BTS or 10 x 220 JH organic) CHF 50'000.-
- Cost surcharge of the feed mill for the production of experimental feed
- The feed analysis costs (raw nutrients)
- A treatment related productivity loss resulting from an altered mortality rate, feed consumption and performance that is significantly (>3%) below or above the average results of the previous years at the Aviforum.

2.4. General information

- The principle of "first come - first served" applies to the allocation of test capacities. A flock and time period are considered as definitively reserved when the corresponding signed agreement has been received by the Aviforum.
- The experimental feed is delivered bulk or in 25 kg bags on pallets
- Additional agreed data collections will be invoiced separately according to the time and costs involved.
- An authorisation for conducting the experiment must be obtained from the cantonal veterinary office for each experiment. The client must provide the necessary information for the application of the authorisation no later than 2.5 months before the start of the experiment.
- 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 with the marketing organisation.
- The data of a test is treated as internal/confidential until it is released by the client.
- Usually, 50% of the invoice is issued when the agreement is signed and 50% when the test report is submitted.
- The results of the experiment are exclusively available to the client. After completion of the experiment, the client receives a test report. A brief summary of the report is published in the Aviforum annual report
- The client decides on the publication of the report and whether or not the name of the tested product should be mentioned. Further publications will only be made by mutual agreement and with mention of the partners involved.
- Currency conversion: This takes place when the invoice is issued at daily exchange rates