SUMMER PRACTICE GUIDELINES in ANIMAL NUTRITION
(3–14 July 2023)

University of Veterinary Medicine, Budapest, Hungary

1. Aims of summer practice are to experience the practical issues of animal nutrition and feeding technology of large-scale farm animals directly, and to highlight the cooperation and the connection between animal nutrition and veterinary work.
Summer farm practical in animal nutrition is compulsory. The review of **two different farm animal spec**ies is required. The farm must be a large-scale facility, preferably dealing with dairy cows, beef cattle, sheep, goats, swine, poultries, horses, or fish. **Small family farms, zoos or minor breeding businesses are not accepted**. The reason of that is to study the feeding of such farm animals which will be educated in the 7th semester.
If it is possible, formulation of mixed feeds should also be studied on the farm.
Former farm work experience does not substitute the present practice. It is because before starting the summer practice acceptance of the course of "Animal Nutrition 1" is required.

2. Duration of the summer practice: **two weeks**. The period is determined every year by the University. This year it is between **3–14 July 2023**. Personal request for a possible change of this period must be submitted to Dr. Bersényi via e-mail (bersenyi.andras@univet.hu).

3. Registration for the summer practice: not later than **21 April 2023**.
It is the student's responsibility to manage the arrangements for the proper place of the summer practice.
It is possible to accomplish the farm practice at two separate farms as well. The University enters into a contract with the farm(s). For this please do the follows:
- fill in the Training Agreement (see below in Annex I) in 1 exemplar,
- have it printed,
- let sign it with the practice leader,
- submit the signed agreement to the secretary of the Department of Animal Nutrition and Clinical Dietetics (Rottenbiller Str. 50.) no later than **28 April 2023**.
- If two students visit the same farm, only one Training Agreement per farm is needed, but the names of both students must be registered on the Agreement.
- Agreement will be sent by the Department of Animal Nutrition and Clinical Dietetics to the rector for signature.
- After that, the student gets back the Agreement signed by the rector till **19 May 2023**, and it must be handed to the supervisor of the practice.
- ***If the farm practice will be accomplished at two separate farms, two Training Agreements are needed***.
- When on the same farm the feeding of two animal species will be introduced by two different supervisors, one Training Agreement is enough, because the contract will be made with the farm, and not with the supervisors. In this case from the side of the farm the manager should sign it.

Students must register themselves for the Nutrition Summer Practice in the NEPTUN as well!

4. Work schedule: during the practice, the student needs to be employed in the routine daily work of the farm and activities, according to directions of the supervisor or the owner (farmer). At arrival, **please hand this SUMMER PRACTICE GUIDELINES in ANIMAL NUTRITION to the supervisor** for her/his information. Please ask the supervisor to sign that guideline.

5. Verification of the accomplished summer practice

The supervisor must sign the two exercise sheets (see below in Annex II) to certify the accomplishment of the summer practice. By some sentences the activity of the student can also be evaluated by the supervisor.

6. Sheets to be submitted to the Department of Animal Nutrition and Clinical Dietetics

You must submit **two exercise sheets** (Annex II) signed by the supervisor/s/ via e-mail, to certify the accomplishment of the summer practice.

Please submit the two exercise sheets to dr. Bersényi (bersenyi.andras@univet.hu) as one file saved as follows: Your Surname.First name.pdf (e.g., Schmid.Julie.pdf).

Deadline of submission: **31 August 2023.**

After submission of these documents, Department justifies the execution of summer practice in NEPTUN. This is the PREREQUISITE of the registration for "Animal Nutrition 2." course in the 7th semester.

7. Account of the summer practice

Every student must prepare a **short** (max. 8 minutes) ppt. **presentation** about her/his summer practice. The presentations will be carried out in the exam period followed the 7th semester, just before the oral exam made from the "Animal Nutrition 2".

To prepare yourself for this presentation, it is worth to make your own notes (diary) during the summer practice. But a written report about the summer practice is not required.

8. Evaluation of the presentation

Members of exam committee, rating "Not accepted", "Accepted" and "Excellent", will evaluate the presentations and the result will be included into the mark of the exam "Animal Nutrition 2".

According to the exam rules of the University, those students whose summer practice presentation is not accepted must prepare another one. Until the new presentation is not accepted, this student is not allowed to take part on the "Animal Nutrition 2" exam.

9. Instructions for preparation of the presentation

Only the concise introduction of **feeding practice** of two different farm animal species is required in max. 8 minutes, according to the EXERCISE SHEET (Annex II).

Please do not prepare more than 10 slides.

It improves the quality of your performance, if you can answer the questions of examiners concerning the summer practice.

Budapest, 6 February 2023.

Dr. István HULLÁR
associate professor,
head of Department of Animal Nutrition and Clinical Dietetics,
Institute for Animal Breeding, Nutrition and Laboratory Animal Science

Guideline for execution of the nutrition summer practice

Dairy cow

– Body condition of cows at the time of calving (parturition),
– feeding of cows in the different phases of lactation, depending on the milk yield: feeds, daily amounts, compounds, and nutrient contents of the daily rations,
– feeding of cows during dry period: aim of feeding, types of feeds and their daily amounts, nutrient contents of the daily rations,
– the time of re-insemination,
– feeding of calves: body weight at birth, period of feeding of colostrum: its daily and total quantity, onset of solid feed consumption, kinds of feedstuffs as solid feeds, age and body weight at weaning,
– rearing of calves after weaning and rearing of heifers,
– age and body weight of heifers at first insemination,
– nutritional disorders of cows on the relevant farm.

Small ruminants (sheep and goat)

– Body condition of ewes or female goats at the time of calving (parturition),
– feeding of lactating ewes or female goats: types of feeds, daily amounts, compounds, and nutrient contents of the daily rations,
– feeding of female goats during dry period: feeds and their daily amounts, nutrient contents of the daily rations,
– time of re-mating, flushing,
– rearing of lambs or kids: birth weight, age, and body weight at weaning,
– fattening of lambs: fattening period, body weight at the slaughter, types of feeds and compounds of the daily rations,
– nutritional disorders of sheep or goats on the relevant farm.

Beef cattle (beef cow, breeding bulls, fattening bulls)

– Reproduction cycle of beef cattle: time (season) of parturition, re-mating, weaning of the calf,
– feedstuffs for beef cattle (beef cows, fattening bulls) including pasture, daily amounts,
– calf fattening: birth weight, slaughter weight, fattening period, feeds, daily amounts,
– nutritional disorders of beef cattle and calves on the relevant farm.

Horse

– Feedstuffs given to the horses, exercise (work intensity),
– pre-exercise feeding and post-exercise feeding, feedstuffs and their daily amounts, nutrient contents of the daily rations, drinking water,
– rearing of the foals: body weight at birth, daily suckling frequency, creep feeding, age at weaning, composition of the daily ration after weaning,
– nutritional disorders of horses on the relevant farm.

Pig

– Ingredients and nutrient contents of different diets fed to pigs in different life stages (i.e. piglets, breeding gilts, fattening pigs, pregnancy, lactation),
– feeding of sows: age and condition at insemination, diets for pregnant sows, feeding lactating sows: body weight and the back fat thickness at the time of farrowing, diets for lactating sows,
– rearing of piglets: birth weight, weaning age and body weight, creep feeding of piglets, Fe (iron) supplementation,
– rearing of gilts: time of the first insemination, body weight and back-fat thickness at that time,
– feeding gilts,

– fattening pigs: age and body weight at the beginning of the fattening period and at slaughter, diets for fattening pigs
– nutritional disorders of pigs on the relevant farm.

Poultries

– Ingredients and nutrient contents of different diets fed on the farm,
– meat production (boilers, turkeys, ducks, geese etc.): egg weight, age and body weight at hatching and at the slaughter, feed efficiency (how many kgs of diet are needed for 1 kg weight gain), nutrient and energy density of the diets,
– Layers: age at the beginning of the of laying period, length of the laying period, egg yield, average weight of the eggs, nutrient and energy density of the diets used for layers.

Fishery

– Breeding technology of fishes kept for human consumption, process of fish production,
– feeding technology: feeds/diets, supplements, physical form, energy and nutrient contents of the feeds given according to the age and species,
– nutrition disorders.

ANNEX I

TRAINING AGREEMENT FOR SUMMER PRACTICE ON ANIMAL NUTRITION

Between Division of Animal Nutrition and Clinical Dietetics, Department of Animal Breeding, Nutrition and Laboratory Animal Science, University of Veterinary Medicine, Budapest, Hungary (DEPARTMENT)

And ……

(PARTNER ORGANISATION)

And ……

(STUDENT)

The PARTNER ORGANIZATION accepts the STUDENT as an intern within the framework of this agreement.

The parties agree to the following:

I - INTERNSHIP

1.1 The training period and this agreement will have a during of 2 weeks, from ..... to .....

1.2 The STUDENT's training requirements are described in the DEPARTMENT`s handout that is available on the DEPARTMENT`s website and is attached to this agreement as supplement.

1.4 During his/her internship, the STUDENT shall not receive any remuneration from the PARTNER ORGANIZATION.

1.5 The STUDENT shall not be considered, in any way, an employee of the PARTNER ORGANIZATION, either for the purposes of the internship or as part of it.

II – DEPARTMENT'S OBLIGATIONS

Under this agreement, the DEPARTMENT assumes the following obligations:

1. To conduct a follow-up with the STUDENT once the internship is complete via two exercise sheets signed by supervisor(s).

2. The DEPARTMENT is not responsible for any physical, personal damages, injuries or financial losses caused directly or indirectly by the STUDENT.

III – PARTNER ORGANIZATION'S OBLIGATIONS

Under this agreement, the PARTNER ORGANIZATION assumes the following obligations:

3.1 To welcome the STUDENT, to integrate him/her into the workplace and to assign him/her professional tasks related to the specified objectives of the internship.

IV – <u>STUDENT'S OBLIGATIONS</u>

4.1 During his/her internship with the PARTNER ORGANIZATION, the STUDENT will remain a student at the UNIVERSITY but shall follow the rules and internal regulations of the PARTNER ORGANIZATION, particularly those related to discipline, working hours, work safety and confidentiality. He/she shall also comply with the work methods, social norms, and standards of dress of the PARTNER ORGANIZATION and be very respectful of others in the interests of integrating into the workplace as successfully as possible.

4.2 The STUDENT shall not divulge any confidential information obtained during the internship that the PARTNER ORGANIZATION has indicated is confidential without having first obtained a formal written authorization from the PARTNER ORGANIZATION.

4.3 The STUDENT shall respect the confidential nature of the information obtained from clients of the PARTNER ORGANIZATION and shall not divulge any part of it without first having obtained a formal written authorization from the persons or organizations involved.

Date,

_____ _____

Supervisor Partner organisation

_____

Student

ANNEX II

SUMMER PRACTICE in ANIMAL NUTRITION

EXERCISE SHEET in a **DAIRY COW** HERD

The undersigned, ……..... supervisors certify that …… student has done the exercise on this day.

	Exercise	**Date**	**Signature**
1	Get information about breeds, number of animals, technology.		
2	Get information about previous yearly/monthly performance: numbers of calves born and weaned, discarded cows, causes of discard and mortality (calves, cows), milk production in average, length of lactation, milk fat content in average, days from calving to first succeeded artificial insemination (AI).		
3	Know the harvested feeds in the farm.		
4	Know the feed preserving methods.		
5	Get information about the purchased feeds and feed supplements.		
6	Rang over the pasture and study its botanical composition.		
7	Study the records of feed analyses.		
8	See the mixture house of the farm.		
9	Study the computer program used for ration formulation. Explain the data involved in the daily rations.		
10	Knowing the feeding process.		
11	Body condition scoring, weigh of body weight (BW).		
12	Study the nutrition and feeding of calves: BW at birth, length of colostrum period, daily amounts, quality control, length of calf rearing period, preparation of milk replacer, daily amounts, creep feeding, age, feeds, their quantities, age, and BW at weaning.		
13	Study the post-weaning nutrition and feeding of calves: length of post-rearing period, feeds, BW of the calf at the end of post-rearing period.		
14	Rearing of heifers: feeds, age, and BW of the heifers at the first AI.		
15	Study the nutrition and feeding of the dairy cows in the different stage of lactation (high, moderate, and low milk yield, dry, close-up periods). Feeds. Composition and quantities of daily rations, feeding regime.		
16	Discussion of the major differences in the different daily rations given to high, moderate, low milk yield, dry and close-up dairy cows.		
17	Study the drinking system.		
18	Metabolic disorders with nutritional background in the farm.		
19	Active participation in the farm's daily routine.		

…….

Supervisor's Signature

ANNEX II

SUMMER PRACTICE in ANIMAL NUTRITION

EXERCISE SHEET in a **BEEF CATTLE** HERD

The undersigned, ……..... supervisors certify that …… student has done the exercise on this day.

	Exercise	**Date**	**Signature**
1	Get information about breeds, number of animals, feeding technology.		
2	Get information about previous yearly/monthly performance: number of calves born and weaned, discarded cows, causes of discard and mortality (calves, cows, bulls).		
3	Know the harvested feeds in the farm.		
4	Know the feed preserving methods.		
5	Get information about the purchased feeds and feed supplements.		
6	Ranging over the pasture and study its botanical composition.		
7	Study the records of feed analyses.		
8	Seeing the mixture house of the farm.		
9	Study the ration formulation.		
10	Knowing the feeding process.		
11	Body condition scoring.		
12	The beef cows' yearly cycle: month/season of calving and re-insemination.		
13	Study the nutrition and feeding of calves from day 0 (birth) to weaning, including age and body weight (BW) at weaning.		
14	Rearing of heifers: feeds, age and BW at the first mating.		
15	Study the nutrition and feeding of beef cows in the different life stages.		
16	Check the bulls' nutrition and feeding.		
17	Compare the feeding regime in spring/summer and late autumn/winter.		
18	Beef fattening: BW at birth and slaughter, length of fattening period, feeds, quantities of daily rations.		
19	Study the drinking system.		
20	Metabolic disorders with nutritional background in the farm.		
21	Active participation in the farm's daily routine.		

…….

Supervisor's Signature

ANNEX II

SUMMER PRACTICE in ANIMAL NUTRITION

EXERCISE SHEET in a **SMALL RUMINANT** HERD

The undersigned, ……..... supervisors certify that …… student has done the exercise on this day.

	Exercise	**Date**	**Signature**
1	Get information about breeds, number of animals, feeding technology.		
2	Get information about previous yearly/monthly performance: number of lambs/kids born and weaned, discarded adult animals, causes of discard and mortality (growing and adult animals), lactating goats' milk production in average (kg, milk fat %).		
3	Know the harvested feeds in the farm.		
4	Know the feed preserving methods.		
5	Get information about the purchased feeds and feed supplements.		
6	Rang over the pasture and study its botanical composition.		
7	Study the records of feed analyses.		
8	See the mixture house of the farm.		
9	Study the ration formulation.		
10	Know the feeding process.		
11	Body condition scoring		
12	Ewe's/female goat's yearly cycle: month/season of mating and parturition, length of lactation, month/season of re-mating.		
13	Study the nutrition and feeding of lambs/kids from day 0 (birth) to weaning/sale, including age and body weight (BW) at weaning/selling.		
14	Study the nutrition and feeding of ewe lambs.		
15	Compare the feeding in spring/summer and late fall/winter.		
16	Check the rams'/bucks' nutrition and feeding.		
17	Lamb fattening: BW at birth and slaughter, length of fattening period, feeds, quantities of daily rations.		
18	Flushing in farm condition.		
19	Study the drinking system.		
20	Metabolic disorders with nutritional background in the farm.		
21	Active participation in the farm's daily routine.		

…….

Supervisor's Signature

ANNEX II

SUMMER PRACTICE in ANIMAL NUTRITION

EXERCISE SHEET in a **SWINE** HERD

The undersigned, ……..... supervisors certify that …… student has done the exercise on this day.

	Exercise	**Date**	**Signature**
1	Get information about breeds/hybrids, number of animals, feeding technology.		
2	Get information about previous yearly/monthly performance: number of piglets born and weaned, discarded gilts, sows, boars, causes of discard and mortality (growing and adult animals).		
3	Know the harvested feeds in the farm.		
4	Know the feed preserving methods.		
5	Get information about the purchased feeds/diets and feed supplements.		
6	Study the records of feed analyses.		
7	Seeing the mixture house of the farm.		
8	Body Condition Scoring.		
9	Measurement of back fat thickness.		
10	Sows' reproduction cycle: age, body weight (BW) and back fat thickness at the time of first artificial insemination (AI), length of pregnancy and lactation, sow's BW and back fat thickness at weaning, time of re-AI.		
11	Study life of piglets from birth to weaning (BW at birth and weaning, heat control, Fe-supplementation).		
12	Know the feeding process.		
13	Study the nutrition and feeding of piglets during the post-weaning period (age, BW).		
14	Study the nutrition and feeding of breeding gilts.		
15	Sow's nutrition and feeding in the different life stages.		
16	Compare the different diets fed in the different life stages (chemical composition, daily amounts, feeding regime).		
17	Pig fattening: age and BW at the beginning and end of fattening periods, diets (chemical composition, daily amounts), feed efficiency.		
18	Study the breeding boars' nutrition and feeding.		
19	Checking the drinking system.		
20	Metabolic disorders with nutritional background in the farm.		
21	Active participation in the farm's daily routine.		

…….

Supervisor's Signature

ANNEX II

SUMMER PRACTICE in ANIMAL NUTRITION

EXERCISE SHEET in **POULTRY** HERDS

The undersigned, ……..... supervisors certify that …… student has done the exercise on this day.

	Exercise	**Date**	**Signature**
The visited poultry herd:			
1	Get information about breeds/hybrids, number of animals.		
2	Study the production (meat and egg) and technology (livestock density, temperature, humidity, lighting program, feed consumption).		
3	Get information about previous yearly/monthly performance (settling, mortality, egg production, feed efficiency).		
4	Know the harvested feeds in the farm.		
5	Get information about the purchased feeds/diets and feed supplements.		
6	Study the records of feed analyses.		
7	See the mixture house of the farm.		
8	Know the feeding process.		
9	Study the nutrition and feeding of poultry species kept in the farm.		
10	Compare the different diets (physical form, contents of energy, protein, fat, Ca and P).		
11	Check the drinking system.		
12	Go-over the hatchery.		
13	Metabolic disorders with nutritional background in the farm.		
14	Active participation in the farm's daily routine.		

…….

Supervisor's Signature

ANNEX II

SUMMER PRACTICE in ANIMAL NUTRITION

EXERCISE SHEET in **FISHERY**

The undersigned, ……..... supervisors certify that …… student has done the exercise on this day.

	Exercise	**Date**	**Signature**
1	Get information about the farm and fish species.		
2	Study the breeding technology.		
3	Get information about previous yearly production.		
4	Get information about the purchased feeds/diets and feed supplements.		
5	Study the records of feed analyses.		
6	Study the feeding technology.		
7	Compare the different diets (physical form, contents of energy, protein, fat).		
8	Disorders caused by not proper feeding.		
9	Active participation in the farm's daily routine.		

…….

Supervisor's Signature

ANNEX II

SUMMER PRACTICE in ANIMAL NUTRITION

EXERCISE SHEET in a **HORSE** HERD

The undersigned, ……..... supervisors certify that …… student has done the exercise on this day.

	Exercise	**Date**	**Signature**
1	Get information about breeds, number of animals.		
2	Study the keeping and breeding technology: breeding age, mating season, length of pregnancy and lactation.		
4	Study the horses' work quality and intensity.		
5	Body condition scoring, weight of body weight (BW).		
6	Rang over the pasture and study its botanical composition.		
7	Know the harvested feeds in the farm.		
8	Know the feed preserving methods.		
9	Get information about the purchased feeds/diets and feed supplements.		
10	Study the records of feed analyses.		
11	Study the daily feeding regime.		
12	Study the horse feeding in the different life stages (idle, early pregnant, late pregnant, lactating), feeds/diets, composition of the different rations daily amounts.		
13	Study the horse feeding according to work intensity (pre-exercise, during the exercise, post-exercise), feeds/diets, composition of the different rations, daily amounts.		
14	Compare the different daily rations based on the life stages and work intensity.		
15	Study the rearing of foals (BW at birth, start of creep feeding, feeds/diets, weaning age, post-weaning feeding).		
16	Study the drinking system.		
17	Metabolic disorders with nutritional background in the farm.		
18	Active participation in the farm's daily routine.		

…….

Supervisor's Signature