UCLouvain

# lbrai2107

*2020*

# Animal Production 2

Due to the COVID-19 crisis, the information below is subject to change, in particular that concerning the teaching mode (presential, distance or in a comodal or hybrid format).

| 4 credits | 30.0 h + 12.5 h | Q2 |
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| Teacher(s) | Abdel Massih Marleen ;Dehoux Jean-Paul ;Donnay Isabelle ;Froidmont Eric ;Larondelle Yvan (coordinator) ; |
| Language : | French |
| Place of the course | Louvain-la-Neuve |
| Main themes | - Main bovine diseases (etiology, epidemiology, symptoms, diagnosis, prognostic, prevention, treatment, vaccines')<br>- Basic theoretical and practical notions of ruminant nutrition ' Analysis and formulation of rations based on specific cases.<br>- Reproductive management and assisted reproduction in the bovine. |
| Aims | a. Contribution of the activity to the LO (LO from the program)<br>M1.1 ; M1.2 ; M2.1 ; M2.4 ; M4.2<br>b. LO from the program specific to this activity<br>At the end of this activity, the student has acquired basic knowledge on:<br>- the main bovine diseases occurring in our region<br>- the main techniques for the management of reproduction and for assisted reproduction used in cattle farming<br>1 At the end of this activity, the student is able to :<br>- predict the zootechnical performances (dairy production, growth rate, ') of dairy cattle, suckler cow, growing bulls on the basis of the composition of the food ration.<br>- analyse with a software for ration formulation a specific ration given to cattle by a farmer; calculate the dietary balance, correct it and propose a more efficient and affordable one by taking into account the factors specific to a given farm.<br>- understand the reproductive management and strategies applied in the farm and evaluate its performance in general.<br>- - - -<br>*The contribution of this Teaching Unit to the development and command of the skills and learning outcomes of the programme(s) can be accessed at the end of this sheet, in the section entitled "Programmes/courses offering this Teaching Unit".* |
| Evaluation methods | **Due to the COVID-19 crisis, the information in this section is particularly likely to change.**<br>Written exam on the theoretical concepts (with a potential shift to an oral exam)<br>Evaluation of the individual work performed in the framework of the practical part of the course on the basis of 1) the elaboration of a PowerPoint, 2) the oral presentation of that PowerPoint, 3) the answers given to the questions of the professors during an oral defence. |
| Teaching methods | **Due to the COVID-19 crisis, the information in this section is particularly likely to change.**<br>The four parts of volume 1 are oral presentations given by the different teachers.<br>Volume 2 takes the form of an individual project aiming at proposing the concrete optimization of a given animal production in a perspective of responsible innovation. This project requires an analysis of the literature and contacts with actors in the field. The teacher in charge of this part monitors each project through individual and group meetings. He facilitates the contacts with the field and makes recommendations as to the structure of the work to be presented. |
| Content | After completion of the course, the students will master the basic concepts corresponding to the four main thematic areas addressed in the course, namely:<br>- Notions of sanitary and medical prophylaxis<br>- Reproductive management in cattle<br>- Management of meadows and valorisation of grass by cattle<br>- Meat production and processing<br>For the first theme, the first part deals with the definition of the dangers and risks involved in the transmission of diseases by direct or indirect contagion, the modes of transmission of diseases, the definition of a whole series of concepts related to epizootiology, different sources of contamination in relation to transmission. The second part defines the tools available to fight against the diseases in an offensive or defensive context. Sanitary measures and |

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| | medical measures are studied starting with the hygienic aspects to end up with immunological reminders preceding the elements related to active (vaccines) and passive (maternal protection) immunization.<br>The second theme focuses first on the reproductive cycle of the dairy cow (puberty, oestrous cycle, gestation, postpartum anoestrus, lactation and dry period) and on the factors that influence it. Secondly, the indicators used for monitoring reproduction in cattle, induction and synchronization of oestrus, pregnancy diagnosis, artificial insemination (including collection, processing and freezing of semen), multiple ovulation and embryo transfer are detailed.<br>The third part addresses issues relating to the quality of grass and pasture products, grazing techniques and monitoring tools. The supplementation of grazing animals, the use of a milking robot in the pasture, the quality of the meat from animals fed with grass are also part of this section. Finally, the example of Ireland, the land of grazing, is used to illustrate the value of grass production.<br>The fourth part deals with meat production, from breeding to finished products: breeding, slaughter, factors influencing meat quality, technology of meat products.<br>The practical part (Volume 2, 12.5 hrs) is dedicated to an individual project, aiming at exploring a topical issue related to animal production. |
| Inline resources | Powerpoint presentations available on Moodle |
| Bibliography | le(s) support(s) de cours obligatoires : Fichiers du cours disponibles sur Moodle |
| Other infos | This course may be taught in English.<br>The section on grass and pasture (Part 3) combined with the individual project corresponding to the practical exercice can be taken as a separate part of the course consisting of 7.5hrs of Volume 1 and 12.5hrs of Volume 2. |
| Faculty or entity in charge | AGRO |

## Programmes containing this learning unit (UE)

| Program title | Acronym | Credits | Prerequisite | Aims |
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| Master [120] in Agricultural Bioengineering | BIRA2M | 4 | | |
| Master [120] in Forests and Natural Areas Engineering | BIRF2M | 4 | | |