

price	€ 1695,-
max. participants	35
number of days	2.5
register before	2 April 2012

Information

- The course will be held in **Hotel and Conference Centre Hof van Wageningen, Wageningen, The Netherlands.**
- The course fee of **€ 1695,-** covers full board and lodging, tuition, course materials, coffee/tea, lunches and dinners on 13 and 14 May. No financial assistance is available.
- Registration closes at **2 April 2012**. Shortly after this date, you will receive additional information about the course.
- A maximum of **35 participants** can take part in this course.
- Registration can only be cancelled by letter. Cancellation between 4 and 2 weeks before start of the course, will result in an € 50,- invoice for administrative costs. Cancellation within 2 weeks before the start of the course will result in a full course fee invoice.

Registration

- By telephone, via WBS secretary: +31 317-484093 or +31 317-481504
- Online via the registration form at www.wbs.wur.nl/UK
- Via email: info.wbs@wur.nl

Terms and conditions

The General Terms and Conditions of Wageningen UR (University & Research centre) apply to all activities of Wageningen Business School. In addition, Wageningen Business School applies additional terms and conditions. These can be read at www.wbs.wur.nl.

Wageningen Business School will not accept any legal liability for loss of life or property or illness during the course. Participants must arrange adequate insurance.

More information: Wageningen Business School	Sanne van Deursen	PO Box 226 6700 AE Wageningen	T +31 317-481504	E info.wbs@wur.nl I www.wbs.wur.nl/uk
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COURSE

Related courses

- Controle van vrijwillige voeropname bij productiedieren (in Dutch)
- Vruchtbaarheid en voortplanting van het varken (in Dutch)
- Varkensvoeding in de praktijk (in Dutch)
- Rundveevoeding (in Dutch)



Incubation Biology and Management

Prospects for improved performance

Prof. E. Decuypere (KU Leuven)



Introduction

New questions, doubts and facts are questioning common practice

The incubation conditions resulting in the highest hatching percentage of fertile eggs were largely determined and studied on an empirical basis more than half a century ago; these conditions have remained unchanged and unchallenged with few exceptions until now. But recently new questions, doubts and facts are questioning the common practice of incubation.

- The increase in size of incubators has increased the variability of conditions within them, so the tolerance zone within which variables may fluctuate during development without harmful effects on hatchability has become more important.
- Physical conditions during incubation were, and are still set in order to obtain maximal hatchability; however, it may be questioned if this is always the best indicator for all other parameters, including chick quality, post hatching viability, growth, feed conversion, carcass quality etc.
- More knowledge has been acquired about the biological processes during embryogenesis. Some biological parameters during development may be used more frequently as an input in order to adapt and refine the controlling physical conditions, instead of using a purely empirical or unilateral approach based only on hatching percentage. In view of the rapid development of sensors

- of all kinds and other technical fine-control adjustments, this possibility should be given more consideration than at present.
- Although holding and incubation conditions have hardly changed during the last half century, it does not mean that chickens have not changed. It may be asked if the tremendous progress in selection methods and the specialization in selection objectives have altered the optimal range of conditions of incubation.
 - Embryogenesis starts at the moment of fertilization which means that not all environmental conditions are under human control. Hence the embryo development may be influenced by oviductal transit time and by other factors such as the hen's age and body temperature, resulting in variable developmental stages at the moment of oviposition. Moreover, duration of holding eggs before incubation starts is another variable factor influencing subsequent embryo development. This often is not taken into account in establishing incubation conditions and management in the hatchery.

Spectacular and renewed interest

All these questions, facts, doubts and hypotheses have stimulated a spectacular and renewed interest in incubation research and in its practical implications.

Focus on opportunities for improving performance

Therefore it is more than appropriate to focus on all mentioned aspects in an international course on Incubation Biology and Management; prospects for improved performance and its mutual interaction.

Katholieke Universiteit Leuven

The Katholieke Universiteit Leuven transfers its knowledge through high-quality interdisciplinary teaching programmes. Its programmes integrate professional training into a broad ethical, cultural, and social context of education. Rather than passing on mere factual knowledge, it promotes the skills of identifying, formulating, and solving problems. It creates the necessary conditions for a stimulating educational experience.



Programme

DAY 1 13 MAY 2012

- 18.00 Registration of participants
- 18.30 Welcome dinner
- 21.00 Closing registration

DAY 2 14 MAY 2012

The biological aspects

Overall introduction
Prof. E. Decuyper

The early biology of the developing embryo
Dr M.L. Boerjan

Introduction of new technologies under practical incubation conditions with emphasis on IN OVO vaccination
Drs. J.C. van den Wijngaard

Physiological control mechanisms during late embryogenesis and during pipping and hatching
Prof. E. Decuyper

Chick quality as a result of the incubation process and interfering variables
Dr N. Everaert

Water and heat balance during incubation
Dr S. Tullett

DAY 3 15 MAY 2012

Technological and management aspects

Pre-incubation and storage factors for incubation eggs
Dr H. van den Brand

Effect of breeders (feeding) on the quality of incubating eggs and subsequent chick performance
Dr H. Enting

In ovo feeding
Dr J. de Oliveira

The breeding and hatchery; an integrated operation
Prof. H.M. Hafez

Conclusions
Prof. E. Decuyper

Closing session: evaluation and certificates

Drinks/snack

Target audience

Hatchery managers, poultry biologists, incubator manufacturers, engineers, poultry breeding companies, technical managers of poultry integration companies, veterinarians, researchers and teachers in poultry science are invited to this course.

Course leader

Prof. E. Decuyper, Katholieke Universiteit Leuven, Faculty of Bioscience Engineering, Department of Biosystems, Heverlee, Belgium

Lecturers

Dr M.L. Boerjan, Pas Reform B.V., R. & D., Zeddam, The Netherlands

Dr H. van den Brand, Adaptation Physiology Department, Wageningen University, Wageningen, The Netherlands

Prof. E. Decuyper, Faculty of Bioscience Engineering, Department of Biosystems, Heverlee, Katholieke Universiteit Leuven, Belgium

Dr H. Enting, Nutreco BV, Boxmeer, The Netherlands

Dr N. Everaert, Faculty of Bioscience Engineering, Department of Biosystems, Heverlee, Katholieke Universiteit Leuven, Belgium

Prof. H.M. Hafez, Free University Berlin, Institute for Poultry Diseases, Berlin, Germany

Dr J. de Oliveira, Cargill R&D Centre Europe, Vilvoorde, Belgium

Dr S. Tullett, Cornerways Poultry Consultants Ltd., Wellingborough, Northants, United Kingdom

Drs. J.C. van de Wijngaard, Wijngaard Poultry Health, Gemonde, The Netherlands