

European Master in Animal Breeding and Genetics (EM-ABG): international training to face future challenges

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Animal production: challenges

- Increase in human population
- Demand in developing countries for animal foods projected to double in coming 20 years.
- The resources available for animal production decrease

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Some recent headlines

The Impact Of Obesity On Rising Medical Spending

European survey revealed consumers are willing to pay more for higher welfare

07/08/2008 08:00:00
Website EAS

Food prices on the rise

Percent change in prices for some common food items, June 2006 to June 2007:

Oranges	19.8%
Eggs	19.3%
Frozen whole milk	13.3%
Apples	11.7%
Dried beans, peas, lentils	11.5%
Fresh, whole chicken	10.0%
Uncooked beef roast	9.8%
Fresh fish, seafood	7.4%
Rice, pasta, cornmeal	7.0%
Coffee	6.6%
Potatoes	5.6%

Source: U.S. Commerce Department
Graphic: Angela Smith, Judy Treibler
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Fascinating new opportunities

Figure 1: Optimal breeding values of animals optimally combine phenotypic and molecular data

Genetic model:

$$P_i = A_{D,i} + E_{D,i} + \sum_{j \neq i} A_{S,j} + \sum_{j \neq i} E_{S,j}$$

Classical Value (A_{D,i}) | Social Breeding Value (A_{S,j})

Classical | "New"

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Animal breeding can help to meet challenges but ...

- ❑ Animal Breeding: a knowledge intensive sector
- ❑ Need for tailor-made solution
- ❑ Research & Implementation: qualified people needed
- ❑ **Number of universities with viable MSc training in this field is decreasing**





Six universities jointly forces → EMABG



- Wageningen University (WU, Netherlands)
- University of Natural Resources and Applied Life Sciences (Vienna, Austria)
- Christian-Albrechts-Universität (Kiel, Germany)
- AgroParisTech (Paris, France)
- Swedish University of Agricultural Sciences (Uppsala, Sweden)
- Norwegian University of Life Sciences (Ås, Norway)

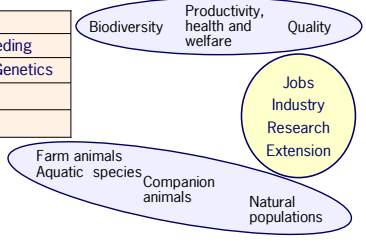
European Master in Animal Breeding and Genetics



- EMABG recognized as Erasmus Mundus course for period of 5 years (2007-2011)
- Builds on existing MSc programs
- Funding of 20-25 scholarships for non-EU students
- EMABG started in August 2007:
 - 24 students received scholarship (>200 applicants)
 - Second group of 21 students started beginning of this month (>200 applicants)



Scope EM-ABG Course


Expertise	
A Animal Breeding	
B Statistical Genetics	
G Genomics	
Other	

General set-up of study program (120 ects)				
What	Aim	Year (%)		ECTS
		1	2	
Orientation period	Introduction + academic skills	100		6
Disciplinary subjects	Increasing understanding of Animal Breeding and Genetics	60	40	30
Complementary subjects	Gaining flanking knowledge (including multidisciplinary subjects)	70	30	24
Joint summer activity	Exchange of experience	100		2
Applied period	Getting to know the industry	50	50	0-24
Free choice	Option to specialise or to broaden skills/expertise	50	50	0-36
Thesis research	Conducting research related to Animal Breeding and Genetics	30	70	30-60
Degree at two universities		50%	50%	120

EMABG: a double degree programme

- Students study at two out of the six universities: receive a degree from these two universities (double degree)
- Creating EMABG community:
 - Welcome to EMABG: 3 week course at the start of the program for all students
 - Summer event (1 week)
 - Activities for finding jobs

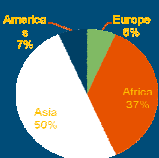


Fees and funding

- Registration fee:**
 - 8000 Euro/year for non-EU students
 - 2000 Euro/year for EU students
- Scholarships**
 - For non-EU students: covering fees + living expenses
 - EU-students: covering fees
- Deadlines for application:**
 - Scholarships: January 15th
 - Other applications: May 1st


Information on EMABG students


- In total 46 students
 - (22 year 1, 24 year 2)
- From 23 different countries
- 33% females



Evaluation of program (after 1 year)

- Very active and motivated group of students
- Collaboration between universities: positive impact on quality of MSc programs
- Visa requirements for non-EU students
- Overall: very rewarding experience

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Plans for coming years

- Increasing participation of European students
 - Increasing awareness
 - Creating scholarship fund
- Involving potential employers
 - Creating awareness
 - Students are interested in job opportunities
- Strengthening collaboration between EMABG partners
 - Use of distant learning and video conferencing

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Thank you

One top MSc course; six countries
European Master in Animal Breeding and Genetics
Erasmus Mundus MSc programme

For more information:
www.emabg.eu
or
emabg@wur.nl (secretariat)

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