Summaries of the posters

Posters session 1 : New technologies in performance recording : imaging, automation, PDA, RFID

	Thierry Hetreau Fr	O.Giroud C.Ponsart J.Gatien P.Paccard F.Badinand P.Bruyère	Management of heat detection using video monitoring: a study in the Montbéliarde and Abondance breeds	During 3 consecutive winters (2007 to 2009), an experiment was conducted in a 80 cows dairy herd (mainly Montbéliarde and Abondance breeds, Centre d'Elevage Lucien Biset, Poisy, France), in order to evaluate a video-watching system for oestrus detection. The detection was based on the observation of standing to be mounted. About 30 dairy cows, housed in two straw litter free stalls, were included in the study each year. The four fixed cameras were connected to a computer equipped with specific software allowing movement detection. This system allowed the continuous observation of cows, as well of the storage of video motions. Dosages of milk progesterone were performed twice a week. The progesterone profiles made it possible to detect ovulatory periods (OP). Data obtained by visual oestrus observation were also used. Our video system allowed the detection of 82% of the ovulatory periods, associated with standing to be mounted behavior (n=168). Only 6 to 12% of the OP were not accompanied by detected specific behaviour. With the visual method, detection rate was the same, although different cows were detected. 4 to 16 minutes (mean 10mn) were necessary to daily to analyse stored pictures.When compared to the four periods of 10mn for visual detection, we conclude that the video-survey provides a significant gain of time. We can even spend less time: when setting the detection rate on 70% in 2009, we spent 3 mn less for the same result, and when watching only 1 camera instead of 2, we still detect 69% of the oestrus cows.

Posters session 2 : Phenotyping of complex traits : quality of products, health, welfare, reproduction, environmental footsprint

	Claire Ponsart Fr	D. Ledoux, J.Gatien, B. Grimard, MC Deloche, S. Fritz, R.Lefebvre, P.Humblot	Phenotyping pregnancy failure occurring within 90 days following first postpartum insemination in Holstein cattle and relationship with fertility breeding value of bull fathers	This epidemiological study aimed to investigate pregnancy failures occurring within 90 days following first postpartum insemination (AI) in Holstein cows according to cow fertility breeding value (FERbv) of 12 bull fathers, which were selected according to their fertility QTL status on chromosom 3. A total of 4239 Holstein daughters were inseminated and submitted to the following phenotyping protocol: progesterone (P4) concentration was determined on the day of AI (D0) and 18 to 25 days later; then two pregnancy checks were performed using ultrasonography 45 and 90 days following AI. Combining these observations, 4 different chronologies of pregnancy failure were described and subsequent failure incidences were estimated from 3508 cows: cows inseminated during the luteal phase (AI-LP, high P4 level on D0, 5.0%), no fertilization or early embryonic death (NF-EED, low P4 on D0 and D18-25, 35.1%), late embryonic death (LED, low P4 on D0, high P4 on D18-25 with a negative pregnancy check on D45, 19.0%), and fetal death (FD, positive pregnancy check on D45 then negative on D90, 2.7%). Bull fathers FERbv (CD>0.95) were classified into 3 groups (low: between -0.7 and -0.5;medium: between -0.1 and +0.3; high: between +0.5 and +1.0). Effects of bull fathers FERbv on pregnancy failure incidences were estimated using mixed models of logistic regression. Cows issued from bulls presenting low FERbv presented significantly higher NF-EED and LED rates than cows issued from bulls with medium FERbv (OR=1.3, p=0.03 and OR=1.4,p=0.007 respectively) or high FERbv (OR=1.3,p=0.02 and OR=1.7,p<0.001 respectively). No effect of FERbv was observed on FD and AI-LP rates. This study confirmed the major impact of early embryonic death. The precise follow-up within 90 days following AI allowed to describe different fertility phenotypes and to quantify effects from bull father FERbv together with environmental sources of variation, management factors and individual characteristics. Further steps consist in interpreting genotype results from phenotyped cows, which should lead to identify new fertility QTLs.

Poster session 3 : New genomic tools for selection and management

	J.Pribyl RTch	L.Vostry J.Boleckova J.Haman T.Kott J.Pribylova M.Simeckova L.Zavadilova V.Cermak Z.Ruzicka J.Splichal M.Verner J.Motycka L.Vondrasek	Single-step Genomic Breeding Value for milk of Holstein in the Czech Republic	Milk production of 849693 primiparous cows with complete lactation (including pedigree 1 643 663 animals) from the period 1995-2010 was evaluated by traditional Animal Model (Breeding Value) and by Single-Step Approach of Genomic Evaluation (Genomic Breeding Value) procedures. In a Single-Step approach the pedigree-based relationship matrix was augmented by the genomic relationship matrix, constructed from SNP genotypes of R50K chip for 838 sires. Pedigree-based relationship matrix was compared with the genomic relationship matrix. Only lactation model and the first lactation were used for simplicity. Evaluation was calculated for whole data set and for subset of cows calved until year 2005. Within groups of animals (cows/heifers/proven bulls/young bulls/genotyped/ungenotyped) were calculated in dependency on the data sets differences and correlations between different procedures of predictions of breeding value. Between genotyped young bulls and their result in progeny test are propitious relations. By genotyping is partly corrected random Mendelian sampling in relationship matrix and it influence also the estimated differences of ungenotyped animals. For test of procedures were used families of programmes of BLUPF90 and DMU. Supported by the Ministry of Agriculture of the Czech Republic.(project N° QI111A167)

Poster session 4 : Milk analysis : new technologies, developments, interest of criteria for man, breeding and management

Poster session 5: New approaches in management of recording activities : how to demonstrate benefits of herd recording ? How to make our business attractive ?

		Jere High USA	DNA mastitis testing as a management tool	This presentation will show how the veterinarians and dairy producers work together using the DNA Mastitis tool PathoProof from Thermo Fisher Scientific. Explain the techniques used by the veterinarian using SOP's for the dairy producers with certain types of mastitis. Show how using the DHIA Milk Laboratory SCC report improves the chance to treat the infected cow more accurately. Show the types of educational papers used to train the dairy producer and also the DHIA Field technician. Show how this has helped between and changed how the dairy producer looks at mastitis management.

	Berenice Huquet F	H.Leclerc C.Lecomte V.Ducrocq	Monthly milk records: the basis of a new valued extension services for an efficient management	Dairy herd extension services supplied by the French milk recording organizations are based on raw data collected monthly (milk, fat and protein percentage, somatic cell count). Until now, the monitoring software do not quantify the impact of factors explaining the observed performance such as age, month of calving, length of dry period, gestation, genetic level and measure of the production environment effect: the Herd Test-Day (HTD).All these factors are the main levers to adjust herd management. Now, their estimates from test-day model evaluations can be used in a new generation of extension services software. Four main applications are planned: to forecast animal (or herd) production, to compare predicted HTD with real ones, to simulate the impact of management changes (e.g. Calving period, age of first calving, length of dry period…), to highlight the herd management strengths and weaknesses through its HTD pattern, comparing it to those obtained in a reference group. HTD pattern analysis, i.e how HTD effect fluctuate over time, is related to short-term environmental effect. It can be used as an indicator of the herd management efficiency. HTD patterns clustering was established on 3 480 455 test-dates (since 2000) from 36154 farms. Ten clusters of HTD pattern (R2 = 66%) were identified and interpreted in terms of management from data of representative 934 farms.