IDENTIFYING AND INCORPORATING GENETIC MARKERS AND MAJOR GENES IN ANIMAL BREEDING PROGRAMS

course notes

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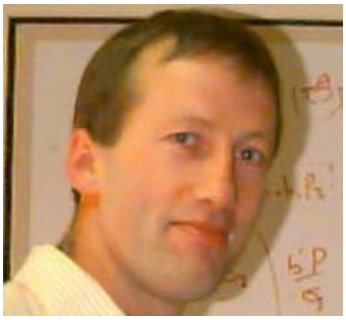

Belo Horizonte (Brazil)

31 May – 5 June 2000

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Chapter 12 based on slides from Jack Dekkers

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Time Table

Lecture	*Day*	**Part I: Introduction and building blocks**	
1	1-am	Overview Animal Breeding and the role of QTL	JW
2		Building Blocks of Quantitative Genetics	BK
P		Practical	JW
3	1-pm	Calculation of genotype probabilities from phenotypic data or DNA tests	BK
P		Practical	BK
4		Introduction to some aspects of Molecular Genetics	JW
		Part II Linkage analysis and gene mapping	
5	2-am	Basics of Linkage and mapping	JW
P		Practical	JW
		Part III Detection and mapping of QTL	
6	2-pm	Principles of estimating QTL effects (single markers)	BK
7		Use of multiple markers: interval mapping	JW
P		Practical	JW
8		QTL detection in designed experiments and in outbred populations	BK
9	3-am	Methods for QTL analysis	JW
10		Genetic models for detecting multiple QTL	BK
P		Practical	JW
11	3-pm	Multiple trait models for QTL analysis	JW
12		Experimental strategies for QTL detection	BK
13		Fine mapping and IBD mapping	JW
14		Positional cloning, candidate genes, and comparative mapping	BK
P		Practical/Discussion	
		Part IV Marker Assisted Selection	
15	4-am	Basics of Marker Assisted Selection	JW
16		Consequences and applications with direct and indirect markers	BK
P		Practical	
17	5-am	Genetic evaluation for marker assisted selection: QTL-BLUP	JW
17		Genetic Evaluation for MAS: Fixed effects approach	BK
18		Examples of marker assisted selection	JW
19		Targeting QTL using mate selection	BK

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