

**Memem Surahman**

**DETAILED GENETIC ANALYSIS OF A WIDE FABA BEAN  
(*Vicia faba* L.) CROSS "GERMAN X MOROCCAN"**



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# **DETAILED GENETIC ANALYSIS OF A WIDE FABA BEAN (*Vicia faba* L.) CROSS "GERMAN X MOROCCAN"**

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submitted for the degree of Doctor of Agricultural Sciences  
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by

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## **DEDICATION**

To my mother, to my wife and children



## TABLE OF CONTENTS

	Page
LIST OF ABBREVIATIONS	iii
LIST OF TABLES	v
LIST OF FIGURES	vii
<b>1. INTRODUCTION</b>	<b>1</b>
1.1. Production and area of faba bean	1
1.2. Faba bean origin, reproductive mode and breeding	3
1.3. Molecular markers	4
1.4. Genetic map in faba bean	5
1.5. Objective	11
<b>2. MATERIALS AND METHODS</b>	<b>12</b>
2.1. Plant material	12
2.2. Phenotypic and genotypic differences between 34Morocco and Kristall25	13
2.3. Field experiment	15
2.4. DNA analysis	17
2.5. Random Amplified Polymorphic DNA (RAPD)-analysis	18
2.6. Primer screening and naming	20
2.7. RAPD band scoring	20
2.8. Construction of the genetic map	21
2.9. Analysis of the field data	23
2.10. Quantitative Trait Loci (QTL) analysis	24
<b>3. RESULTS</b>	<b>26</b>
3.1. Field experiments	26
3.2. Use of RAPD markers	33

	Page
3.3. Construction and characteristics of the linkage map	39
3.4. Relationship between markers and agronomic traits	42
3.5. Identification of QTL using PLABQTL	44
<b>4. DISCUSSION</b>	<b>48</b>
4.1. Analysis of agronomic traits	48
4.2. The suitability of RAPD for the construction of genetic maps	49
4.3. The use of reference maps and characteristics of the linkage map	50
4.4. Relationship between marker and agronomic traits	54
4.5. Identified QTL and factors affecting its position	54
<b>5. SUMMARY</b>	<b>58</b>
<b>6. ZUSAMMENFASSUNG</b>	<b>60</b>
<b>7. RINGKASAN</b>	<b>62</b>
<b>8. REFERENCES</b>	<b>64</b>
<b>9. APPENDIX</b>	<b>77</b>
<b>10. ACKNOWLEDGEMENTS</b>	<b>81</b>
<b>11. CURRICULUM VITAE</b>	<b>83</b>

## LIST OF ABBREVIATIONS

%	: percent
µl	: microliter
34M	: 34Morocco, P1, Mediterranean faba bean inbred line
ANOVA	: analysis of variance
bp	: base pair
CIM	: composite interval mapping
cm	: centimeter
cM	: centiMorgan
CTAB	: cetyltrimethylammonium bromide
DNA	: deoxyribonucleic acid
dNTP	: desoxynucleotide triphosphate
E	: environment
EDTA	: ethylenediaminetetraacetic acid
EU	: European Union
G x E	: genotypes x environments
G	: genotypes
g	: gram
h <sup>2</sup>	: heritability
K25	: Kristall25, P2, German faba bean inbred line
Kb	: kilobase
Ldg	: lodging
LG	: linkage group
LSD	: least significant difference
m	: meter
M	: molar
min.	: minute
ml	: milliliter
mm	: millimeter
mM	: millimolar
MS	: mean square



°C	: degree Celcius
P1	: Parent 1
P2	: Parent 2
PCR	: polymerase chain recation
Pht	: plant height
QTL	: quantitative trait loci
RAPD	: random amplified polymorphic DNA
RFLP	: restriction fragment length polymorphism
RI	: recombinant inbred line
rpm	: rotation per minute
Sd	: standard deviation
SIM	: simple interval mapping
t	: ton
TAE buffer	: TRIS acetate buffer
TE buffer	: TRIS EDTA buffer
Tfl	: time to flowering
TRIS	: TRIS [hydroxylmethyl] aminoethan
Tsw	: thousand seed weight
Ttm	: time to maturity
U	: enzyme Unit
UV	: ultra violet
Var	: variance
X	: crossing with
Yld	: yield

## LIST OF TABLES

	Page
1: The development of faba bean production in European union (Pahl,1997; Pahl, 1998)	2
2: Phenotypic difference between 34Morocco and Kristall25	13
3: Climatic data of Göttingen and St. Johann (March – September 1999)(adopted from www.weather.com)	16
4: List of the traits observed in the field	16
5: Extraction buffer and TE buffer solution used under study	18
6: Agarose gel and PCR buffer used under study	19
7: Example of RAPD band scoring	21
8: The 57 RI lines used under study	22
9: The commands especially used here to work with PLABQTL	25
10: Variance components of genotypes, and their interactions with the two locations for the agronomic traits of 253 RI F7-lines and 57 RI F7-sample lines	26
11: Mean value and $LSD_{0.05}$ of agronomic traits for parent P1 (34M), parent P2 (K25), F1 (34M x K25), F1' (K25 x 34M), F2 (34M x K25), F2' (K25 x 34M), and check cultivar Scir. (Scirocco)	27
12: Mean value, estimate of genotypic standard deviation and heritability of agronomic traits in a RI (recombinant inbred line) population of 253 RI F7-lines and 57 RI F7-sample lines	28
13: Coefficient of correlation calculated between all traits of the 253 RI F7-lines across two locations and two replications	30
14: The decamer primers and their sequences used in this study	34