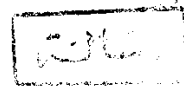


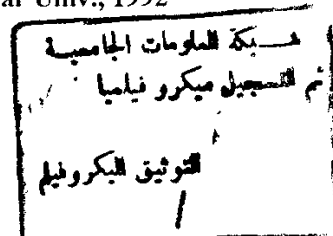
STUDIES ON IMPROVING YIELD QUALITY AND QUANTITY OF SNAP BEAN UNDER PROTECTED CULTIVATION

BY



MOHAMED MAHMOUD SALEH

B. Sc. Agric Sci. (Horticulture), Cairo Univ., 1975
M.Sc. Agric. Sci. (Veg. Crops), Al-Azhar Univ., 1992



Thesis submitted in partial fulfillment
of
the requirements for the degree of

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in
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Department of Horticulture
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Ain Shams University

1996



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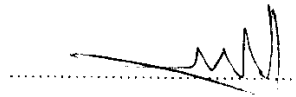
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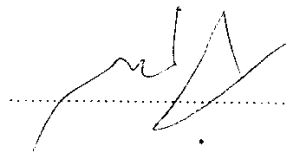
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ABSTRACT

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Three experiments were carried out at El-Bossaily protected cultivation site during winter seasons of 1993/1994 and 1994/1995. These experiments aimed to improve yield quality and quantity of snap bean and study the effect of heating, distance between plants and plant growth regulators (GA_3 , 4-CPA and N-meta tolyl phthalamic acid) on yield quality and quantity of green pods of common bean plants. Seeds of snap bean (*Phaseolus vulgaris*) cv. Serbo (a round type) and Helda (a flat type) were sown in the greenhouses on 15th of October in both seasons. The results showed that heating treatments increased pollen grain viability, total yield and exportable yield of green pods of Serbo and Helda cultivars significantly in both seasons and the best treatment was 18°C followed by 15°C as minimum temperature. All the concentrations of GA_3 decreased the total yield and exportable yield of green pods than the control. One row treatment increased the total yield and exportable yield of green pods than the control in both Serbo and Helda in both seasons, while four beds treatment decreased them than the control. The reduction in total exportable yield of green pod in four bed treatment due to the reduction of number of plants per square meter.

Key words: Snap bean, *Phaseolus vulgaris*, Heating, distance between plants and plant growth regulators (GA_3 , 4-CPA and N-meta tolyl phthalamic acid), Yield, Quantity, Quality.

CONTENTS

Page

1. INTRODUCTION	1
2. REVIEW OF LITERATURE	2
2.1. EFFECT OF HEATING ON YIELD QUALITY AND QUANTITY	2
2.1.1. <i>Pollen grain viability</i>	2
2.1.2. <i>Pod characters</i>	3
2.1.3. <i>Average weight of the pod</i>	4
2.1.4. <i>Total soluble solids</i>	5
2.1.5. <i>Pod dry matter percentage</i>	5
2.1.6. <i>Pod chlorophyll content</i>	5
2.1.7. <i>Total protein</i>	6
2.1.8. <i>Fibers</i>	6
2.1.9. <i>Total carbohydrate</i>	6
2.1.10. <i>Yield: Quality and quantity</i>	6
2.2. EFFECT OF PLANT GROWTH REGULATORS ON YIELD QUALITY AND QUANTITY	8
2.2.1. <i>Pod characters</i>	8
2.2.2. <i>Average pod weight</i>	9
2.2.3. <i>Total soluble solids (T.S.S.)</i>	10
2.2.4. <i>Pod dry matter percentage</i>	11
2.2.5. <i>Total protein</i>	11
2.2.6. <i>Fibers</i>	12
2.2.7. <i>Total carbohydrate</i>	12
2.2.8. <i>Yield</i>	13
2.3. EFFECT OF DISTANCE BETWEEN PLANTS ON YIELD QUALITY AND QUANTITY	15
2.3.1. <i>Pod characters</i>	15
2.3.2. <i>Average pod weight</i>	15
2.3.3. <i>Total soluble solids (T.S.S.)</i>	15
2.3.4. <i>Pod dry matter percentage</i>	16
2.3.5. <i>Pod chlorophyll content</i>	16
2.3.6. <i>Total protein</i>	17
2.3.7. <i>Total carbohydrate</i>	17
2.3.8. <i>Yield: Quality and quantity</i>	17
3. MATERIALS AND METHODS.....	20
3. 1. EFFECT OF HEATING ON YIELD QUALITY AND QUANTITY	20
3. 2. EFFECT OF PLANT GROWTH REGULATORS ON YIELD QUALITY AND QUANTITY	21
3. 3. EFFECT OF DISTANCE BETWEEN PLANTS ON YIELD QUALITY AND QUANTITY	22
4. RESULTS	27
4.1. EFFECT OF HEATING ON YIELD QUALITY AND QUANTITY	27
4.1.1. <i>Pollen grain viability</i>	27
4.1.2. <i>Pod length</i>	28
4.1.3. <i>Pod diameter</i>	28
4.1.4. <i>Average pod weight</i>	29

4.1.5. Pod total soluble solids.....	30
4.1.6. Dry weight of pods.....	31
4.1.7. Pod chlorophyll content.....	32
4.1.8. Pod protein percentage	33
4.1.9. Fiber content.....	34
4.1.10. Total carbohydrate.....	34
4.1.11. Total yield.....	35
4.1.12. Exportable yield.....	36
4.2. EFFECT OF PLANT GROWTH REGULATORS ON YIELD QUALITY AND QUANTITY	37
4.2.1. Pod length.....	37
4.2.2. Pod diameter.....	38
4.2.3. Average pod weight.....	39
4.2.4. Total soluble solids (T.S.S.)	40
4.2.5. Dry matter of green pods.....	41
4.2.6. Pod chlorophyll content.....	42
4.2.7. Total protein percentage	43
4.2.8. Fiber content.....	44
4.2.9. Total carbohydrate.....	45
4.2.10. Total yield.....	46
4.2.11. Exportable yield.....	47
4.3. EFFECT OF DISTANCE BETWEEN PLANTS ON YIELD QUALITY AND QUANTITY.....	48
4.3.1. Pod length.....	48
4.3.2. Pod diameter.....	49
4.3.3. Average pod weight.....	50
4.3.4. Total soluble solids (T.S.S.)	51
4.3.5. Pod dry matter.....	51
4.3.6. Pod chlorophyll content.....	52
4.3.7. Total protein.....	53
4.3.8. Fiber content.....	54
4.3.9. Total carbohydrate.....	54
4.3.10. Total yield.....	55
4.3.11. Exportable yield.....	56
DISCUSSION.....	58
SUMMARY.....	67
REFERENCES.....	73
ARABIC SUMMARY.....

LIST OF TABLES

Table	Page
1. Average light intensity (LUX) above the plants under different treatments of distance between plants in both seasons of 1993/1994 and 1994/1995	23
2. Total cost of heating treatment (L.E./greenhouse) or (L.E./m ²) in the first and second season.	25
3. Incremental benefit, incremental profit and benefit cost ratio (L.E./m ²) of snap bean under heating treatments in the first and second seasons.	26
4. Effect of heating treatments on pollen grain viability of the two varieties of common bean plants in both seasons of 1993/1994 and 1994/1995.	27
5. Effect of heating treatments on pod length (cm) of the two varieties of common bean plants in both seasons of 1993/1994 and 1994/1995.	28
6. Effect of heating treatments on pod diameter (cm) of the two varieties of common bean plants in both seasons of 1993/1994 and 1994/1995.	29
7. Effect of heating treatments on average pod weight (gm) of the two varieties of common bean plants in both seasons of 1993/1994 and 1994/1995.	30
8. Effect of heating treatments on total soluble solids (T.S.S.) of the two varieties of common bean plants in both seasons of 1993/1994 and 1994/1995.	31
9. Effect of heating treatments on pod dry matter percentage (gm/100 gm) of the two varieties of common bean plants in both seasons of 1993/1994 and 1994/1995.	31
10. Effect of heating treatments on pod chlorophyll content (mg/100 gm) of the two varieties of common bean plants in both seasons of 1993/1994 and 1994/1995.	32
11. Effect of heating treatments on protein percentage of the two varieties of common bean plants in both seasons of 1993/1994 and 1994/1995.	33
12. Effect of heating treatments on fiber content of the two varieties of common bean plants in both seasons of 1993/1994 and 1994/1995.	34
13. Effect of heating treatments on total carbohydrate (gm/100 gm) of the two varieties of common bean plants in both seasons of 1993/1994 and 1994/1995.	35
14. Effect of heating treatments on total yield (kg/m ²) of the two varieties of common bean plants in both seasons of 1993/1994 and 1994/1995.	36
15. Effect of heating treatments on exportable yield (kg/m ²) of the two varieties of common bean plants in both seasons of 1993/1994 and 1994/1995.	37
16. Effect of plant growth regulation on pod length (cm) of the two varieties of common bean plants in both seasons of 1993/1994 and 1994/1995.	38
17. Effect of plant growth regulation on pod diameter (cm) of the two varieties of common bean plants in both seasons of 1993/1994 and 1994/1995.	39
18. Effect of plant growth regulation on average pod weight (gm) of the two varieties of common bean plants in both seasons of 1993/1994 and 1994/1995.	40

197. Effect of plant growth regulation on total soluble solids (T.S.S.) of the two varieties of common bean plants in both seasons of 1993/1994 and 1994/1995.....	41
20. Effect of plant growth regulation on dry matter of green pods (gm/100 gm) of the two varieties of common bean plants in both seasons of 1993/1994 and 1994/1995.....	42
21. Effect of plant growth regulation on pod chlorophyll content (mg/100 gm) of the two varieties of common bean plants in both seasons of 1993/1994 and 1994/1995.....	43
22. Effect of plant growth regulation on total protein percentage of the two varieties of common bean plants in both seasons of 1993/1994 and 1994/1995.....	44
23. Effect of plant growth regulation on fiber content (gm/100 gm) of the two varieties of common bean plants in both seasons of 1993/1994 and 1994/1995.....	45
24. Effect of plant growth regulation on total carbohydrate (gm/100 gm) of the two varieties of common bean plants in both seasons of 1993/1994 and 1994/1995.....	46
25. Effect of plant growth regulation on total yield (kg/m ²) of the two varieties of common bean plants in both seasons of 1993/1994 and 1994/1995.....	47
26. Effect of plant growth regulation on exportable yield (kg/m ²) of the two varieties of common bean plants in both seasons of 1993/1994 and 1994/1995.....	48
27. Effect of distance between plants on pod length (cm) of the two varieties of common bean plants in both seasons of 1993/1994 and 1994/1995.....	49
28. Effect of distance between plants on pod diameter (cm) of the two varieties of common bean plants in both seasons of 1993/1994 and 1994/1995.....	50
29. Effect of distance between plants on average pod weight (gm) of the two varieties of common bean plants in both seasons of 1993/1994 and 1994/1995.....	50
30. Effect of distance between plants on total soluble solids (T.S.S.) of the two varieties of common bean plants in both seasons of 1993/1994 and 1994/1995.....	51
31. Effect of distance between plants on pod dry matter (gm/100 gm) of the two varieties of common bean plants in both seasons of 1993/1994 and 1994/1995.....	52
32. Effect of distance between plants on pod chlorophyll content (mg/100 gm) of the two varieties of common bean plants in both seasons of 1993/1994 and 1994/1995.....	53
33. Effect of distance between plants on protein content (gm/100 gm) of the two varieties of common bean plants in both seasons of 1993/1994 and 1994/1995.....	54