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**STUDIES ON THE IN VITRO CULTURE OF TISSUES FROM
DIFFERENT ORGANS OF STRAWBERRY PLANT
(*Fragaria X ananassa* Duch)**

By

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the 1990s, the number of people in the UK who are employed in the public sector has increased by 1.5 million, from 2.5 million in 1980 to 4 million in 1999. The public sector has become a major employer in the UK, and its growth has been a key factor in the overall growth of the economy.

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APPROVAL SHEET

STUDIES ON THE IN VITRO CULTURE OF TISSUES FROM DIFFERENT ORGANS OF STRAWBERRY PLANT

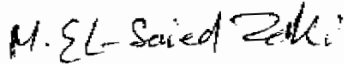
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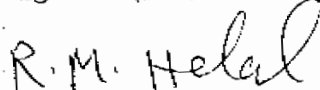
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The first part of the paper discusses the importance of understanding the underlying mechanisms of the observed phenomena. This is followed by a detailed analysis of the data, which reveals several key findings. The results indicate that the proposed model is highly effective in capturing the essential features of the system under study. Furthermore, the analysis shows that the system exhibits a high degree of robustness and stability, even in the presence of significant perturbations. These findings are supported by a series of experiments and simulations, which demonstrate the model's ability to accurately predict the system's behavior over a wide range of conditions. The paper concludes by highlighting the potential applications of the proposed model and suggesting directions for future research.

ABSTRACT

Awatif Fouad Mekail. Studies on the in vitro culture of tissues from different organs of strawberry plant (*Fragaria x ananassa* Duch). Unpublished Master of Science, University of Ain Shams, Faculty of Agriculture, Department of Horticulture, 1996.

This study was carried out during the period from 1992 to 1995 at the Strawberry and Non Traditional Crops Center, Faculty of Agriculture, Ain Shams University.

The object of this study was to evaluate the different in vitro propagation methods of strawberry plant, i.e. runner tip, immature fruit and leaf tissues in the subsequent micropropagation stages.

Results indicate that using runner tip of 1, 2 and 3 mm length gave 85, 90 and 100 in vitro survival percentage, respectively. Shoots produced from the smallest runner tip (1 mm) showed the lowest values of root length and number compared with the other two lengths. The best callus formation was attained when leaf, fruit and runner tip explants were cultured on MS-medium containing 0.2 mg/l BA+0.5 mg/l 2, 4-D followed by 0.2 mg/l BA+1 mg/l 2, 4-D and 0.5 mg/l BA+1.0 mg/l 2, 4-D.

The growth dynamics of calli derived from the three types of explants, cultured individually on the three chosen culture media mentioned above were determined. Among the three culture media, it was observed that supplementation of MS-medium by 0.2 mg/l BA + 0.5 mg/l 2, 4-D gave the best growth of leaf derived callus. The increment rate in both fresh and dry weight as well as the growth rate of fruit callus were increased by increasing the time of culture on the three tested media. However, the highest values of growth parameters was obtained using medium contained 0.5 mg/l BA + 1.0 mg/l 2, 4-D.

The study concluded that sixty four clones were obtained from

immature fruit callus while seventeen clones were obtained from runner tip callus. On the other hand, leaf callus failed to produce any shoots on the different differentiation media.

Key words: Strawberry, Tissue culture, Callus induction, Clone.

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CONTENTS

	Page
1. INTRODUCTION	1
2. REVIEW OF LITERATURE	2
3. MATERIALS AND METHODS	28
4. RESULTS AND DISCUSSION	36
4.1. Sterilization of fruit and leaf explant	36
4.2. In vitro experiments on shoot tip length.....	38
4.3. Callus production in tissue culture.....	46
4.4. Shoot production in tissue culture	63
4.5. Shoot multiplication	73
4.6. Root regeneration	73
4.7. Transplanting	75
5. SUMMARY AND CONCLUSION	89
6. REFERENCES	94
7. ARABIC SUMMARY	110

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LIST OF TABLES

Table	Page
A	Composition of meristem culture media (Damiano, 1980).....
B	Composition of basal medium of Murashige and Skoog (1962) and some other components
1	Effect of different sterilization treatments on contamination % and survival % of fruit and leaf explant of Strawberry..... 37
2	Effect of shoot tip length on the survival (%) and shoot induction (%) of strawberry..... 39
3	Effect of shoot tip length on the shoots number and shoot length of strawberry..... 42
4	Effect of shoot tip length on the root length and roots number of strawberry..... 45
5	Cullus induction (%) from Strawberry leaf explant, cultured 6 weeks on MS-medium supplemented with different combinations of BA and 2, 4-D 48
6	Cullus induction (%) from Strawberry shoot tip explant, cultured 6 weeks on MS-medium supplemented with different combinations of BA and 2, 4-D..... 49
7	Cullus induction (%) from Strawberry fruit explant, cultured 6 weeks on MS-medium supplemented with different combinations of BA and 2, 4-D 51
8	Fresh and dry weight of leaf derived callus, cultured five weeks on MS-medium supplemented with three combinations of BA and 2, 4-D 54

	2,4-D.....	Page 61
9	Callus tissues derived from shoot tip (M), leaf (L) and fruit (F) of strawberry at the day of culturing (frist passage) on MS-medium supplemented by 0.2 mg/l BA + 0.5 mg/l 2, 4 D (A) and after four weeks on the same medium (B)	65
10	Callus of leaf (L) and shoots regenerated from cullus of shoot tip (M) and fruit (F) of strawberry, after two weeks of subculturing (second passage) on MS-medium supplemented by 0.2 mg/l BA + 0.5 mg/l 2, 4 D	67
11	Shoots regenerated from cullus of shoot tip (M) and fruit (F) of strawberry, after four weeks of subculturing (second passage) on MS-medium supplemented by 0.2 mg/l BA + 0.5 mg/l 2, 4 D	68
12	Leaf derived cullus of strawberry, after several culturing on MS-medium supplemented by 0.2 mg/l BA + 0.5 mg/l 2, 4 D	69
13	Shoots regenerated from cullus of shoot tip (M) and fruit (F) of strawberry, after four weeks of subculturing (third passage) on MS-medium supplemented by 0.2 mg/l BA + 0.5 mg/l 2, 4 D	70
14	Root formation on strawberry shoots after one, two and three weeks (from right to left) of culture on MS-medium contained 1.0 mg/ l IBA	74
15	Strawberry transplants before culturing in peat-sand mixture.....	76
16	Four new strawberry clones (the left control) was produced from runner tip method. Clones 1-4	87
17	were produced from callus meristem..... Eight new strawberry clones, the left (control) was produced from runner tip method. Clones from 1-8 were produced from callus immature fruit.....	8

LIST OF FIGURES

Figure		Page
1	Development of strawberry runner tips excised by three lengths: 1 mm (S), 2 mm (M) and 3 mm (L) after 4 weeks of culture.....	40
2	Development of strawberry shoot tips excised by three lengths: 1 mm (S), 2 mm (M) and 3 mm (L) after 2 weeks of culture.....	43
3	Development of strawberry shoot tips excised by three lengths: 1 mm (S), 2 mm (M) and 3 mm (L) after 4 weeks of culture.....	44
4	Shoot tip (M), Leaf (L) and fruit (F) explants of strawberry at the day of culture on MS-medium supplemented by different combinations of BA and 2,4-D.....	47
5	Fresh weight (F.W.) and dry weight (D.W.) of leaf derived callus, cultured five weeks on MS-medium supplemented with three combinations of BA and 2,4-D.....	55
6	Increase value (I.V.) by fresh weight (F.W.), dry weight (D.W.) and growth rate (G.R.) of leaf derived callus, cultured five weeks on MS-medium supplemented with three combinations of BA and 2,4-D.....	57
7	Fresh weight (F.W.) and dry weight (D.W.) of fruit derived callus, cultured five weeks on MS-medium supplemented with three combinations of BA and 2,4-D.....	59
8	Increase value (I.V.) by fresh weight (F.W.), dry weight (D.W.) and growth rate (G.R.) of fruit derived callus, cultured five weeks on MS-medium supplemented with three combinations of BA and	

Table		Page
9	Increase value by fresh, dry weight and growth rate of leaf derived callus, cultured five weeks on MS-medium supplemented with three combinations of BA and 2, 4-D	56
10	Fresh and dry weight of fruit derived callus, cultured five weeks on MS-medium supplemented with three combinations of BA and 2, 4-D	58
11	Increase value by fresh, dry weight and growth rate of fruit derived callus, cultured five weeks on MS-medium supplemented with three combinations of BA and 2, 4-D	60
12	Shoot length, root length and roots number of strawberry somaclones derived from meristem callus after 5 weeks of culture on rooting medium.	78
13	Shoot length, root length and roots number of strawberry somaclones derived from super meristem callus after 5 weeks of culture on rooting medium	79
14	Shoot length, root length and roots number of strawberry somaclones derived from fruit callus after 5 weeks of culture on rooting medium	80
15	Shoot length, root length and roots number of strawberry somaclones derived from fruit callus after 5 weeks of culture on rooting medium.....	82
16	Shoot length, root length and roots number of strawberry somaclones derived from fruit callus after 5 weeks of culture on rooting medium.....	83
17	Shoot length, root length and roots number of strawberry somaclones derived from fruit callus after 5 weeks of culture on rooting medium.....	85
18	Shoot length, root length and roots number of strawberry somaclones derived from fruit callus after 5 weeks of culture on rooting medium.....	86