

**Table 3:** Effect of substrates mixture and nutrient solutions source on number of leaves, plant height, leaf chlorophyll reading and total leaf area/plant at 240 days after transplanting in the winter seasons of 2012/2013 and 2013/2014.

Substrate mixtures	1 <sup>st</sup> Season				2 <sup>nd</sup> Season			
	<i>Nutrient solutions source</i>							
	Vermi.-tea	Animal -tea	Mineral	Mean	Vermi.-tea	Animal -tea	Mineral	Mean
<i>Number of Leaves/plant</i>								
M1	20.93b	16.92c	22.67a	<b>20.17A</b>	23.34b	18.68c	24.67a	<b>22.23A</b>
M2	8.44g	8.13g	12.92e	<b>9.828C</b>	9.94f	9.51f	13.09e	<b>10.85C</b>
M3	9.12g	11.22f	14.70d	<b>11.68B</b>	10.18f	12.33e	14.84d	<b>12.45B</b>
<b>Mean</b>	<b>12.83B</b>	<b>12.09C</b>	<b>16.76A</b>		<b>14.48B</b>	<b>13.50C</b>	<b>17.53A</b>	
<i>Plant height (cm)</i>								
M1	17.37a	14.26b	17.86a	<b>16.50A</b>	17.50a	14.23b	17.90a	<b>16.54A</b>
M2	12.74c	11.75d	14.70b	<b>13.06C</b>	12.78c	11.83d	14.71b	<b>13.11C</b>
M3	12.90c	14.17b	14.35b	<b>13.81B</b>	13.01c	14.23b	14.41b	<b>13.88B</b>
<b>Mean</b>	<b>14.34B</b>	<b>13.39C</b>	<b>15.64A</b>		<b>14.43B</b>	<b>13.43C</b>	<b>15.67A</b>	
<i>Leaf chlorophyll reading (SPAD)</i>								
M1	43.00b	38.11c	46.05a	<b>42.39A</b>	44.79b	37.61c	46.20a	<b>42.87A</b>
M2	17.73g	15.83h	38.34c	<b>23.97C</b>	17.48g	14.87h	36.97d	<b>23.11C</b>
M3	30.00f	34.30e	36.36d	<b>33.55B</b>	27.72f	35.63e	37.90c	<b>33.75B</b>
<b>Mean</b>	<b>30.24B</b>	<b>29.41C</b>	<b>40.25A</b>		<b>30.00B</b>	<b>29.37C</b>	<b>40.36A</b>	
<i>Total leaf area/plant (cm<sup>2</sup>)</i>								
M1	1854.01a	1263.62c	1708.85b	<b>1608.82A</b>	1954.96a	1326.09c	1780.87b	<b>1687.31A</b>
M2	508.02h	512.96h	741.36d	<b>587.45C</b>	549.48h	552.95h	776.13d	<b>626.19C</b>
M3	542.88g	717.93e	650.59f	<b>637.13B</b>	590.94g	750.66e	676.46f	<b>672.69B</b>
<b>Mean</b>	<b>968.30B</b>	<b>831.50C</b>	<b>1033.60A</b>		<b>1031.79B</b>	<b>876.57C</b>	<b>1077.82A</b>	

\*Different letters indicate significant difference at 5% and level of probability according to LSD.

M1 =perlite: peat moss (1:1(v/v)), M2 = perlite: vermicompost (4:1(v/v)), M3 = perlite: plant compost (4:1(v/v)), vermi.-tea= vermicompost tea, animal-tea= animal compost tea, SPAD= (10 mg/100 g).

**Table 4:** Effect of substrates mixture and nutrient solutions source on yield characteristics in the two winter seasons of 2012/2013 and 2013/2014.

Substrate mixtures	1 <sup>st</sup> season				2 <sup>nd</sup> season			
	Nutrient solutions source							
	Vermi.-tea	Animal -tea	Mineral	Mean	Vermi.-tea	Animal -tea	Mineral	Mean
<i>Early yield (kg/m<sup>2</sup>)</i>								
<b>M1</b>	2.59b	1.91c	3.00a	<b>2.50A</b>	2.64b	1.94c	3.08a	<b>2.55A</b>
<b>M2</b>	1.46h	1.02i	1.55g	<b>1.35C</b>	1.49f	1.04g	1.59e	<b>1.37C</b>
<b>M3</b>	1.57f	1.72e	1.75d	<b>1.68B</b>	1.60e	1.76d	1.77d	<b>1.71B</b>
<b>Mean</b>	<b>1.88B</b>	<b>1.55C</b>	<b>2.10A</b>		<b>1.91B</b>	<b>1.58C</b>	<b>2.15A</b>	
<i>Total yield (kg/m<sup>2</sup>)</i>								
<b>M1</b>	10.36b	7.62c	12.02a	<b>10.00A</b>	10.56b	7.77c	12.31a	<b>10.22A</b>
<b>M2</b>	5.85h	4.08i	6.21g	<b>5.38C</b>	5.97g	4.14h	6.37f	<b>5.49C</b>
<b>M3</b>	6.29f	6.87e	6.98d	<b>6.71B</b>	6.40f	7.04e	7.09d	<b>6.84B</b>
<b>Mean</b>	<b>7.50B</b>	<b>6.19C</b>	<b>8.40A</b>		<b>7.64B</b>	<b>6.32C</b>	<b>8.59A</b>	
<i>Number of fruit per (m<sup>2</sup>)</i>								
<b>M1</b>	557.12b	425.63cd	648.27a	<b>543.67A</b>	558.28b	426.51c	650.63a	<b>545.14A</b>
<b>M2</b>	355.80f	291.80g	372.21ef	<b>339.94C</b>	375.17e	308.08f	385.41de	<b>356.22C</b>
<b>M3</b>	402.39de	449.91c	377.09ef	<b>409.80B</b>	408.30cd	425.99c	391.55de	<b>408.61B</b>
<b>Mean</b>	<b>438.44B</b>	<b>389.12C</b>	<b>465.86A</b>		<b>447.25B</b>	<b>386.86C</b>	<b>475.86A</b>	
<i>Average fruit weight (g)</i>								
<b>M1</b>	18.62a	17.95ab	18.56a	<b>18.38A</b>	18.92a	18.26a	18.93a	<b>18.70A</b>
<b>M2</b>	16.49cd	14.03e	16.73bc	<b>15.75C</b>	15.95b	13.50c	16.55b	<b>15.33C</b>
<b>M3</b>	15.66cd	15.31d	18.54a	<b>16.50B</b>	15.70b	16.54b	18.14a	<b>16.79B</b>
<b>Mean</b>	<b>16.92B</b>	<b>15.76C</b>	<b>17.94A</b>		<b>16.85B</b>	<b>16.10C</b>	<b>17.87A</b>	

\* Different letters indicate significant difference at 5% and level of probability according to LSD  
M1 =perlite: peat moss (1:1(v/v)), M2= perlite: vermicompost (4:1(v/v)), M3= perlite: plant compost (4:1(v/v)), vermi.-tea= vermicompost tea, animal-tea= animal compost tea.

**Table 5:** Effect of substrates mixture and nutrient solutions source on macronutrient concentration of the fourth leaf of strawberry plants at 240 days after transplanting in the two end winter seasons of 2012/2013 and 2013/2014:

1 <sup>st</sup> season				2 <sup>nd</sup> season				
Substrate mixtures	Nutrient solutions source							
	Vermi.-tea	Animal -tea	Mineral	Mean	Vermi.-tea	Animal -tea	Mineral	Mean
<b>N%</b>								
<b>M1</b>	2.69b	2.68c	2.78a	<b>2.71A</b>	2.46b	2.26c	2.55a	<b>2.42A</b>
<b>M2</b>	2.10h	1.94i	2.59e	<b>2.21C</b>	1.85h	1.48i	2.12d	<b>1.82C</b>
<b>M3</b>	2.32f	2.31g	2.63d	<b>2.42B</b>	1.98f	1.94g	2.09e	<b>2.00B</b>
<b>Mean</b>	<b>2.37B</b>	<b>2.31C</b>	<b>2.67A</b>		<b>2.10B</b>	<b>1.89C</b>	<b>2.25A</b>	
<b>P%</b>								
<b>M1</b>	0.400b	0.370c	0.430a	<b>0.400A</b>	0.523b	0.470c	0.547a	<b>0.513A</b>
<b>M2</b>	0.200h	0.170i	0.320e	<b>0.230C</b>	0.367f	0.240g	0.452d	<b>0.353C</b>
<b>M3</b>	0.281f	0.260g	0.325d	<b>0.289B</b>	0.410e	0.368f	0.455d	<b>0.411B</b>
<b>Mean</b>	<b>0.294B</b>	<b>0.267C</b>	<b>0.358A</b>		<b>0.433B</b>	<b>0.359C</b>	<b>0.485A</b>	
<b>K%</b>								
<b>M1</b>	3.28b	2.93c	3.49a	<b>3.23A</b>	3.23b	2.93c	3.34a	<b>3.17A</b>
<b>M2</b>	2.77h	2.62i	2.82e	<b>2.74C</b>	2.70h	2.61i	2.84e	<b>2.72C</b>
<b>M3</b>	2.79f	2.78g	2.90d	<b>2.82B</b>	2.78f	2.71g	2.89d	<b>2.79B</b>
<b>Mean</b>	<b>2.95B</b>	<b>2.78C</b>	<b>3.07A</b>		<b>2.90B</b>	<b>2.75C</b>	<b>3.02A</b>	

M1 =perlite: peat moss (1:1(v/v)), M2= perlite: vermicompost (4:1(v/v)), M3= perlite: plant compost (4:1(v/v)), vermi.-tea= vermicompost tea, animal-tea= animal compost tea.

\* Different letters indicate significant difference at 5% and level of probability according to LSD.