Description of ornamental traits of F$_1$ OO lily population

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ABSTRACT

This report is on the successful OO cross in the lily family. Two Oriental lily cultivars were used, Lilium ‘Sorbonne’, which used as a mother, has a beautiful flower with darker pink spots on petals and Lilium ‘Gaudi’ with large and white flowers, in some varieties with light yellow mid veins without a spot on petals which used as a donor plant. This experiment was done in vegetables and flowers Institute of CAAS and 261 F$_1$ plants were produced successfully. Flower color was measured by using NS800 spectrophotometer. The results showed that there was a significant (P>0.05) difference between plants in L, A and B. The whitest petal was belonged to plant number 7 and the darkest was in plant number 123 with the L rate of 83.20 and 51.73 respectively. The lowest amount of A in individual 163 was 1.87 and the highest was 26.83 in individual 43. The highest and lowest value of B was obtained from plants 70 and 235 with a rate of 28.48 and 3.48 respectively. It was clearly seen that the highest value of outer petal length and width produced in group 1 and the lowest value was in group 5. For individual plants the maximum length of outer petal produced in plant number 215 and the minimum in plant number 198 with 16 cm and 8.8 cm, respectively. The number of the spot in the inner petal was much more than the outer petal in all groups. The most spot number in the inner and outer petal produced in individual number 209 and 197 with the amount of 207 and 99 respectively. Group 1 had the largest and group 5 had the smallest spot size in the inner petal while the largest size of the spot in the outer petal produced in first and second groups and the smallest was in group 5th. The results of the experiment showed that there is a significant difference (P > 0.01) between groups in plant height and also there is a mutual correlation between leaf number and flower number. The highest number of leaf and flower belong to group 1 and by going to group 5 the amount of both characters were decreased. The total flowering period was 35days. The results emphases that the highest and lowest rate of vase life obtained from group 1 and 5 with the rate of 8.69 and 10.91 days, respectively. Early flowering led to decrease the vase life in all plants.

Keywords: Flower color, Flowering period, Lilium, population, Petal, Spot