

6125 Landover Road  
Hyattsville, Md. 20785  
July 2, 1969

Dear Fred,

President Mooney has suggested that we forward a brief summary of our respective committee activities. Since I am not certain as to whether it was intended that the Research Committee should function in a formal manner, I have not attempted to organize any specific programs for group participation. I feel that the commercial growers would prefer to present their research developments in their own manner since it was private profits that made the research possible. If I am present at the general membership meeting when committee chairmen are giving accounts of their committees I will invite any member present (who has just completed a lily research project) to describe the high points of his or her research project.

My own lily research program at Beltsville continues to be a restricted program because of the Administrator's desire to phase out lily research. I am permitted to go on with the 'Black Beauty' breeding program. Accordingly, I utilized all of the Black Beauty flowers available to me at Beltsville in my yard, and at the residence of Mrs. Mal Bacas, for various crosses and self-pollination.

Eleven amphidiploid flowers were produced by two of the flowerery size 'Black Beauty' plants and all were pollinated. Only one cross proved slightly fertile (5 viable seeds) and all amphidiploid selfs failed as in previous years. Microscopic examinations of thin sections made recently revealed that many amphidiploid pollen grains germinated and pollen tubes were present at least half-way down the style. Similar examinations made on undepicted diploid Black Beauty anthers indicate that an occasional viable pollen grain is produced. These two observations indicate that success with Black Beauty is not as impossible as the innumerable pollination failures of the past have suggested.

At the diploid level, several additional Black Beauty backcross seedlings have flowered but the flowers continue to resemble *L. speciosum rubrum* to date. As the bulbs of the other seedlings grow to flowering size, it is hoped that some new flower types will segregate out.

One new lily project was approved by the Ornamentals Investigators this year. It was prompted by enquiries from Dr. Neil W. Stuart who requests chromosome number counts on suspected polyploid

plants that occur in his bulb forcing tests. Essentially, this will be a study to determine what are the anatomical differences because a normal and superior flower substance or stating it another way, "What is flower substance"? An attempt will be made to determine if the flower substance of an outstanding diploid hybrid can equal the flower substance of the tetraploid flower.

Several minor projects on seed germination and colchicine treatments have been underway to attempt to increase the percentage of propagations.

If it is the desire of the Society's officers and Directors and sufficient funds are available for an actively functioning Research Committee, this should be indicated now or at a future appropriate date. The main objectives and extent or scope of this committee should also be given.

Respectfully submitted,  
Joseph Ubrüg, Chairman  
Research Committee