

COSTITUTIONAL OF ORNAMENTAL HYBRIDS OF *NICOTIANA SPP.*

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Nicotiana Spp., ornamental hybrids

The *Nicotiana* genus has broadly been used in varied genetic searches, biochemical, physiological and in the last decades in molecular studies, where tobacco acts as a “model organism”, such a species is revealed of notable support for the facility of introduction and expression of exogenous genes; besides it results a particularly “plastics” species for the culture in vitro. Few studies, instead, were drawn the use of *Nicotiane* as ornamental plants exploiting their special botanical characteristics that make their a very desirable subject for the market of ornamental plants. In this genus, in fact, were individualized and described some species which for some species characters, were inserted in a plan of genetic improvement with the purpose to constitute interspecific hybrids to be used as ornamental plants. Their varieties were selected on the basis of the appearance, of the kind of inflorescence, of the form, the color and the fragrance of the flower. Such varieties belonging to the the collection of *Nicotiane Spp.* of C.R.A., Experimental Institute for Tobacco of Scafati (Salerno, Italy), and they are: *Nicotiana sylvestris* ($2n=24$), *Nicotiana alata* ($2n=18$), *Nicotiana forgetiana* ($2n=18$), *Nicotiana suaveolens* ($2n=32$) and *Nicotiana sanderae* ($2n=18$). The crosses were made to the normal procedure of the emasculation and of the following manual pollination, both among species with equal levels of ploidy: *N. alata* ($2n=18$) x *N.sanderae* ($2n=18$), *N.sanderae* ($2n=18$) x *N. alata* ($2n=18$), *N. forgetiana* ($2n=18$) x *N.sanderae* ($2n=18$), *N. sanderae* ($2n=18$) x *N. forgetiana* ($2n=18$), that among species with different levels of ploidy: *N. sylvestris* ($2n=24$) x *N. suaveolens* ($2n=32$), *N. suaveolens* ($2n=32$) x *N.sanderae* ($2n=18$). The F1 hybrids were submitted above all morphological investigations revealing meaningful differences in comparison with the parental ones for the vast assortment of the obtained forms and colors of the flower, such differences were confirmed by the cytological analysis made both through the chloroplastics computation technique, that through the Feulgen reaction technique applied to the radical apexes. The hybrids were submitted both to self-impollination and to backcross, showing a low level of self-incompatibility, besides, were made the androgenesis with the purpose to constitute an isogenic lines.