

Testing hybrids of mustard (*Brassica juncea*) and canola (*Brassica napus*) to improve favorable fatty acids in mustard, and testing canola for cultivation in Sri Lanka

The edible fatty acid (oleic, linoleic, linolenic and erucic acids) content (%) analyses in spring canola (*Brassica napus*) varieties Narendra, Monty, Oscar, Hyola and mustard (*Brassica juncea*) indicated that Narendra, Monty, Oscar and Hyola had a high percentage of nutritionally desired oleic acid, whereas *B. juncea* had a very low percentage of oleic acid. However, *B. juncea* had a high percentage of erucic acid which is nutritionally undesired, compared to that of Narendra, Monty, Oscar and Hyola. The crossability of Narendra, Monty, Oscar and Hyola with *B. juncea* was quite satisfactory. The F1 hybrid seeds of all four crosses showed an intermediate amount (%) of oleic acid contents and decreased amount (%) of erucic acid, compared to *B. juncea* showing a possibility to improve it. The comparison of some agronomic characters such as flowering time, stem height at flowering, number of pods per plant and number of seeds per pod and other aspects such as drought tolerance, susceptibility to bacterial, fungal and viral diseases and susceptibility to insects, aphids and caterpillars were

tested for Narendra, Monty, Oscar, Hyola and *B. juncea*. The agronomic characters showed that the spring canola varieties have more or less similar characters to *B. juncea*. Narendra and Hyola showed a better adaptation than Monty and Oscar with a high pod setting. There was not much difference in drought tolerance among *B. juncea* and the four spring canola varieties. No fungal diseases were recorded in plants. However, aphid attack was severe and very common in *B. juncea* and in all spring canola varieties. Agronomic characters and other aspects studied for *B. juncea* and spring canola indicated that some selected spring canola varieties such as Narendra and Hyola could be grown in Sri Lanka under the same climatic conditions which are suitable for *B. juncea*.