

Evaluation of yield potential of introduced & locally produced cultivars, hybrids and selections of Cocoa in Sri Lanka

Yield performance of 22 introduced and locally produced varieties, hybrids and selections of Cocoa were field evaluated at the Export Agricultural Research Station. Cocoa yield potential was measured as number of pods/tree/year, pod value (number of pods required to produce 1 kg of dry Cocoa) and 100 seed dry weight. Of the 22 different types tested, 10 varieties yielded more than 100 pods/tree/years for above high yielding 16 cultivars are ranging from 81.77 to 135.43, it was not statistically deviated. Cultivars NA 32XICSS1, MILLAWANA < W6/438, W6/374 x A 10 and W6/6 yielded 60.77 to 78.00 number of pods/tree/year and the deference from the above group for number of pods was statistically significant.

Pod values of the tested cultivars are deviated from the above pattern. Cultivar W5/5 gave the best value also gave higher pod value. Variety NA 34 x NA 33 has given the poorest pod value where it needed 35 pods to produce 1KG as far as 100 seed weight is concerned, cultivars W5/5 and SCA6 xICS6 provided the highest value of 147 g and 143 g respectively while cultivars NA34 xNA33, W6/6 & W5/3, W6/374 and Na32xICS 95 provided the lower values.

Total dry bean weight/plant/year could be considered as the most significant yield parameter and in this regard W5/5 could be ranked number 01 where it produced 5.065 kg/plant/year. Varieties W5/566, W6/26, W5/24, W6/70, A10.SCA12 x NA 34, NA 32 x W6/434, W6/457, W6/374, MILLAWANA selection, NA34 X Na33 and W6/6 yielded less than 3 kg/tree/year.

It is concluded that, to be a high yielding cultivar in terms of bean yield in weight, all the above parameters. (pod yield, pod value, seed size and number of seeds /pod) should to elevate the level of overall yield of the variety. Out of 22 cultivars evaluated W5/5 ranked number 01 and W5/566 and W6/26 are close 2nd and 3rd while NA34 x Na33 and W6/6 are the poorest yielders.