Repeatability of Seasonal Patterns in Coconut Yield Components

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Repeated measurements are often co-related. This co-relation should be taken to account when analyzing such data. Moreover, time cannot be a study factor since time cannot be randomized. Time effect can be studied only by repeated measures analysis. Similarly, precision can be increased. This study was conducted to evaluate the repeatability of the seasonal pattern of yield components during 2013 to 2020 in inter-mediate zoon in Sri Lanka. Wellawa, Malsiripura, and Muruthange estates were used to collect data. Number of bunches, number of female flowers per bunch, percentage setting, and immature nut fall data for each season were recorded for the 8 consecutive years. These repeated measurements were thus used for evaluations. Two-month period was considered as a season as the most common harvesting method of coconut is the bimonthly harvesting. According to the results, the year effect of repeatability on the number of bunches is significant ($P<0.05$). In addition, season effect and the interaction effect of season and year were significant ($P<0.05$). When consider the female flowers per bunch too, year effect, season effect and interaction effect of season and year were present ($P<0.05$). However, with respect to nut setting percentage, the year effect was significant ($P<0.05$) but the seasons effect ($P>0.05$) as well the interaction effect of season and year ($p>0.05$) were not significantly different. When consider the immature nut falling per bunches, the year effect, seasons affect, and the interaction effect of season and year were significant ($p<0.05$). Accordingly, it is clear that, not only characteristics have been changed with time, but also the season effect has also changed with time.

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