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Correlation studies on agronomic and yield related characteristics of groundnut (*Arachis hypogea* L.) cv. *Indi* on sandy regosol

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An attempt was made to examine correlations among agronomic and yield-related characteristics of groundnut (*Arachis hypogeal* L.) cv. *Indi* and also to identify the characteristics which influence pod yield. The experiment was conducted at the crop farm of the Eastern University, Vantharumoolai, Sri Lanka in *Maha* 2008. Plants were managed according to the recommendations given by the Department of Agriculture, Sri Lanka. Ten characteristics viz. plant height, number of leaves, number of branches, number of pods, pod weight, kernel weight, shell weight, shelling percentage, plant biomass and number of nodules were measured and analyzed statistically.

The results showed that, the pod weight was positively correlated with shell weight ($r=0.95^{**}$) and negatively correlated with leaf number ($r=-0.69^{*}$) and shelling percentage ($r=-0.61^{*}$). As such, pod weight could be highly influenced by shell weight and high leafiness at maturity, which would have in turn caused a detrimental effect on pod yield. Plant biomass showed positive correlation with shell weight ($r=0.64^{*}$), number of pods ($r=0.58^{*}$) and plant height ($r=0.57^{*}$). It showed negative correlation with shelling percentage ($r=-0.76^{**}$). Thus increment in plant biomass would have increased shell weight and pod number. But it would reduce kernel weight. A significant positive correlation was observed between shelling percentage and kernel weight ($r=0.65^{*}$). Therefore shelling percentage could be improved to increase kernel weight. It was noticed that nodulation showed a weak positive correlation with kernel weight. From this study it could be stated, that increase in nodulation could probably improve kernel weight of groundnut in sandy regosol. As such farmers should take steps to increase nodulation in groundnut.