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Phytochemical Analysis of Some Selected Indigenous Plants in Eastern Region of Sri Lanka used for Minimizing Insect Damage on Stored Grains during Storage**Karunakaran S.*, Niranjana R.F.***Department of Agricultural Biology, Eastern University, Palacholai, Sri Lanka***selvikaruna23311@yahoo.com***Abstract**

Grains are precious food in developing countries but are tragically susceptible to attack by several stored insects. Thus, grain productions often fall below demand. As the resistance of pests against synthetic chemical pesticides and residues in foods increased, consumers' awareness turned toward food and environmental safety. The studies conducted in Sri Lanka revealed that the botanical pesticides are being used to minimize these problems and have the potential to battle against pests on stored grains during storage. Further the reference in Sri Lanka evidenced that the botanical pesticides are readily available, inexpensive, easily biodegradable and low toxic to non-target organisms. With this concept the present study has been undertaken to analyze the secondary metabolites, known as phytochemicals that possess antioxidant or anti insecticidal properties, which are much safe, eco-friendly and can combat with the man-made chemicals in controlling the storage pests. The study was carried out to find the presence of phytochemicals namely, alkaloid, flavonoid, phenol, tannin, steroids, cardiac glycosides, terpenoid, saponine and reducing sugars in an aqueous extract of some selected indigenous plants, which are available in Eastern Region of Sri Lanka namely; *Capsicum annuum* (Chilli), *Citrus aurantiifolia* (Lime) *Piper nigrum* (Pepper), *Azadiracta indica* (Neem), *Moringa oleifera* (Moringa) *Eucalyptus globules* (Eucalyptus), *Justicia adhatoda* (Adhathodai) *Annona reticulate* (Annona), *Cymbopogan citratus* (Lemon grass) *Vitex trifolia* (Nochchi), *Ocimum tenuiflorum* (Thulsi), *Lantenna camera*(Nayunni), *Eichhornia crassipes* (Water hayasinth), *Tagetes erecta* (Marigold) *piper longum* (Thipilli) and *Achyranthes aspera* (Nayuruvi), that have pesticidal properties. The leaves of selected crops were dried at room temperature for a period of one week and grounded in to fine powder to take 10 g of powder from each to prepare 200 ml of water extract using electro thermal soxhlet for 36 hours and analyses qualitatively by the standard scientific procedures. The results showed that the water extract of Neem, Moringa and Thulsi contained all the above tested phytochemicals. The flavonoid was observed in all tested crops except Thipilil, which contained only phenol and tannin. Further Pepper, Eucalyptus, Lemon grass, Annona, and Chilli did not show alkaloids where Annona had only flavonoid, phenol and tannin. Nochchi showed all the phytochemicals except cardiac glycosides and terpenoid. The study confirmed the strength of tested crops in utilizing them in the pest management programme at storage because of the presence of one or more groups of the major insecticidal components like, alkaloids and flavonoids. The study also exposes the way for further studies related to the impact of individual plant insecticidal components against storage pests.

Keywords: Aalkaloids, Aqueous, Extract, Grains and phytochemical