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The Importance of Farmers' Perceptions in Determining Reasons and Providing Practical Solutions for Agrochemical Overuse in Non-Traditional Crop Farmers of Guyana

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Abstract

The overuse of agrochemicals by non-traditional crop farmers in Guyana is of concern, but literature reveals a paucity of information concerning the reasons for farmers' persistence of this inappropriate practice. This paper presents some of the results from PhD research which adopted an original approach, to unearth and explain the reasons for this phenomenon and formulate relevant recommendations.

The investigation utilised a mixed methods strategy of complementary quantitative and qualitative techniques; comprising analysis of data from farm unit surveys and farmer and key informant interviews, respectively. Quantitative analysis, conducted via SPSS software, revealed that pesticide and fertiliser overuse among occurred via farmers' use of high frequencies and concentrations of the chemicals. Factors which were significantly associated with overuse include farmers' age, education level, area cultivated, land tenure status and the 'source-type' of information they accessed.

However, qualitative analysis conducted with the aid of NVivo software, demonstrated that reasons for farmers' overuse were not merely the single factors which showed statistical significance with this practice. On the contrary, this study revealed that the reasons for farmers overuse practices were embedded within an intricate network of contingent, support and contextual factors and to a great extent were explained by detailed analysis of farmers' perceptions of overuse.

This paper focuses initially on quantitative findings which reveal those factors significant to farmers' overuse and subsequently explains complementary qualitative analysis of farmers' perceptions which shows that understanding of farmers' perceptions present new insight into their practice of agrochemical overuse. Recommendations of this study suggest a new orientation from those previously suggested in other studies and offer a targeted approach for resolution of agrochemical overuse in farmers of Guyana, which includes strategic farmer-training in agrochemical use.

Keywords: agrochemical, overuse, farmer, Guyana, reason, quantitative technique, qualitative technique