



CHEMICAL LEASING - GREEN BUSINESS MODEL IN AGRICULTURE BUSINESS TO PROMOTE LOW INPUT AGRICULTURE

Sena Peiris V.R.^{1,2*} and Lakmini Edirisinghe¹

¹National Cleaner Production Centre, Sri Lanka

²Faculty of Graduate Studies, University of Sri Jayewardenepura, Sri Lanka

sena.vijerupa@gmail.com

ABSTRACT

Chemicals are essential for most business activities. In conventional business practice the supplier likes to sell more chemicals while the buyer likes to buy less. Chemical Leasing is a green business model where buyer pays for the service instead of the quantity. This makes the quantity a cost to the supplier too making him to reduce volume sold. Conventional agricultural practices consume large volumes of agrochemicals due to many reasons. The standard practice of farmers was to apply larger than necessary volumes of agro chemicals to ensure a safe growth of plants and an assured yield. This is the situation in most developing countries in the agriculture sector leading to high cost and residual agro chemicals in soils and products. UNIDO and NCPC Sri Lanka decided to test and prove that chemical leasing, the widely applied business model in other sectors can be applied to agriculture too. A field research trial was organized to test the effectiveness of chemical leasing in potato growing sector in Nuwara Eliya. Chemical leasing brings the user and supplier together to create synergy so that use of chemicals and the downstream impacts are reduced. The trial conducted in two separate plots of 0.4 Hc each. One plot grew potatoes applying principles of chemical leasing while other plot was cultivated using conventional practices which served as the control plot. As Sri Lanka has no manufacturers of agrochemicals a new model of chemical leasing was introduced using an intermediate consultant who took over the role of expert knowledge provider of the supplier. In the control plot agro chemicals were used regularly applying it regularly at every six day intervals. In the chemical leasing plot the expert observed the signs of any pest attack and agro chemicals were applied when only needed. All other activities like watering, weeding were carried out as usual in both plots. The process went through the entire growth cycle and both plots were monitored daily taking photographs and recording observations. During harvesting it was found that the total chemicals consumed was 40% less in the plot where chemical leasing was applied compared to the control plot. The yield was also up by 11% in the plot where chemical leasing was applied. Subsequent trials repeated in a larger potato plantation of 5 hectares confirmed the results. Chemical Leasing which was applied for the first time in agricultural sector can be applied to bring down the use of agro chemicals in cultivation by conducting more trials in other crops too.

Keywords: Chemical leasing, Green business model, Pest attacks, Agro chemicals, Yield