

DEMAND FOR FERTILISERS IN ANDHRA PRADESH

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An attempt is made in this paper to present a model for estimating the demand for Nitrogenous fertilisers in the State of Andhra Pradesh, India. In this paper firstly, the important variables are identified and their data limitations are indicated. Here it is noticed that the data for the variable High Yielding Varieties (HYV) are not available for the entire period under consideration. Secondly, a model has been specified for estimating the demand for Nitrogenous fertilisers. As the data for HYV are available only for a few years, a cross-section demand model is specified to obtain the estimate of HYV in order to pool this estimate in the time series model. In estimating the coefficients of the variables in the cross-section demand model it is found that the coefficient of HYV has an improper sign due to high intercorrelations among the set of independent variables. Hence to overcome the multicollinearity problem, principal component method has been used. In the time series model also principal components have been used to overcome the interdependency among some of the independent variables. Here the model being a time series, the problem of autocorrelation has arisen. To overcome this Cochrane-Orcutt iterative procedure has been used. It is found that a third order autoregressive process suits well for the disturbance term and hence the variables have been transformed by using the estimated coefficients of the variables specified in the functional form of the disturbance term. Thus, using the three statistical techniques namely principal component method, pooling of cross-section and time series data and Cochrane-Orcutt iterative procedure, the demand for Nitrogenous fertilisers has been estimated for the State of Andhra Pradesh.

I. *Specification of the Variables and Their Data Limitations:*

From the studies of Micro and Macro level analysis of factors determining demand for fertilisers, the following are observed as the important determinants: ⁽¹⁾

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