

Implementing a User Friendly Feed Formulation Software Application for Sri Lankan Poultry Farmers

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Poultry is a fast growing livestock sub-sector in Sri Lanka today. We have 50 years history of commercial poultry industry in Sri Lanka. With the introduction of open economy policy in 1980's this industry started to boost up and now it has become well established in our country. With the rapid growth of poultry sector it demands higher quality concentrated feeds and it opens up a new industry opportunity for large scale feed manufacturing ventures. Since poultry requires high quality concentrate feed our poultry farmers have to depend on commercial compound feeds. Instead of having commercially manufactured feed, some poultry farmers use self-mixed feeds as commercial feeds are costly. Starting from the recent past there is a growing tendency in farmers in mixing their own feeds inside the farm. Since these self-mixed feeds are not up to standards in terms of nutrient levels and hygienic conditions. Poultry birds should be fed well balanced compounded feeds as modern poultry strains are bred for higher performances. This high performance can be achieved through proper feeding and management only. Developing a mathematical model which is to formulate the feed ration with optimal solution and implement with in software which can be used by poultry farmers to day to day manufacturing will be my solution. C# was used as the runtime environment to the application and Solver Foundation was used to simulate problems, User can change ingredients and get dynamic results as he satisfy with the ration mix ingredients. When using Traditional methods like trial and error method or Pearson's Square method user have to spend more than 10 min to hours to prepare one ration to specific bird type. But using this software user can prepare a ration in seconds.

Keywords: Poultry feed formulation, Object Oriented Programming, Solver Foundation, Linear Programming