UD. Legi Jaya is one of the companies producing purebred chicken eggs situated in Wirolegi Village, Sumbersari Sub-district, Jember Regency. The research done is a descriptive explorative research which just describes the information which exists according to variables which will be researched. The method used in this research was expert system method, which is a problem solving method by doing interview towards some experts specializing in the fields. The interview results then modeled by using the help of Powersim Software. The results got based on the research done were: a) the factors which are interconnected and can influence each other in UD. Legi Jaya purebred chicken eggs production were egg production sub-system, production cost sub-system, and profits sub-system; b) Based on purebred chicken eggs production at UD. Legi Jaya Jember Regency dynamic system modeling produced moderate scenario, optimistic scenario, and pessimistic scenario. In the moderate scenario and optimistic scenario every year experiencing the increasing of purebred chicken eggs production and profits and for pessimistic scenario experiencing the increasing of production costs and the decreasing of profits got.

Key Words: modeling, purebred chicken eggs production, dynamic system.