Assessment payment method of integration contracts in poultry - A case study in Santa Catarina

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The broiler production in Brazil has a high degree of organization and coordination. The production system is coordinated mainly via integration contract. In this production system the agroindustry is the processes coordinator. In the contract integrated system costs are shared by producers and the integrator. There are several ways to share then, but in general costs with labor, energy, maintenance, insurance, wood shavings, loading of animals, and Funrural are the responsibility of the farmer.

Until the mid 90's some important producers cost itens were controlled by the state (minimum wage and eletricity) and showed little variability. Similarly, the large supply timber made this a cheap feedstock (generally was extracted from own property). After that the Brazilian governmental opens the economy and the market has more influence on the prices set. As in most payment formulas producer price receive are intex from price of live chicken doubt arise about the relationship between the price received and the producers cost. Thus, the present study aim is determine the degree of integration between the variables cost itens and the average income earned in one company in Santa Catarina State.

The data used were the price received by the producer, price of firewood, wood shavings, eletric power, average wage paid by producers of chickens and the national minimum wage. The dates used in this study were obeid from the Embrapa Swine and Poultry Information Center for poultry and hog and was collected monthly. The unit root and cointegration tests (Margarido and Anelfos, 2001; Endres, 2004) were performed to determine the integration between variables. The results show that all variables are non-stationary in level, and differentiation is needed to make them stationary. Moreover, the cointegration tests performed on the errors in the equations where the dependent variable is the price received by producers and the independent variable was the variable costs (firewood, wood shavings, electricity and average salary) showed that they are stationary in level. Thus, it can be said that there is a long-term relationship between the dependent variable and the set of independent variables. Doing test of co-integration in the equations in pairs (one dependent variable and one independent variable) showed that all cost variables are individually cointegrated with revenue producer.

Still, the results of linear equations estimated by the ordinary least squares method where the dependent variable is the revenue received by chicken delivered and the independent variable is each cost item showed that price of firewood, wood shavings and electricity were not significant a 5 % probability. On the other hand the price of the average salary received by producers was the only variable that show positive relationship with the dependent variable and are statistically significant at 5 % probability.

This fact indicates the low effectivity of this kind of contract in compensate some producer cost itens. However we need to keep in mind that the average salary is the most important variable cost for the producer and this item is significant.

Keywords: contract integration, poultry, unit root, co-integration, producer, cost production