

## The effect of different levels of dried distillers wheat grain with solubles on milk composition, blood parameters and concentration of liver enzymes in holstein cows during the transitional period

**Authors:**

**Mohammad Hadi Aghajani  
Delavar,  
Yadollah Chashtidel and  
Asadollah Teimuri Yansari**

**Institution:**

Animal Science Department  
of Agriculture and Natural  
Resources, University of  
Sary-Mazandaran, Iran.

**Corresponding author:**

**Mohammad Hadi Aghajani  
Delavar**

**Abstract:**

In order to evaluate the effect of different levels of wheat Dried Distillers Grain with Solubles (DDGS) on milk composition, blood parameters and concentration of liver enzymes in dairy cows during the transitional period, 12 Holstein dairy cows with similar porosity, weight and record are studied for six weeks in a completely random design. The cows received experimental treatments for three weeks before calving, three weeks after calving and two weeks and represented 0, 50, 100% of wheat DDGS as soybean substitute. The experimental cows were milked three times a day at 4 a.m., 12 p.m. and 8 p.m. The blood samples were taken two weeks after the experiment, two weeks after calving and after morning diet. The results of the study showed that using wheat DDGS milk production was maintained but with negative effect on fat of milk. All blood measures were constant and only urea of blood plasma was increased. Aspartate aminotransferase enzyme and liver creatine phosphokinase of plasma are not changed, wheat DDGS supplement can be used without having any negative effect on liver activity during the transitional period on dairy cows.

**Keywords:**

Distillers grain with solubles, wheat, milk composition, blood parameters, dairy cows, transitional period.