



Hempseed By-Product in Diets of Italian Simmental Cull Dairy Cows and Its Effects on Animal Performance and Meat Quality .

Keywords: Hempseed cake;
Cannabis sativa L.
Cull cows; fatty acids profile;
carcass traits.

AIMS: This research work was centered on the valorization of the Hemp sativa by-product obtained during the mechanical extraction, the Hempseed cake is rich in polyunsaturated fatty acids, so its use in the diets of cull cows could probably improve meat value and contribute to pursuing the objectives of a circular economy. The aim of this study was to investigate the effects of adding hempseed cake to the diet of IS cull dairy cows on performances and meat quality.

APPLICATIONS: The multiparous Italian Simmental cull dairy cows were divided into three dietary groups: hay-based (H, n = 10), corn silage-based (CS, n = 8) and pasture-based (Pa, n = 8) diets. The animals were equally divided into two treatments based on the protein source of the concentrate: hempseed cake (HEMP) or soybeans meal (SB). At the beginning of the trial, HEMP and SB groups had similar initial body weight (609.6 ± 13.87 kg), age (86.8 ± 6.60 months) and body condition score (3.14 ± 0.087 points).

RESULTS: Hempseed cake can replace soybean in the diet of cull cows up to 5% DM, without affecting in vivo performance, carcass characteristics and meat quality in terms of color, cooking loss and shear force. The fatty acids composition of intramuscular fat was similar between experimental groups, with the exception of the desirable fatty acids (DFA) level, which was lower in the animals fed with hempseed cake.

This study showed that hempseed cake can replace soybean meal, thus improving the circular economy.

