

News & Comments

Role of Caraway(*Carum carvi* L.) in the broiler chicken*Abir Hariz*

The Apiaceae family includes the annual herb known as caraway (*Carum carvi* L.), which is indigenous to Northern America, western Asia, and Europe. The Czech Republic, which had previously imported this spice, is now a caraway exporter thanks to the development of non deciduous types. According to Kozera and Majcherczak (2013), caraway seeds grown without mineral fertilization had 6.36 grams of total phosphorus, 16.38 grams of potassium, 6.55 grams of calcium, 3.97 grams of magnesium, and 0.32 grams of sodium per kilogram. Carvone is a colourless or yellow oil that can be used to potentially prevent bacterial and fungal development as well as have anticancer effects. It is insoluble in water but miscible with ethanol. The EOs in caraway are not readily accessible because they are protected in oil ducts inside a tough peel.

Caraway, a plant that belongs to the class of medicinal, aromatic, and spicy herbs, is a common crop in the Czech Republic. Its by-products, such as irregular grains and/or grain fragments, may be fed to poultry and may have health benefits due to the biologically active compounds they contain. The major investigation to confirm appropriateness and potential effects on the functionality and health of hens is ours. The purpose of this study as per authors was to compare the performance metrics, blood biochemical profile, and gastrointestinal tract morphology of broiler chicks that were growing quickly and slowly. Changes in the animal food can cause the gut's weight, length, absorptive area, and enterocyte turnover rate to change. "This is one of the reasons why intestine morphological characteristics were investigated in our study to ascertain the impact of caraway on intestinal development.", said the authors.

The free-radical scavenging ability of caraway's components appears to be connected to its protective action against ethanol-induced damage to the gastric tissue. There is still uncertainty regarding the precise mechanism of action of the gastroprotective function. However, it may be brought on by the inhibition of cytochrome P450 1A1 (CYP1A1) by flavonoids, which is known to transform endogenous and xenobiotic chemicals into hazardous metabolites. Based on our findings, it can be said that performance metrics, blood biochemical profiles, and relative organ sizes were unaffected by the diet's 1% caraway content in either fast-growing or slow-growing broiler chickens.

The experiment using caraway-supplemented slow-growing broilers revealed a sizable variation in the villi's height and crypts' depth. As a result, it is possible to draw a preliminary conclusion from the findings of our study that *Carum carvi* can be fed to broiler chickens of both fast and slow growth. As



per the authors, additional research is required to provide more comprehensive justifications and suggestions for the evaluation of caraway as a chicken feed.

KEYWORDS

carvone, limonene, phytogenic feed, villus, ileum histomorphometry

