UTILIZATION OF NATURAL CAROTENOID SOURCES TO ENHANCE MEAT COLOR IN BROILER CHICKENS

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***Abstract*:**

Carotenoids are naturally occurring pigments that have bioactive properties. They are very important for poultry nutrition because they make broiler meat and eggs healthier, more marketable, and of higher quality. This paper provides a comprehensive overview including the chemical structure of carotenoids, biological functions and potential dietary applications including enhancement of meat color as well as antioxidant and immune functions in poultry. Most important natural sources, such as yellow corn, algae meal, marigold extract and dehydrated alfalfa meal, are evaluated for their potential to supply xanthophylls and beta-carotene, which are necessary for the pigmentation desired by consumers. The review's scope also includes the role in pigmentation that carotenoid bioavailability plays as well as their cost-effectiveness and efficacy when given to birds' skin, meat, and nutritional composition. Other synergistic effects, like the effects of combining carotenoids with vitamin E or other antioxidants are also highlighted. New studies hint at sustainable ways in which natural carotenoid sources can be combined to achieve efficient pigmentation in poultry. This paper offers strategies to chicken feed composition to make it more market oriented and poultry products more appealing to consumers.

Key words: *carotenoids, meat color, natural pigments, yellow colorants*