Organic and Traditionally Grown Helianthus annuus Seeds as a Protein Supplement for Grain Based Rations

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In recent years Iowa has seen a rise in organic farming, with that many farmers have begun using organic Helianthus Annuus (black oil sunflowers) as cover crops for organic soybeans. Cover crops are commonly used in organic farming to reduce soil erosion, improve soil organic matter, provide competition with weed growth, and to increase water infiltration from rainfall and irrigation. The issue that this research looked at was how the use of organic vs non-organic sunflower seeds as an alternative protein source for multiple livestock types. Tenebrio Molitor (Mealworms) was used as a model of livestock before using large livestock animals to eliminate potential future risk. The mealworms were chosen randomly, weighed, and placed into glass jars with different mixed rations using both organic and non-organic sunflower seeds. The hypothesis was that mealworms in the middle percentages of mixed rations would have a higher rate of gain. This research found that amongst many trial groups traditionally grown sunflower seeds used in 30-50% protein rations produced the highest rate of gain. This information produced by these trials will help make livestock production more efficient and showcase new types of proteins in livestock diets.

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