

SUNFLOWER MEAL AND HULL UTILIZATION

By

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An excellent review of the nutritional value of sunflower meal was presented at the 1968 International Sunflower Conference and is a part of the proceedings of that conference. Copies of that paper are available from Dr. Keith Smith, National Cottonseed Products Association, Inc., Memphis, Tennessee.

I will not discuss the contents of that review but will attempt to bring you up to date by presenting a brief resume of the papers of sunflower meal and hull research that have appeared in the literature that is available to us.

Feeding trials have been conducted at the University of Arkansas to evaluate solvent extracted sunflower meal as a supplement for broiler diets. This meal was analyzed to contain 47% protein. Isonitrogenous substitution for soybean meal was made.

The results of these trials indicate that sunflower meal could replace up to 50% of the protein supplied by soybean meal without impairing performance. The addition of supplemental lysine aided somewhat in improving performance when high levels of sunflower meal were fed but could not completely overcome the adverse effects. It was observed that the sunflower meal diets were extremely dusty. Feed packed around the beak of the chicks when high levels of sunflower meal were substituted in the diet. When the sunflower meal diets were pelleted it was possible to use increased amounts of the meal without any difficulty with beak packing problems. It would appear from this report that sunflower meal can be used satisfactorily in poultry feeds of various types provided the dust problem is solved by pelleting or the possibility of including additional fat in the ration.

At North Dakota State University, sunflower meal was evaluated as a source of supplemental protein in laying hens. A total of 1200 pullets were fed practical, corn based mash rations to evaluate utilization of two commercial sources of sunflower meal in a 168-day experiment.

Dietary treatments involved replacement of 0, 50, or 100% of soybean meal protein with either source of sunflower meal in isonitrogenous and isocaloric diets. Each of these diets was supplemented with 0, 0.2, or 0.4% lysine.

Good performance was obtained from all the diets. However, slightly reduced hen/day egg production occurred when the diets contained sunflower meal, especially at the 100% replacement level. Feed required per dozen eggs was increased by the inclusion of sunflower meal in the rations and the feed consumption per hen/day was generally greater for hens fed the sunflower meal

FACTORS AFFECTING PRODUCTION OF SUNFLOWERS

By

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There are five major factors which are necessary to produce high yielding sunflowers in both oil and confection type. These factors are:

1. Seed bed preparation.
2. Selection of high quality seed.
3. Plant population.
4. Fertilization.
5. Weed control.

There is a definite need for more experimental fertilizer trials on sunflowers, for we as commercial operators are not satisfied that the existing information is giving us maximum yields.

Some of our association growers have run fertilizer trials using high rates of nitrogen and potash. These trials have shown tremendous results on low fertility soil, but have not been consistent on high fertility land. We as an association would also like to see more research testing in general on large commercial farms. We have several association growers who have offered acreage for this purpose to any one who will tabulate and issue information on the results of these trials. Growers are willing to assume all production costs.

Bee Research in the field of pollination is another area that should be expanded. Some of our commercial operators are using this system at present and are showing economic results; especially in oil type varieties.

Some of our growers are experiencing damage from bird infestation. This is another area where research is needed.

The National Sunflower Growers Association commends the research people as a world-wide research team for the commendable progress that has been made in these past years.

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