ALFALFA HAY AND MEAL FOR POULTRY

By LEO J. FINCH, '28

Results of Experiments Using Alfalfa Hay and Alfalfa Meal—May Be Substituted for Green Feeds for Succulence

NUMEROUS experiments from all sections of the country have concluded that freshly cut alfalfa gives better results in maintaining health and growth than any other kind of green plants when fed to poultry. This is probably due to alfalfa containing vitamines and proteins, which it is an excellent source, in more correct proportions for feeding than other plants.

Of late experiments have been carried out to determine if alfalfa hay and meal could be used with as good results and as cheaply as the fresh cut alfalfa or any other succulent green plant. At the New York State College of Agriculture it was found that alfalfa hay, from both the second and third cuttings, when either cut in one-half inch lengths or left in its natural form were placed in a wire basket or box, gave as good results from October to May as any kind of succulent plant tried. At the Ohio Experiment Station it was found that as good results were obtained from laying pullets confined indoors and fed alfalfa hay as from those having access to an outside range of bluegrass. From the above experiments we can conclude that the dry alfalfa hay will give as good results through the winter as any succulent plant available. The Ohio Station found, however, that no benefits were derived from ordinary alfalfa meal when mixed with the mash. The value of alfalfa leaf meal, as a green-feed substitute, has not as yet been determined.

With the above data in mind the author has carried out a local investigation among some of the representative poultrymen to determine if possible what kind of green-feed is being fed the poultry, its cost, and whether alfalfa hay and meal could be or is substituted for succulent green feed.

A compilation of the information obtained is listed in the tables below.

	Farm No. 1	Farm No. 2	Farm No. 3	Farm No. 4	Farm No. 5
Kind of green feed	Alfalfa and barley	Alfalfa and barley	Alfalfa	Alfalfa and oats	Alfalfa and barley
Variety of alfalfa	Common	Common	Common	Common	Common
Amount land for 100 birds	3600 sq. ft.	400 sq. ft.	500 sq. ft.	450 sq. ft.	500 sq. ft.
How land was prepared	Not known	Plowed, plank dragged, bordered	Plowed, plank dragged,	Not known	Plowed, plank dragged,
Previous crop	Not known	Nothing	Nothing	Not known	Nothing
Amount of seed sown	3 lb. Alfalfa 12 lb. Barley	3 lb. Alfalfa 10 lb. Barley	5 lb.	5 lb. Alfalfa 10 lb. oats	2 lb. Alfalfa 10 lb. oats
How seed was sown	Broadcast, harrowed	Broadcast, harrowed	Broadcast, harrowed	Broadcast, harrowed	Broadcast, harrowed
Manure and how applied	Poultry, spread on surface	Poultry, spread on surface	Poultry, spread on surface	Poultry, spread on surface	Poultry, spread on surface
Water applied	.45 acre ft.	.45 acre ft.	.56 acre ft.	.5 acre ft.	.59 acre ft
How feed to poultry	Soiling crop	Soiling crop	Soiling crop	Soiling crop	Soiling crop
How cultivated	None	None	None	None	None
ESTIMATED COSTS					
Land-spread of 20 years	$16	$20	$25	$22.50	$25
Preparing land	$5	$6	$8	$7	$8
Seeds	.60 .35	.60 .30	$1.00	$1.00 .30	.80 .30
Manure	.....	.....	.....	.....	.....
Water	$1.50	$1.50	$1.75	$1.60	$1.75
Labor—sowing, manuring, watering	$8.00	$8.00	$9.00	$8.50	$9.00
Alfalfa cutter	$9.00	$9.00	$5.00	$9.00	$9.00
Labor in feeding	$37.00	$37.00	$37.00	$37.00	$37.00
Total cost (per year)	$77.45	$82.40	$86.75	$86.90	$90.85

From the above estimates of costs, we can assume that to furnish the necessary green-feed to poultry, it cost on the average of $84.87 a year for 1000 birds. The table, as listed above, contains estimates in nearly every case as the poultrymen had not kept a record of any kind and gave the figures as they could remember them. However, assuming that the above figures are approximately correct, a comparison can be made with alfalfa hay and meal. It might be well to state here that not

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Arizona produced that year only enough butter, cheese and condensed milk to supply her citizens with 2.5, 1.3 and 8.3 pounds respectively.

The above data would indicate that it is not likely that Arizona will have sufficient dairy cows to supply home consumption for a long time. One has only to note the butter being sold in Arizona stores from other states to be convinced that Arizona is importing a large per cent of her butter. If dairymen in California, Colorado, Kansas, Texas and other states can produce butter for the Arizona market surely the farmers of Arizona can produce more milk with profit.

We must not overlook the fact that the dairy market in Arizona will be directly affected by the price of cream in the country as a whole. The dairy market is a national market at least and with unfavorable conditions abroad, it may become a world market.

The immediate future for dairying looks good for the United States as a whole and with continued prosperity it would seem that prices for dairy products will be good for some time. It would seem that farmers in Arizona with feed, and gifted along dairy lines could make some money with a small herd of good dairy cows.

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one of the poultrymen had tried alfalfa meal and only one had tried the hay. They either thought that it would cost more or that the hay and meal were not a proper substitute for the succulent green-feed.

One bale of hay is sufficient for 1000 birds for one day. At 50 cents a bale, it would cost the poultryman approximately $180.00 to feed 1000 birds for the year. One sack of alfalfa meal would be sufficient for five days for the 1000 birds. At $2.50 a sack, it would cost the poultryman approximately $180.00 for this source of green-feed for the year. In both of the above cases costs of labor in feeding and hauling the feed to the ranch must be taken into account.

In conclusion the figures show that the poultryman can raise his own green-feed at half the cost of that available on the market. The freshly cut succulent green-feed, especially alfalfa, has proven to be the best source of vitamines, and where it can be grown the whole year, the author recommends its use.

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the best methods to improve soil fertility. Some crops adapted to this use are Hubam clover, sour clover, cowpeas, and alfalfa.

It is sometimes necessary to shade trees during the first summer. Burlap supported on a frame or fan palm leaves are often used on the south, east, and west sides and over the top. If a cover crop is used this may not be necessary as the large leaf area transpires moisture in large quantities during the hot part of the summer. It is not necessary to prune or train the trees during the first season.

If the pecan trees make a good growth during the first two years they may bear a few nuts the third or fourth year, but commercial returns cannot be expected until the sixth to eighth year from planting. Allowing twelve trees to the acre the average yields are 100 pounds to the acre at six years of age, 500 pounds at ten years of age, and 1000 pounds at fifteen years of age.