

South Dakota State University
**Open PRAIRIE: Open Public Research Access Institutional
Repository and Information Exchange**

South Dakota Poultry Field Day Proceedings and
Research Reports, 1985

Animal Science Reports

1985

Dried Colostrum For Growing Turkeys

Ali B. Kashani
South Dakota State University

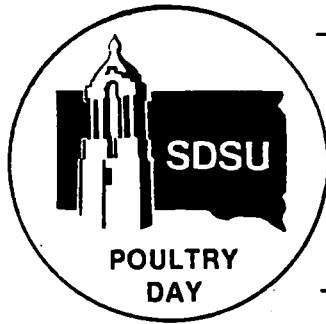
C. Wendell Carlson

Follow this and additional works at: http://openprairie.sdstate.edu/sd_poultry_1985

Recommended Citation

Kashani, Ali B. and Carlson, C. Wendell, "Dried Colostrum For Growing Turkeys" (1985). *South Dakota Poultry Field Day Proceedings and Research Reports, 1985*. Paper 5.
http://openprairie.sdstate.edu/sd_poultry_1985/5

This Report is brought to you for free and open access by the Animal Science Reports at Open PRAIRIE: Open Public Research Access Institutional Repository and Information Exchange. It has been accepted for inclusion in South Dakota Poultry Field Day Proceedings and Research Reports, 1985 by an authorized administrator of Open PRAIRIE: Open Public Research Access Institutional Repository and Information Exchange. For more information, please contact michael.biondo@sdstate.edu.



DRIED COLOSTRUM FOR GROWING TURKEYS

¹
Ali B. Kashani and C. Wendell Carlson¹

Department of Animal and Range Sciences

POULTRY 85-4

The importance of fresh whole colostrum for the young animal has long been recognized. Because of its content of antibodies and other possible immune-producing substances, colostrum enhances the young's growth performance and frequently aids in preventing some or much mortality. With the possible unavailability of antibiotics (that have been in use for over 35 years to enhance growth and survivability of turkey poults especially) other substances are being considered for their replacements. As examples, high levels of copper salts (providing upwards of 100 ppm copper) and several probiotics have been evaluated for this purpose. Dried colostrum is perhaps the latest additive to be so tested.

Levels of 2-1/2 and 5 lbs. of dried colostrum per ton of feed were fed to turkey poults to 4 weeks of age on normal diets as well as those made to be subnormal in calcium and in both calcium and phosphorus. The results are shown in Table 1.

With the control or good diet there appeared to be a real growth response due to the addition of both colostrum levels; however overall, the differences were not significant. Feed/gain values showed the same trends, but the differences were not significant. A disturbing factor was the very high rate of mortality even among the poults on the good diets.

A repetition of a portion of this study was therefore conducted with the results at three weeks shown in Table 2. There was no growth response evident, but the livability was much improved. It would appear that the previously encountered stress was avoided.

It seems therefore, that dried colostrum may have a place in turkey production when the stresses are severe. The combined effects of colostrum and antibiotics were not evaluated in these studies. The lack of major quantities of dried colostrum being available could limit its usefulness.

¹
Superintendent, Poultry Research Center and Professor Emeritus.

Table 1. Effect of Calcium, Phosphorus and Colostrum Levels on Large White Turkey Poults (Experiment 1)

Treatments	Avg. Body Weight gm			Avg. Feed:gain		Avg. % of Bone		% Mortality
	Initial	2 wks	4 wks	2 wks	4 wks	% DM	% Ash	
1. Basal (1.2% calcium, .6% available P)	61	278	784	1.23	1.61	41.4	54.8	12.2
2. Basal + colostrum 1x (2 1/2 lbs/ton)	63	312	863	1.22	1.59	42.2	55.4	24.5
3. Basal + colostrum 2x (5 lbs/ton)	60	303	877	1.16	1.52	43.0	55.9	23.3
4. Low calcium (.6% calcium, .6% available P)	61	309	871	1.19	1.52	40.3	55.0	22.2
5. Low calcium + colostrum 1x	62	280	800	1.21	1.59	39.3	54.5	16.7
6. Low calcium + colostrum 2x	62	283	829	1.21	1.55	41.8	54.4	28.9
7. Low calcium, low P (.6% Ca, .3% available P)	59	220	435	1.32	1.57	39.3	48.0	87.8
8. Low Ca + low P + colostrum 1x	63	227	547	1.32	1.85	33.2	42.5	46.6
9. Low Ca + low P + colostrum 2x	62	249	561	1.23	1.51	33.2	43.6	40.0
<u>Effect of Ca + P</u>								
control	62	297 ^a	841 ^a	1.20 ^a	1.57 ^a	42.2 ^a	55.4 ^a	20.0 ^a
low Ca	62	290 ^a	833 ^a	1.21 ^a	1.55 ^a	40.4 ^b	54.6 ^b	22.6 ^b
low Ca + low P	61	232 ^b	514 ^b	1.29 ^a	1.64 ^a	34.1 ^b	43.9 ^b	58.2 ^b
<u>Effect of colostrum</u>								
no colostrum	60	269 ^a	697 ^a	1.25 ^a	1.56 ^a	40.6 ^a	53.9 ^a	40.7 ^a
1x colostrum	63	273 ^a	736 ^a	1.25 ^a	1.67 ^a	38.1 ^a	51.2 ^a	29.3 ^a
2x colostrum	61	278 ^a	756 ^a	1.20 ^a	1.52 ^a	39.8 ^a	52.4 ^a	30.7 ^a

^{a, b} Values with unlike letter are statistically different.

¹ Normal protein starter diets adequate in all nutrients (NRC, 1977). There were 3 groups of six males fed each treatment.

² Fat free dry bone.

Table 2. Effect of Dried Colostrum
on Turkey Poults (Experiment 2)

Treatment	3 wk wt. gm	Mort- ality %	Feed/ Gain
(As 1 - Exp. 1)	407	5.0	1.40
2 - 1&2-1/2 lb. colostrum/T	369	8.5	1.57
3 - 1&5 lb. colostrum/T	418	6.3	1.46
4 - as 7, low Ca and P	292	80.0	--
5 - 4+2-1/2 lb. colostrum/T	267	80.0	--
6 - 4+5 lb. colostrum/T	355	95.0	--