7230 P

Results of Prolonged Increased Iodine Feeding.

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The advisability of adding iodine to the diet of man and animals has long been questioned. The herd of Brown Swiss dairy cows at the farms of Mr. William Wallace Kincaid,* Ellerslie-on-Niagara, New York, had been fed daily large amounts of iodine during a period of 2 years and 11 months. They were, consequently, satisfactory experimental animals for investigating the effects of prolonged increased iodine feeding. The blood iodine was of particular interest. The normal bovine blood iodine is 13,[1] or 14[2] gamma %. In 19 cows of this herd the blood iodine ranged from 35.9 to 78.1 gamma %, averaging 55.

Analyses of the feed given these cows daily, revealed the increased iodine intake (Table I). Since the high milk producing cows were

TABLE I.
Daily Iodine Intake.

Source	I. Mg. %	Kg. Fed Daily	Mg. I. Fed Daily
"Grain Mix"	2.0060	2.721 to 9.071 (a)	54.59 to 181.98 (a)
Alfalfa Hay	.0326	11.339	3.70
Carrots	.0099	9.072	0.90
Wet Steamed Feed	.0508	9.072	4.91
Ensilage	.0391	10.886	4.26
Water	.0007	31.751 to 45.359	0.23 to 0.33

fed more of the "grain mix" they ingested greater amounts of iodine (Table I, a). The natural iodine content of the "grain mix" had been increased by the addition of potassium iodide, fish meal, and kelp. The iodine content of this thoroughly mixed food was 2.006 mg. per 100 gm. The daily iodine intake of the cows varied from 68.6 to 196.1 mg.

Large amounts of iodine, from 51.7 to 163.4 mg. daily, were eliminated, Table II. More was eliminated in the urine than in either the milk or the feces. The high milk producing cows likewise showed the greater elimination of iodine, (Table II, a).

* We express our appreciation of Mr. Kincaid's generous cooperation.

[1] Kendall, E. C., *J. Biol. Chem.*, 1920, **43**, 149.

[2] Phillips, F. J., and Curtis, G. M., unpublished studies.

TABLE II.
Daily Iodine Output.

Origin	Output	I. Gamma %	Mg. I.
Urine	10.1 to 18.6 l.	269 to 1005	34.6 to 130.0 (a)
Feces	9.1 to 29.5 k.	140 to 468	15.2 to 71.5 (a)
Milk	7.7 to 27.5 l.	15.7 to 181.9	1.5 to 19.5 (a)

The milk iodine was increased. It ranged from 15.7 to 181.9 gamma per 100 cc., averaging 66.4. The average iodine content of milk from cows on usual feed is 5 gamma per 100 cc.[2, 3]

All physical examinations showed the cows to be in very good general condition. Cows of the herd previously sterile have become pregnant and borne normal calves during this regimen of feeding. The calves developed normally. No objective symptoms of abnormalities were discerned in the entire herd. There was no evidence of hyperthyroidism. The milk and butter fat production of the entire herd has definitely increased during this period of increased iodine feeding. During the year 1932 one of these cows became one of the highest milk producers of the breed.†

7231 C

Scalp Products and Hair as a Culture Medium for Certain Pathogenic Fungi.

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In the present work observations were made of the growth of certain pathogenic fungi on hair. Bonar and Dreyer[1] used bundles of hair inoculated with trichophyton interdigitale to test antiseptic properties of solutions. Tona[2] observed the growth of trichophyton on hair in the test tube. The growth of the various pathogenic fungi (dermatophytes) on a medium of scalp products and hair seems to have received little attention.

The medium used consisted of barber shop hair cleansed with water, placed in petri dishes and test tubes and autoclaved. It was

[3] Schwaibold, J., and Scharrer, K., *Biochem. Z.*, 1927, **180**, 334.

† Milk—21, 924.9 lb., butter fat—1,037.1 lb., % butter fat—4.73, for 1932, by G. V. L. No. 18823.

[1] Bonar, Lee, and Dreyer, A. D., *Am. J. Pub. Health*, 1932, **22**, 909.

[2] Tona, A., *Ann. de dermat. et syph.*, 1928, **10**, 194.