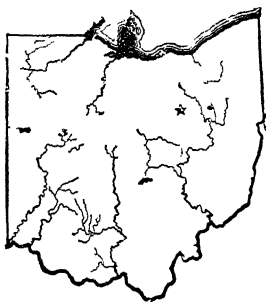


THE IODINE CONTENT OF FOODS

OHIO  
Agricultural Experiment  
Station

WOOSTER, OHIO, U. S. A., JUNE, 1916

*BULLETIN 299*



The Bulletins of this Station are sent free to all residents of the State who request them. When a change of address is desired, both the old and the new address should be given. All correspondence should be addressed to  
EXPERIMENT STATION, Wooster, Ohio

# OHIO AGRICULTURAL EXPERIMENT STATION

## BOARD OF CONTROL

G. E. JOBE, *President*.....Cedarville  
GEORGE E. SCOTT.....Mt. Pleasant  
CHARLES FLUMERFELT.....Old Fort  
MARTIN L. RUETENIK.....Cleveland  
JAMES DEVOL.....Marietta

WILLIAM H. KRAMER, *Secretary-Treasurer*

## STATION STAFF

CHARLES E. THORNE, M. S. A., *Director*

### ADMINISTRATION

THE DIRECTOR, *Chief*  
WILLIAM H. KRAMER, *Bursar*  
W. K. GREENBANK, *Librarian*  
L. L. RUMMELL, M. S., *Editor*  
HORATIO MARKLEY, *In Charge of Exhibits*

### AGRONOMY

C. G. WILLIAMS, *Associate Director, Chief*  
F. A. WELTON, M. S., *Associate*  
J. B. PARK, Ph. D., *Associate*<sup>1</sup>  
WILLIAM HOLMES, *Farm Manager*  
C. A. PATTON, *Assistant*  
C. A. GEARHART, B. S., *Assistant*

### ANIMAL HUSBANDRY

B. E. CARMICHAEL, M. S., *Chief*  
J. W. HAMMOND, M. S., *Associate*  
DON C. MOTE, M. S., *Assistant*  
W. J. BUSS, *Assistant*  
W. L. ROBISON, B. S., *Assistant*  
D. G. SWANGER, B. S., *Assistant*

### BOTANY

A. D. SELBY, B. S., *Chief*  
TRUE HOUSER, B. S., *Asst. (Germantown)*  
D. C. BARCOCK, A. B., *Assistant*  
RICHARD WALTON, B. S., *Assistant*  
J. G. HUMBERT, B. S., *Assistant*  
WAYNE VAN PELT, B. S., *Assistant*  
R. C. THOMAS, M. A., *Assistant*<sup>2</sup>

### CHEMISTRY

J. W. AMES, M. S., *Chief*  
G. E. BOLTZ, B. S., *Assistant*  
J. A. STENIUS, B. S., *Assistant*  
C. J. SCHOLLENBERGER, *Assistant*  
MABEL K. CORBOULD, *Assistant*  
T. E. RICHMOND, M. S., *Assistant*

### CLIMATOLOGY

W. H. ALEXANDER, *Chief (Columbus)*<sup>3</sup>  
C. A. PATTON, *Observer*

### DAIRYING

C. C. HAYDEN, M. S., *Chief*  
A. E. PERKINS, M. S., *Assistant*  
R. I. GRADY, B. S., *Assistant*

### ENTOMOLOGY

H. A. GOSSARD, M. S., *Chief*  
J. S. HOUSER, M. S. A., *Associate*  
R. D. WHITMARSH, M. S., *Assistant*<sup>2</sup>  
T. L. GUYTON, M. S., *Assistant*  
J. R. STEAR, B. S., *Assistant*

### FORESTRY

EDMUND SECREST, B. S., *Chief*  
J. J. CRUMLEY, Ph. D., *Assistant*  
A. E. TAYLOR, B. S., *Assistant*  
J. W. CALLAND, B. S., *Assistant*

### HORTICULTURE

W. J. GREEN, *Vice Director, Chief*  
F. H. BALLOU, *Assistant (Newark)*  
PAUL THAYER, M. S., *Assistant*  
J. B. KELL, *Orchard Assistant*  
S. N. GREEN, *Garden Assistant*  
I. P. LEWIS, B. S., *Field Assistant*

### NUTRITION

E. B. FORBES, Ph. D., *Chief*  
J. O. HALVERSON, Ph. D., *Assistant*  
L. E. MORGAN, M. S., *Assistant*  
J. A. SCHULZ, B. S., *Assistant*

### SOILS

THE DIRECTOR, *Chief*  
C. G. WILLIAMS, *Associate in soil fertility*  
J. W. AMES, M. S., *Asso. in soil chemistry*  
E. R. ALLEN, Ph. D., *Asso. in soil biology*<sup>4</sup>  
F. E. BEAR, Ph. D., *Associate*<sup>1</sup>  
B. S. DAVISSON, M. A., *Assistant*  
A. BONAZZI, B. Agr., *Assistant*  
O. P. GOSSARD, B. S., *Assistant*  
G. K. SIVASLIAN, B. S., *Assistant*  
J. T. PARSONS, B. A., *Assistant*

### FARM MANAGEMENT

C. W. MONTGOMERY, *Chief*  
R. R. BARKER, B. S., *Assistant*

### DISTRICT EXPERIMENT FARMS

Northeastern Test-Farm, Strongsville  
J. PAUL MARKLEY, *Superintendent*  
Southwestern Test-Farm, Germantown  
HENRY M. WACHTER, *Superintendent*  
Southeastern Test-Farm, Carpenter  
S. C. HARTMAN, *Superintendent*  
Northwestern Test-Farm, Findlay  
JOHN A. SUTTON, *Superintendent*

### COUNTY EXPERIMENT FARMS

Miami Co. Experiment Farm, Troy  
Paulding Co. Experiment Farm, Paulding  
Madison Co. Experiment Farm, London  
F. M. LUTTS, *Supt.*, Norwalk  
Clermont Co. Experiment Farm, Owensville  
Hamilton Co. Experiment Farm,  
Mt. Healthy  
W. J. SMITH, *Supt.*, Mt. Healthy  
Washington Co. Experiment Farm, Fleming  
Washington Co. Truck Experiment Farm,  
Marietta  
Belmont Co. Experiment Farm,  
St. Clairsville  
S. C. HARTMAN, *Supt.*, Marietta  
Mahoning Co. Experiment Farm, Canfield  
Trumbull Co. Experiment Farm, Cortland  
M. O. BUGBY, *Supt.*, Canfield

### STATE FORESTS

Waterloo State Forest, New Marshfield  
Dean State Forest, Steece

<sup>1</sup>In cooperation with the College of Agriculture, Ohio State University, Columbus.

<sup>2</sup>On leave of absence.

<sup>3</sup>In cooperation with the U. S. Department of Agriculture.

<sup>4</sup>In cooperation with the U. S. Department of Agriculture.

## TABLE OF CONTENTS

	Page
INTRODUCTION .....	487
METHOD OF ANALYSIS.....	489
RESULTS OF ANALYSES .....	492
Table I, Alphabetic summary, grouped according to kind of product...	493
Table II, Extended data, grouped according to kind of product.....	496
Table III, Geographic arrangement of extended data.....	522
Discussion of results.....	544

## FOREWORD

As far as is now known the function of the thyroid gland is metabolization of iodine, in order that the iodine thus metabolized may perform a larger role in human and animal economy.

At certain periods of life when the activities of the organism are increased, and consequently an increased metabolization of iodine is required, the thyroid may enlarge as a result of its increased activity. This enlargement of the thyroid appears most commonly at the period of adolescence. The administration of iodine during that period, however, may prevent thyroid enlargement, or if the thyroid is already enlarged it diminishes its size, and may reduce it to normal.

In view of this fact and of the fact that goiter is prevalent in some regions of the United States while in others it is rare, it would seem to be important to know whether there is a difference between the iodine content of foods in areas where goiter is prevalent as compared with areas where goiter is rarely seen.

Such a research as that undertaken by Dr. Forbes and his associates may therefore have an important bearing upon the better understanding and control of this disease.

G. W. Crile

# BULLETIN

OF THE

## Ohio Agricultural Experiment Station

---

NUMBER 299

JUNE, 1916

---

### THE IODINE CONTENT OF FOODS

E. B. FORBES AND F. M. BEEGLE, WITH COLLABORATION BY  
C. M. FRITZ, L. E. MORGAN AND S. N. REHUE<sup>1</sup>

Among the several mineral elements present in foods in minute quantities especial interest attaches to iodine, on account of its important function in animal metabolism. The only tissue in the bodies of vertebrate animals which contains iodine in apparently essential relations is the thyroid gland. The iodine content of the thyroid may be increased by the administration of iodine, and one of the active principles of this remarkable organ is its iodine-containing constituent. Through abnormalities in the functional efficiency of the thyroid, then, as made manifest by the extreme prevalence of goiter in certain regions, this matter of the iodine content of foods becomes one of much importance.

A fact tending to emphasize the significance of the iodine content of foods is the well-known responsiveness of the thyroid in certain disordered conditions, to iodine treatment. A fact tending to minimize the value of iodine estimations in foods is that the total iodine content of the body is so exceedingly small that it is quite conceivable that the organism could glean its entire iodine requirement from foods containing so little of this element that its presence would escape detection by the best of our methods of chemical estimation of iodine.

A marked characteristic in the distribution of goiter is its extreme and continuous prevalence in definitely localized situations. A natural inference from this fact is that there is a local cause for the disorder. The idea that goiter is due to the foods or drinking water of the regions where it is found is very old; and that the

---

<sup>1</sup>The authors take pleasure in expressing their great indebtedness to Dr George W. Crile for suggesting this study and for valued advice and assistance.

We also gratefully acknowledge the hearty and helpful cooperation received from a large number of the directors of the agricultural experiment stations of the United States, and from other members of the station staffs, in the collection of the large series of crop samples involved in this investigation.

iodine content of the foods and water should determine the condition and efficiency of the thyroid is as natural an hypothesis. In spite of the fact that these ideas have been constantly before us, however, since the beginning of the discussion of the cause of goiter, we have no direct evidence that they are in harmony with the facts. On this account they have been abandoned by many students of the disease, as unworthy of further consideration. Others adhere to this theory as so logical, especially in the light of the satisfactory response of incipient cases of goiter to iodine treatment, as to call for further extensive work of a sort to establish definitely the relation of goiter to the iodine content of the dietary.

In this paper we present iodine estimations on a large number of common foods purchased in the market, to show in what food-stuffs iodine is found, and to serve as a basis for further studies. We also include a large number of iodine estimations on the same kinds of food products grown under various conditions as to soil, climate, artificial fertilization and geographic location. This latter group of foods has been collected through the state agricultural experiment stations, and a large proportion of these institutions in the United States have contributed materials for this study. This latter series of estimations was intended especially as an investigation of the geographic distribution of iodine in foods, with the idea that the relation of the results to the geographic distribution of goiter might be enlightening. Letters of inquiry to the state boards of health and to the Surgeon General of the United States, however, revealed the fact that we have no accurate information as to the distribution of goiter in this country. Through the publications of physicians and the reports of hospitals, with occasional studies by public school medical inspectors, we have come to understand, in a very general way, in what regions goiter is especially prevalent, but this information does not furnish a basis for even an attempt at numerical expression, and is unsatisfactory for the purpose of comparison with our data on the iodine content of foods from the several regions. In this study we have made no attempt to map the prevalence of goiter in this country, but sets of food samples have been collected from many regions of interest in this connection either because of the local prevalence or because of the rarity of this disorder. Interest also attaches to the iodine content of foods from certain situations because of the association of goiter in these localities with a pathological condition of farm animals, especially swine, which results in the birth of the young in a hairless state. This

matter is of much economic importance in certain parts of Montana and Washington, and is being made the subject of experimental inquiry in these states.

In this study a very wide range of plant and animal products has been included. The drinking water was not investigated.

#### METHOD OF ANALYSIS

Because of the very small amounts in which iodine is found in foods the accuracy of the method of estimation followed is especially important. Practically all of the results obtained in this study represent quantities much less than the negligible errors of ordinary chemical analysis. Fortunately iodine is an element which is recognizable in extremely small quantities. The method of estimation used was that of Kendall.<sup>1</sup> Throughout this study the analytical work was checked by numerous repeats and by recovery of added amounts of iodine. This method (Kendall's), which was developed especially in the analysis of thyroid tissue, was found satisfactory for use with miscellaneous animal products, and also with nuts, fruits and vegetables, with no considerable modification. Iodine was also found to be accurately recoverable from water solutions of the reagents used. With roughages and other foods containing much mineral matter, however, the method was difficult of operation, and for such use stands in need of further thorough-going study, though the method as modified by Kendall for use in the presence of bromides and chlorides was found satisfactory, and no difficulty was experienced in making a complete recovery of known amounts of iodine from solutions of common salt. A considerable number of samples of this salt were included in this study. The following is a complete statement of the method of Kendall:

#### THE DETERMINATION OF SMALL QUANTITIES OF IODINE IN ORGANIC COMBINATION

For the determination of iodine in thyroid preparations, the most satisfactory weight of the material to be analyzed is 0.5 gram. Whether this is in the form of a dry powder, a solution or a moist precipitate on a filter paper, the same procedure is carried out. The material is placed in a 5.9-centimeter nickel crucible and moistened with 5 to 6 cubic centimeters of 30 percent sodium hydroxide; 10 to 15 grams of stick sodium hydroxide which has been broken into small pieces is added and the crucible placed on a hot-plate until the excess of water is evaporated and the contents have a thick, syrupy consistency. If but little organic matter is present, there is a tendency for spattering of fine

---

<sup>1</sup>Kendall, E. C.; Jour. Biol. Chem., 19 (1914), 251-256.

drops during the evaporation of the excess water. If some organic substance is dissolved in the solution, this spattering is prevented. A small amount of gallic acid is suitable and sufficient for this purpose.

For the fusion of the organic matter with the sodium hydroxide it is necessary to heat the bottom of the large crucible<sup>1</sup> to a dull red heat. If the crucible is heated too much, the fusion in the small crucible will creep up the side and sodium hydroxide will volatilize with loss of iodine. If the large crucible is not heated sufficiently, the destruction of organic matter will not be complete. However, there is a wide range of temperature between the two limits and after a little experience no difficulty is encountered.

When the sodium hydroxide is first heated in the presence of water, considerable foaming is produced. This, however, does not extend more than half way up the side of the crucible. As the heating continues, the foaming becomes less and after 5 to 10 minutes the melt settles to the bottom. Bubbles will continue to be given off for some time (5 minutes or so), depending upon the nature of the organic matter.

When the melt has settled to the bottom and only a few bubbles of gas are being liberated, the small crucible is removed with crucible tongs and partly cooled by agitating the contents with a rotary motion. This will also remelt and carry to the bottom any particles of the fusion which have solidified on the cooler sides of the crucible.

Five to ten milligrams of potassium nitrate is now added. This will oxidize the remaining organic matter and cause a liberation of bubbles. If only a few bubbles are liberated, a second addition of 5 to 10 milligrams of potassium nitrate will not cause a further liberation of bubbles and the oxidation of the organic matter is complete. If the second addition of nitrate causes a further oxidation, repeated additions of 5 to 10 milligrams of the nitrate are made until no more bubbles of gas are produced by the addition of the nitrate. The melt is now poured into the shallow cover of the 5.9-centimeter crucible and allowed to cool.

The entire time required for the fusion is 10 to 15 minutes. The writer finds it most convenient to use two crucible-supporting cylinders and to carry on two fusions at the same time.

When the melt and crucible are cool, they are placed in a tall beaker of from 600 to 800 cubic centimeters capacity together with a little talcum powder and 125 to 150 cubic centimeters of water. The beaker is placed on a hot-plate. After the melt is dissolved, it is transferred to a 500 cubic centimeter Erlenmeyer flask. It should be a colorless, clear solution with a volume of about 200 cubic centimeters. To the solution 1 cubic centimeter of 10 percent sodium bisulphite<sup>2</sup> and a few drops of methyl orange are added. The solution is cooled by immersing the flask in cold running water. When cool, 85 percent phosphoric acid is added by allowing the acid to run directly into the flask from a pipette or syphon having a small delivery tube. The flask is vigorously and constantly shaken with a rotary motion to expel the carbon dioxide. As the indicator begins to turn pink the neutralization is finished slowly so that only

<sup>1</sup>For details as to apparatus used see the original.

<sup>2</sup>The bisulphite is added to supply a reducing action to the solution which prevents the loss of iodine. As the iodine is kept in the form of hydriodic acid, no loss can occur. More than 1 c. c. of bisulphite should not be added as it produces hydrobromic acid from the bromine and this in excess reduces iodic acid, giving low results.



a few drops are added after the indicator has changed. This is a very important condition to satisfy, as too much acid will cause low results. A few drops of bromine are now added and the solution is shaken until the bromine colors the solution a distinct yellow. This is essential as the addition of too little bromine will prevent the subsequent determination of the iodine.

The volume of the solution should be made between 250 and 300 cubic centimeters. The flask is placed on the hot-plate and boiled for 8 to 10 minutes. The talcum powder causes a rapid boiling and the bromine is quickly expelled. When the solution becomes colorless,<sup>1</sup> the flask is removed from the hot-plate, five to ten drops of 5 percent solution of sodium salicylate<sup>2</sup> is added, and the flask is immersed in cold water. The volume of the solution after boiling should not be less than 175 to 200 cubic centimeters, as the high concentration of the salts makes the end-point less sharply defined if the solution is boiled down to a small volume.<sup>3</sup>

When the solution is cool, 5 cubic centimeters of 10 percent potassium iodide is added. If there is not an immediate liberation of iodine, 3 to 4 cubic centimeters of 85 percent phosphoric acid is added.<sup>4</sup>

The liberated iodine is now titrated with N/200 sodium thiosulphate.<sup>5</sup> The titration is finished with the aid of the blue starch-iodine color. For this, 0.5 percent solution of Kahlbaum's soluble starch is recommended.

In general we used 1½- to 2-gram samples of the food products, usually in a water-free condition. With samples of this size it was found necessary to use 15 to 20 grams of sodium hydrate, in the fusion, instead of 10 to 15 grams as used by Kendall on 0.5-gram portions of thyroid tissue.

---

<sup>1</sup>The bromine destroys the color of the methyl orange.

<sup>2</sup>This is best prepared by dissolving 5 grams of pure salicylic acid in dilute sodium hydroxide and diluting to 100 c. c. The solution should be only slightly alkaline.

<sup>3</sup>Experience has shown that practically all samples of distilled water will take up small amounts of iodine. As this reducing action is destroyed by boiling with bromine, this source of error is entirely controlled under the conditions of the method as described above. However, a considerable error may result in the determination of iodine if any distilled water is added after the bromine has been boiled out of solution.

<sup>4</sup>The acid is added after boiling out the bromine rather than before, at the acidification of the fusion melt, as low results may occur when the solution is boiled in the presence of a large excess of phosphoric acid. No error is caused by adding even a large excess of the acid to the cold solution.

<sup>5</sup>The most convenient strength of sodium thiosulphate for amounts of iodine ranging from 0.5 to 5 mgm. is 0.005 N. This is not a stable solution and must be frequently restandardized. A convenient method proposed by Hunter is to prepare a solution of potassium acid iodate which is equivalent to a known weight of iodine. The strength of any sample of thiosulphate is readily found by titrating the iodine liberated by the acid iodate solution, which retains its strength indefinitely. The iodine equivalent of the potassium iodate is found as follows: Prepare a 0.1 N solution of potassium acid iodate  $KIO_3 \cdot HIO_3$  by dissolving 3.249 grams of the salt in 1 liter of water. This solution diluted twenty times will be approximately 0.005 N. Dissolve a known weight of pure iodine (approximately 1 gram) in 1 liter of water containing 5 to 6 grams of sodium hydroxide. Dilute this ten times. One c. c. of this solution will contain 0.1 mgm. of iodine. Measure 25 c. c. of this solution into a 500 c. c. flask, and dilute to 200 c. c.; add 5 to 10 drops 85 percent phosphoric acid and a few drops of bromine; boil out the bromine; add 5 to 10 drops of 5 percent sodium salicylate, cool, add 5 to 10 grams of sodium chloride, then add 5 c. c. 10 percent potassium iodate, and titrate the liberated iodine with approximately 0.005 N thiosulphate. This will establish the relation between "original iodine" and the 0.005 N thiosulphate, and from this the iodine equivalent of the potassium acid iodate can be found by adding a known volume of the acid iodate to 150 c. c. of water containing potassium iodide, and 5 drops of 85 percent phosphoric acid and 5 to 10 grams of sodium chloride. When a small amount of iodic acid is in a solution which contains but a small amount of salts the reaction with potassium iodide is retarded and the end-point of the titration with thiosulphate is uncertain. The addition of 5 to 10 grams of sodium chloride to such a solution accelerates the liberation of iodine and makes the end-point sharp and accurate. The sodium chloride must not be added until *after* the solution has been boiled with bromine.

Especial attention was found necessary in the acidification with phosphoric acid. One or two drops of phosphoric acid in excess was found not to be sufficient to assure our ability to boil off all of the bromine, the result being high figures for iodine; with 1 cubic centimeter of phosphoric acid in excess, however, we were able to boil off all of the bromine and at the same time to accomplish a complete recovery of known amounts of added iodine.

We would also emphasize the fact that in boiling off the bromine the boiling must be continued for a few minutes after the solution has become colorless, before the addition of the sodium salicylate; otherwise sufficient traces of bromine remain to cause a pink color in the titration. In our use of this method we found it accurate to 0.000003 of a gram of iodine.

#### RESULTS OF ANALYSES

For convenience of access we have followed a three-fold arrangement of the data: first (page 493) an alphabetic list of the kinds of foods involved, with a statement of the number of samples of each kind analyzed, the number containing iodine, and the maximum amount of iodine found; second (page 496) a grouping of the analyses according to the general class or character of the products; and third (page 522) a geographic arrangement, the analyses being grouped by place of origin—the states, towns within states and foodstuffs from each locality being arranged alphabetically.

TABLE I.—THE IODINE CONTENT OF FOODS—ALPHABETIC ARRANGEMENT

(Dry Basis Unless Otherwise Stated)

	Number of samples	Number containing iodine	Maximum iodine content
			Percent
Agar agar.....	1	1	0.005505
Alfalfa hay.....	25	3	Trace
Alfalfa leaves.....	1		
Almond.....	1		
Apple.....	6	1	Trace
Apple, canned.....	1		
Apple, dried.....	1		
Apricot.....	2	1	Trace
Apricot, preserved.....	1		
Bacon.....	1		
Banana.....	1		
Barley.....	22	5	Trace
Beans (variety not recorded).....	3	2	Trace
Beans, brown.....	2	1	.000244
Beans, Florida Velvet.....	1		
Beans, green, stringless.....	1		
Beans, Lima.....	2		
Beans, navy.....	1	1	Trace
Beans, string.....	2		
Beef round.....	1		
Beets.....	18	6	.000343
Beets, red.....	7	3	Trace
Beets, sugar.....	1		
Beggar weed.....	1		
Blackberry.....	1		
Blood albumen.....	2		
Blueberries.....	1	1	Trace
Brain, hog.....	1		
Brazil nuts.....	1		
Brewer's grains.....	1	1	Trace
Buckwheat flour.....	1		
Butter, creamery.....	1	1	*Trace
Cabbage.....	9	3	Trace
Cane, seed.....	2		
Carrots.....	14	4	.000185
Celery.....	4	2	.001697
Cheese, cream.....	1		
Chocolate.....	2		
Cinnamon.....	1	1	Trace
Clams.....	1		
Clover, alsike.....	2	1	Trace
Clover, bur.....	1		
Clover, crimson.....	1		
Clover, red.....	100	17	.000280
Clover, seed.....	1		
Clover, spotted bur.....	1	1	.000254
Clover, sweet, hay.....	2		
Clover, white.....	1	1	Trace
Cloves.....	1		
Cocoa.....	1		
Cocanut.....	1		
Codfish, shredded.....	1	1	*Trace
Coffee.....	1		
Corn (variety not recorded).....	17	4	.000280
Corn, dent.....	3		
Corn, dent, immature.....	3		
Corn, flint.....	7		
Corn, sweet.....	4	1	Trace
Corn germ.....	1		
Corn plant.....	1		
Corn silage.....	4	2	Trace
Corn stover.....	5	2	.001279
Cowpea hay.....	3	2	.000380
Cowpeas.....	3	2	.000253
Cottonseed.....	1		
Cottonseed meal.....	2	1	.000280
Cottonseed oil.....	1		
Cranberries.....	1		
Cucumbers.....	3	2	.000666
Currants, canned.....	1		

\*Fresh basis.

TABLE I.—THE IODINE CONTENT OF FOODS—ALPHABETIC  
ARRANGEMENT—Continued  
(Dry Basis Unless Otherwise Stated)

	Number of samples	Number containing iodine	Maximum iodine content
			Percent
Dates.....	1		
Distiller's grains.....	1	1	0.000280
<i>Dolichos biflorus</i> , seed.....	1		
<i>Dolichos</i> , <i>sp.</i> , seed.....	1		
Egg, hen's.....	1	1	Trace
Endive.....	1	1	.000354
Feces, cow's.....	18		
Flaxseed.....	1		
Feterita, seed.....	1		
Figs.....	1		
Ginger.....	1	1	Trace
Gluten feed.....	1	1	Trace
Gluten flour.....	1	1	Trace
Grass (variety not recorded).....	1	1	Trace
Grass, Bermuda.....	2	1	Trace
Grass, blue, Kentucky.....	3	1	.000750
Grass, blue, Texas.....	1	1	.000312
Grass, canary.....	1		
Grass, mixed.....	1		
Grass, native, Arizona.....	1		
Grass, native, New Mexico.....	1	1	Trace
Grass, oat.....	2		
Grass, orchard.....	1	1	Trace
Grass, <i>Paspalum dilatatum</i> .....	1	1	Trace
Grass, redtop.....	1		
Grass, rescue ( <i>B. schraderi</i> ).....	1		
Grass, rye.....	4	1	Trace
Grass, Sudan.....	1		
Guar, seed.....	1	1	Trace
Hair and hoof.....	1	1	.000774
Halibut, smoked.....	1		
Ham, smoked.....	1		
Heart, beef.....	1		
Herring, boneless.....	1		
Irish moss.....	1	1	.025120
Kafir corn.....	1		
Kale.....	2		
Kohl rabi.....	1	1	Trace
Lard.....	1		
Lemon.....	1		
Lentils.....	1		
Lettuce.....	1	1	.001230
Linseed meal.....	1	1	.000280
Liver, calf.....	1	1	*Trace
Lobster.....	1	1	*Trace
Mangel wurzel.....	2		
Milk, cow's.....	18		
Millet, plant.....	1	1	Trace
Millet, seed.....	1		
Millet, straw.....	1		
Milo maize, dwarf.....	2		
Milo maize, seed.....	1		
Molasses.....	1		
Mutton chop.....	1	1	*Trace
Nucleic acid (yeast).....	1	1	Trace
Nutmeg.....	1		
Oat hay.....	1		
Oat plant.....	4	1	.000390
Oatmeal.....	1	1	Trace
Oat straw.....	3	1	.000649
Oats.....	73	12	.000580
Oats, winter.....	6	1	Trace
Olive oil.....	1		
Olives, pickled.....	1		
Onions.....	15	5	.000433
Orange.....	1	1	Trace
Oysters.....	1	1	*Trace
Parsnip.....	6	2	Trace
Pasture grass and white clover.....	1		
Peach.....	2		
Peach, preserved.....	1		

\*Fresh basis

TABLE I.—THE IODINE CONTENT OF FOODS—ALPHABETIC  
ARRANGEMENT—Concluded  
(Dry Basis Unless Otherwise Stated)

	Number of samples	Number containing iodine	Maximum iodine content
			Percent
Peach, spiced.....	1		
Peanuts.....	1		
Pearl barley.....	1	1	Trace
Pearl hominy.....	1		
Pear.....	2		
Pear, canned.....	1		
Peas (variety not recorded).....	1		
Peas, dried.....	2	2	Trace
Peas, field.....	3	1	Trace
Peas, field, hay.....	1	1	Trace
Peas, garden.....	2		
Pecans.....	1		
Pepper, black.....	1		
Pepper, Cayenne.....	1		
Pepper, mango.....	2		
Plum.....	2		
Pork, salt, fat.....	1	1	*Trace
Pork steak.....	1		
Potatoes.....	19	6	0.001126
Potatoes, sweet.....	2		
Prune.....	2		
Pumpkin.....	1		
Raisin.....	1		
Raspberry, red.....	1	1	Trace
Rhubarb.....	2	1	.000506
Rice polish.....	1	1	Trace
Rice, polished.....	1	1	Trace
Roe (fish eggs).....	2	1	*Trace
Rutabaga turnip.....	6	1	.000292
Rye.....	6		
Rye, plant.....	1	1	Trace
Salmon.....	1		
Salsify.....	2		
Salt.....	16		
Sardine.....	1	1	*Trace
Shrimp.....	1		
Sorghum, plant.....	3	1	Trace
Sorghum, seed.....	3	1	Trace
Soybeans.....	7	1	Trace
Spinach.....	2	2	Trace
Squash.....	2		
Sudan seed.....	1		
Tankage.....	1	1	Trace
Tapioca.....	1		
Tea leaves.....	1		
Thymus, calf.....	1		
Timothy hay.....	9	2	.000323
Tomatoes.....	2		
Tongue, beef.....	1		
Tuna.....	1		
Turnip.....	5		
Urine, cow's.....	18		
Vetch, plant, Georgia.....	1		
Vetch, plant.....	1		
Vetch, purple, plant.....	1	1	Trace
Vetch, seed.....	1		
Walnuts, black.....	1		
Walnuts, English.....	1		
Water, creek.....	1	1	.000077
Water, well.....	1	1	.000012
Wheat, durum.....	3	1	Trace
Wheat, emmer.....	2		
Wheat, spring.....	19	4	.000301
Wheat, winter.....	199	31	.000768
Wheat bran.....	1	1	Trace
Wheat flour.....	1		
Wheat hay.....	5	1	.000252
Wheat middlings.....	2	1	Trace
Wheat straw.....	5	3	.000526
White fish.....	1		

\*Fresh basis

TABLE II.—THE IODINE CONTENT OF FOODS—CLASSIFIED ARRANGEMENT  
(Dry Basis Unless Otherwise Stated)

Sample No.	Sample	Locality	Iodine content	Remarks
<b>ANIMAL PRODUCTS</b>				
			Percent	
771	Bacon .....	Market .....	None	
776	Beef round.....	Market .....	"	
778	Blood albumen, black.....	Armour & Co., Chicago, Ill.....	"	
779	Blood albumen, "Lot 100".....	Armour & Co., Chicago, Ill.....	"	
781	Brain, hog.....	Market .....	"	
784	Butter, creamery.....	" .....	*Trace	
786	Cheese, cream.....	" .....	None	
790	Clams, Burnham's Tarpon Bay.....	" .....	None	
797	Codfish, shredded.....	" .....	Trace	
806	Egg, hen's.....	" .....	Trace	
876-893	Feces, cow's (18 samples).....	Experiment Station, Wooster, Ohio.....	None	Experiment 8
808	Fish, white.....	Lake Erie.....	None	
478	Hair and hoof from swine.....	Experiment Station, Wooster, Ohio.....	.000774	
812	Halibut, smoked.....	Market .....	None	
813	Ham, smoked.....	" .....	"	
814	Heart, beef.....	" .....	"	
815	Herring, boneless.....	" .....	"	
817	Lard.....	" .....	"	
821	Liver, calf.....	" .....	*Trace	
822	Lobster.....	" .....	*Trace	
894-911	Milk, cow's (18 samples).....	Experiment Station, Wooster, Ohio.....	None	Experiment 8
825	Mutton chop.....	Market .....	*Trace	
832	Oysters.....	" .....	*Trace	
11	Pork, salt, fat.....	Snowflake, Ariz.....	*Trace	
839	Pork, steak.....	Market .....	None	
844	Roe, Nonpareil Brand.....	" .....	*Trace	
845	Roe, white fish.....	" .....	None	
846	Salmon, Seaside Brand.....	" .....	None	
863	Sardine, Margot Brand.....	" .....	*Trace	
864	Shrimp.....	" .....	Trace	
865	Tankage (meat meal).....	Swift & Co., Chicago, Ill.....	Trace	
868	Thymus, calf.....	Market .....	None	
870	Tongue, beef.....	" .....	"	
871	Tuna.....	" .....	"	
912-929	Urine, cow's (18 samples).....	Experiment Station, Wooster, Ohio.....	"	Experiment 8

\*Fresh basis

TABLE II.—THE IODINE CONTENT OF FOODS—CLASSIFIED ARRANGEMENT—Continued  
(Dry Basis Unless Otherwise Stated)

Sample No.	Sample	Locality	Iodine content	Remarks
CEREALS			Percent	
14	Barley, Southern Ohio.....	Exp. Sta., Fayetteville, Ark.....	Trace	
33	Barley.....	Exp. Sta., Berkeley, Cal.....	None	Seed half-filled
39	Barley.....	Exp. Sta., Storrs, Conn.....	"	
53	Barley, winter, six-row, bearded.....	Experiment, Ga.....	Trace	Seed half-filled
80	Barley.....	Substation, Sand Point, Idaho.....	"	
105	Barley.....	Colby, Kan.....	None	
129	Barley.....	Exp. Sta., East Lansing, Mich.....	"	
154	Barley.....	Exp. Sta., Bozeman, Mont.....	Trace	
175	Barley.....	Savage, Mont.....	None	
196	Barley.....	Springhill Creek near Bozeman.....	"	
197	Barley.....	Springhill Creek near Bozeman.....	"	
229	Barley.....	Wibaux, Mont.....	"	
234	Barley, New Zealand.....	Exp. Sta., Reno, Nev.....	Trace	
278	Barley.....	Exp. Sta., Fargo, N. Dak.....	None	
669	Barley.....	Fountain Green, Utah.....	"	
674	Barley.....	Freedom, Utah.....	"	
716	Barley.....	Nephi, Utah.....	"	
692	Barley, Utah Winter.....	Substation, Nephi, Utah.....	"	
693	Barley, Utah Winter.....	Substation, Nephi, Utah.....	"	
725	Barley.....	Oak City, Utah.....	"	
733	Barley.....	Exp. Sta., Pullman, Wash.....	"	
586	Barley, Awnless.....	Clemson College, S. C.....	"	
653	Cane, Black Amber, seed.....	Exp. Sta., College Station, Texas.....	"	
654	Cane, White Amber seed.....	Exp. Sta., College Station, Texas.....	"	
5	Corn.....	Snowflake, Ariz.....	.000280	
16	Corn, mixed Johnson Co. White and Hildreth.....	Exp. Sta., Fayetteville, Ark.....	None	
40	Corn, dent.....	Exp. Sta., Storrs, Conn.....	"	
41	Corn, flint.....	Exp. Sta., Storrs, Conn.....	"	
50	Corn, Poor Land.....	Exp. Sta., Gainesville, Fla.....	"	
125	Corn, flint.....	Exp. Sta., Amherst, Mass.....	"	
132	Corn, flint.....	Exp. Sta., East Lansing, Mich.....	"	
148	Corn.....	Exp. Sta., Agricultural College, Miss.....	Trace	
180	Corn.....	Savage, Mont.....	"	

TABLE II.—THE IODINE CONTENT OF FOODS—CLASSIFIED ARRANGEMENT—Continued  
(Dry Basis Unless Otherwise Stated)

Sample No.	Sample	Locality	Iodine content	Remarks
	CEREALS		Percent	
181	Corn.....	Savage, Mont.....	None	
182	Corn.....	Savage, Mont.....	"	
192	Corn.....	Near Springhill Canon, Bozeman, Mont.....	"	Roasting-ear stage
208	Corn.....	Springhill Creek near Bozeman.....	"	Roasting-ear stage
209	Corn.....	Springhill Creek near Bozeman.....	"	Roasting-ear stage
247	Corn.....	Exp. Sta., New Brunswick, N. J.....	"	Plot 1A—1913
248	Corn.....	Exp. Sta., New Brunswick, N. J.....	"	Plot 1B—1913
266	Corn, white dent.....	Aztec, N. Mex.....	"	
557	Corn.....	Exp. Sta., State College, Pa.....	"	
564	Corn.....	Exp. Sta., Kingston, R. I.....	"	
573	Corn, flint.....	North of Point Judith, R. I.....	"	
574	Corn, flint.....	North of Point Judith, R. I.....	"	
575	Corn, flint, white.....	North of Point Judith, R. I.....	"	
590	Corn.....	Clemson College, S. C.....	"	
675	Corn.....	Freedom, Utah.....	Trace	
676	Corn, flint.....	Freedom, Utah.....	None	
686	Corn, Northwestern Dent.....	Logan, Utah.....	"	
726	Corn.....	Oak City, Utah.....	"	
755	Corn.....	Winthrop, Wash.....	"	
756	Corn.....	Winthrop, Wash.....	"	
799	Corn.....	Market.....	"	
92	Corn, sweet.....	Exp. Sta., Urbana, Ill.....	"	Fed in Experiment 8
134	Corn, sweet, cross between Stowell's Evergreen and Pickett.....	Exp. Sta., East Lansing, Mich.....	"	
576	Corn, sweet.....	North of Point Judith, R. I.....	Trace	
727	Corn, sweet.....	Oak City, Utah.....	None	
161	Corn, p.ant.....	Exp. Sta., Bozeman, Mont.....	"	
657	Peterita.....	Exp. Sta., College Station, Texas.....	"	
659	Kafir corn.....	Exp. Sta., College Station, Texas.....	"	
126	Millet, seed.....	Exp. Sta., Amherst, Mass.....	"	
8	Milo maize, dwarf.....	Snowflake, Ariz.....	"	
660	Milo maize, red, seed.....	Exp. Sta., College Station, Texas.....	"	
661	Milo maize, dwarf, red, seed.....	Exp. Sta., College Station, Texas.....	"	
21	Oats, Early Champion.....	Exp. Sta., Fayetteville, Ark.....	.000311	
22	Oats, Winter Turf.....	Exp. Sta., Fayetteville, Ark.....	Trace	



TABLE II.—THE IODINE CONTENT OF FOODS—CLASSIFIED ARRANGEMENT—Continued  
(Dry Basis Unless Otherwise Stated)

Sample No.	Sample	Locality	Iodine content	Remarks	
	CEREALS		Percent		
37	Oats.....	Exp. Sta., Berkeley, Cal.....	Trace	Seed half-filled	
42	Oats.....	Exp. Sta., Storrs, Conn.....	None		
76	Oats.....	Gooding, Idaho.....	None	Field C, Series II, 5-year rotation	
83	Oats.....	Substation, Sand Point, Idaho.....	None		
106	Oats.....	Colby, Kan.....	Trace		
136	Oats, Danish Grant.....	Exp. Sta., East Lansing, Mich.....	None		
141	Oats No. 295.....	Exp. Sta., Univ. Farm, St. Paul, Minn.....	None		
151	Oats.....	Exp. Sta., Agricultural College, Miss.....	None		
162	Oats, Big Four.....	Exp. Sta., Bozeman, Mont.....	Trace		
163	Oats, Swedish Select.....	Exp. Sta., Bozeman, Mont.....	None		
183	Oats.....	Savage, Mont.....	"		
184	Oats.....	" ".....	"		
185	Oats.....	" ".....	"		
186	Oats.....	" ".....	Trace		
210	Oats.....	Springhill Creek near Bozeman, Mont.....	None		
211	Oats.....	Springhill Creek near Bozeman, Mont.....	None		
231	Oats.....	Wibaux, Mont.....	None	Plot 1A—1914 Plot 1B—1914	
232	Oats.....	Wibaux, Mont.....	.00058		
235	Oats, Abundance.....	Exp. Sta., Reno, Nev.....	Trace		
251	Oats.....	Exp. Sta., New Brunswick, N. J.....	None		
252	Oats.....	Exp. Sta., New Brunswick, N. J.....	None		
268	Oats.....	Aztec, N. Mex.....	None		
281	Oats.....	Exp. Sta., Fargo, N. Dak.....	.00033		
308	Oats.....	Substation, Carpenter, Ohio.....	None		
480	Oats.....	Exp. Sta., Wooster, Ohio.....	"		Five-year Rotation Plot 2
481	Oats.....	" " " ".....	"		
482	Oats.....	" " " ".....	"		
483	Oats.....	" " " ".....	"		
484	Oats.....	" " " ".....	"		
485	Oats.....	" " " ".....	"		
486	Oats.....	" " " ".....	"		
487	Oats.....	" " " ".....	"		
488	Oats.....	" " " ".....	"		
489	Oats.....	" " " ".....	"		
490	Oats.....	" " " ".....	"		

TABLE II.—THE IODINE CONTENT OF FOODS—CLASSIFIED ARRANGEMENT—Continued  
(Dry Basis Unless Otherwise Stated)

Sample No.	Sample	Locality	Iodine content	Remarks
	<b>CEREALS</b>			Five-year rotation
491	Oats.....	Exp. Sta., Wooster, Ohio.....	None	Plot 18
492	Oats.....	" " " ".....	"	" 20
493	Oats.....	" " " ".....	"	" 21
494	Oats.....	" " " ".....	"	" 23
495	Oats.....	" " " ".....	"	" 24
496	Oats.....	" " " ".....	Trace	" 26
497	Oats.....	" " " ".....	None	" 27
498	Oats.....	" " " ".....	"	" 29
499	Oats.....	" " " ".....	"	" 30
500	Oats.....	" " " ".....	"	Check plots composited
558	Oats.....	Exp. Sta., State College, Pa.....	"	
592	Oats, Appler.....	Clemson College, S. C.....	Trace	
593	Oats, Alabama Station No. 435.....	" " " ".....	None	
594	Oats, Alabama Station Red Rust Proof.....	" " " ".....	"	
595	Oats, U. S. Dept. No. 956.....	" " " ".....	"	
596	Oats, Gardner White.....	" " " ".....	"	
597	Oats, J. R. Coker.....	" " " ".....	"	
598	Oats, Currel's Prolific.....	" " " ".....	"	
599	Oats, Fulghum Early.....	" " " ".....	"	
600	Oats, Hastings 100-1.....	" " " ".....	"	
601	Oats, Wanamaker & Sons.....	" " " ".....	"	
635	Oats, winter.....	Univ. Farm, Knoxville, Tenn.....	"	
643	Oats.....	Knoxville, Tenn.....	"	
644	Oats.....	" " " ".....	"	
645	Oats.....	" " " ".....	"	
646	Oats.....	" " " ".....	"	
647	Oats, winter.....	" " " ".....	"	
648	Oats, winter.....	" " " ".....	"	
671	Oats.....	Fountain Green, Utah.....	"	
677	Oats.....	Freedom, Utah.....	"	
678	Oats.....	Freedom, Utah.....	"	
688	Oats, Danish.....	Logan, Utah, Greenville Farm.....	Trace	
694	Oats, Boswell Winter.....	Substation, Nephi, Utah.....	None	
695	Oats, Boswell Winter.....	" " " ".....	"	
696	Oats, New Roosevelt.....	" " " ".....	"	
697	Oats, Sixty Day.....	" " " ".....	"	

TABLE II.—THE IODINE CONTENT OF FOODS—CLASSIFIED ARRANGEMENT—Continued  
(Dry Basis Unless Otherwise Stated)

Sample No.	Sample	Locality	Iodine content	Remarks
	CEREALS		Percent	
698	Oats, Swedish Select.....	Substation, Nephi, Utah.....	None	
717	Oats.....	Nephi, Utah.....	"	
718	Oats.....	Nephi, Utah.....	"	
738	Oats.....	Exp. Sta., Pullman, Wash.....	"	
757	Oats.....	Winthrop, Wash.....	Trace	
58	Oats.....	Winthrop, Wash.....	None	
760	Oats, straw and grain.....	Winthrop, Wash.....	"	
23	Rye, Terraces.....	Exp. Sta., Fayetteville, Ark.....	"	
43	Rye.....	Exp. Sta., Storrs, Conn.....	"	
78	Rye.....	Gooding, Idaho.....	"	
603	Rye, Abruzzi.....	Clemson College, S. C.....	"	
604	Rye, Mountain.....	Clemson College, S. C.....	"	
679	Rye, spring.....	Freedom, Utah.....	"	
51	Sorghum, Sumac, seed.....	Exp. Sta., Gainesville, Fla.....	Trace	
663	Sorghum, Red Amber, seed.....	College Station, Texas.....	None	
664	Sorghum, Sumac, seed.....	" " " " " ".....	"	
668	Sudan, seed.....	" " " " " ".....	*	
699	Wheat, Arnautka, durum.....	Substation, Nephi, Utah.....	"	
709	Wheat, Kubanka, durum.....	Substation, Nephi, Utah.....	Trace	
710	Wheat, Spring Durum.....	Substation, Nephi, Utah.....	None	
31	Wheat, Winter Emmer.....	Exp. Sta., Fayetteville, Ark.....	"	
323	Wheat, Emmer.....	Substation, Carpenter, Ohio.....	"	
108	Wheat, spring (No. 1).....	Colby, Kan.....	"	
109	Wheat, spring (No. 2).....	Colby, Kan.....	"	
142	Wheat, No. 163, spring.....	Exp. Sta., Univ. Farm, St. Paul, Minn.....	"	Field C, Series I, Plot 14
143	Wheat, No. 163, spring.....	" " " " " ".....	.000268	" C, " III, " 3
144	Wheat, No. 163, spring.....	" " " " " ".....	.000258	" C, " IV, " 13
145	Wheat, No. 163, spring.....	" " " " " ".....	None	" C, " I, " 13
146	Wheat, No. 163, spring.....	" " " " " ".....	"	" C, " III, " 3
147	Wheat, No. 163, spring.....	" " " " " ".....	.000301	" C, " IV, " 14
226	Wheat, Marquis.....	Springhill Creek near Bozeman, Mont.....	None	
238	Wheat, Marquis.....	Exp. Sta., Reno, Nev.....	Trace	
283	Wheat, spring.....	Exp. Sta., Fargo, N. Dak.....	None	
284	Wheat, spring.....	Exp. Sta., Fargo, N. Dak.....	"	
548	Wheat, Washington Blue Stem.....	Substation, Burns, Ore.....	"	

THE IODINE CONTENT OF FOODS

TABLE II.—THE IODINE CONTENT OF FOODS—CLASSIFIED ARRANGEMENT—Continued  
(Dry Basis Unless Otherwise Stated)

Sample No.	Sample	Locality	Iodine content	Remarks
CEREALS				
672	Wheat, spring.....	Fountain Green, Utah.....	None	
689	Wheat, New Zealand.....	Logan, Utah.....	"	
702	Wheat, Ghirka, spring.....	Substation, Nephi, Utah.....	"	
720	Wheat, California Club.....	Nephi, Utah.....	"	
721	Wheat, Red Chaff.....	Nephi, Utah.....	"	
765	Wheat, Blue Stem.....	Winthrop, Wash.....	"	
12	Wheat, winter.....	Snowflake, Ariz.....	"	
29	Wheat, Bearded Fulcaster.....	Exp. Sta., Fayetteville, Ark.....	"	
30	Wheat, Kentucky Blue Stem.....	Exp. Sta., Fayetteville, Ark.....	"	
45	Wheat, winter.....	Exp. Sta., Storrs, Conn.....	"	
79	Wheat.....	Gooding, Idaho.....	Trace	
87	Wheat.....	Substation, Sand Point, Idaho.....	None	
107	Wheat.....	Colby, Kan.....	"	
110	Wheat.....	Chapman, Dickinson Co., Kan.....	"	
111	Wheat.....	Cheney, Sedgwick Co., Kan.....	"	
112	Wheat.....	Concordia, Cloud Co., Kan.....	"	
113	Wheat.....	Conway, McPherson Co., Kan.....	Trace	
114	Wheat.....	Halstead, Harvey Co., Kan.....	Trace	
115	Wheat.....	Louisburg, Miami Co., Kan.....	None	
116	Wheat.....	Medicine Lodge, Barber Co., Kan.....	Trace	
117	Wheat.....	Minneapolis, Ottawa Co., Kan.....	None	
118	Wheat.....	Sabetha, Nemaha Co., Kan.....	None	
119	Wheat.....	Nickerson, Reno Co., Kan.....	Trace	
120	Wheat.....	Osborne, Osborne Co., Kan.....	None	
121	Wheat.....	Wellington, Sumner Co., Kan.....	Trace	
139	Wheat, Gypsy.....	Exp. Sta., East Lansing, Mich.....	Trace	
140	Wheat, winter.....	Exp. Sta., East Lansing, Mich.....	None	
169	Wheat.....	Exp. Sta., Bozeman, Mont.....	"	
170	Wheat.....	Exp. Sta., Bozeman, Mont.....	"	
225	Wheat.....	Springhill Creek near Bozeman.....	Trace	
227	Wheat.....	Springhill Creek near Bozeman.....	None	
228	Wheat.....	Springhill Creek near Bozeman.....	"	
257	Wheat, winter.....	Exp. Sta., New Brunswick, N. J.....	"	
258	Wheat, winter.....	Exp. Sta., New Brunswick, N. J.....	"	
277	Wheat.....	Aztec, N. Mex.....	"	



TABLE II. THE IODINE CONTENT OF FOODS—CLASSIFIED ARRANGEMENT—Continued  
(Dry Basis Unless Otherwise Stated)

Sample No.	Sample	Locality	Iodine content	Remarks
	CEREALS			
			Percent	
385	Wheat.....	Substation, Germantown, Ohio.....	None	Plot 33
386	Wheat.....	" " " ".....	None	" 35
387	Wheat.....	" " " ".....	Trace	" 36
388	Wheat.....	" " " ".....	None	" 38
389	Wheat.....	" " " ".....	"	" 39
390	Wheat.....	" " " ".....	"	Check plots composited
398	Wheat.....	Substation, Strongsville Ohio.....	"	Plot 1
399	Wheat.....	" " " ".....	"	" 2
400	Wheat.....	" " " ".....	"	" 3
401	Wheat.....	" " " ".....	Trace	" 4
402	Wheat.....	" " " ".....	.000768	" 5
403	Wheat.....	" " " ".....	None	" 6
404	Wheat.....	" " " ".....	None	" 7
405	Wheat.....	" " " ".....	.000280	" 8
406	Wheat.....	" " " ".....	None	" 9
407	Wheat.....	" " " ".....	"	" 10
408	Wheat.....	" " " ".....	"	" 11
409	Wheat.....	" " " ".....	"	" 12
410	Wheat.....	" " " ".....	"	" 13
411	Wheat.....	" " " ".....	"	" 14
412	Wheat.....	" " " ".....	"	" 15
413	Wheat.....	" " " ".....	"	" 16
414	Wheat.....	" " " ".....	"	" 17
415	Wheat.....	" " " ".....	"	" 18
416	Wheat.....	" " " ".....	"	" 19
417	Wheat.....	" " " ".....	"	" 20
418	Wheat.....	" " " ".....	"	" 21
419	Wheat.....	" " " ".....	"	" 22
420	Wheat.....	" " " ".....	"	" 23
421	Wheat.....	" " " ".....	"	" 24
422	Wheat.....	" " " ".....	"	" 25
423	Wheat.....	" " " ".....	"	" 26
424	Wheat.....	" " " ".....	"	" 27
425	Wheat.....	" " " ".....	"	" 28
426	Wheat.....	" " " ".....	"	" 29

TABLE II.—THE IODINE CONTENT OF FOODS—CLASSIFIED ARRANGEMENT—Continued  
(Dry Basis Unless Otherwise Stated)

Sample No.	Sample	Locality	Iodine content	Remarks
	CEREALS		Percent	
427	Wheat.....	Substation, Strongsville, Ohio.....	None	Plot 30
428	Wheat.....	" " " ".....	"	" 31
429	Wheat.....	" " " ".....	"	" 32
430	Wheat.....	" " " ".....	"	" 33
431	Wheat.....	" " " ".....	"	" 34
432	Wheat.....	" " " ".....	"	" 35
433	Wheat.....	" " " ".....	"	" 36
434	Wheat.....	" " " ".....	"	" 37
435	Wheat.....	" " " ".....	"	" 38
436	Wheat.....	" " " ".....	"	" 39
437	Wheat.....	" " " ".....	"	" 40
515	Wheat.....	Exp. Sta., Wooster, Ohio.....	"	Check plots composited
516	Wheat.....	" " " ".....	"	Plot 2
517	Wheat.....	" " " ".....	.000405	" 3
518	Wheat.....	" " " ".....	.000403	" 5
519	Wheat.....	" " " ".....	Trace	" 6
520	Wheat.....	" " " ".....	Trace	" 8
521	Wheat.....	" " " ".....	None	" 9
522	Wheat.....	" " " ".....	"	" 11
523	Wheat.....	" " " ".....	"	" 12
524	Wheat.....	" " " ".....	"	" 14
525	Wheat.....	" " " ".....	"	" 15
526	Wheat.....	" " " ".....	"	" 17
527	Wheat.....	" " " ".....	"	" 18
528	Wheat.....	" " " ".....	"	" 20
529	Wheat.....	" " " ".....	"	" 21
530	Wheat.....	" " " ".....	"	" 23
531	Wheat.....	" " " ".....	"	" 24
532	Wheat.....	" " " ".....	"	" 26
533	Wheat.....	" " " ".....	"	" 27
534	Wheat.....	" " " ".....	"	" 29
535	Wheat.....	" " " ".....	"	" 30
536	Wheat.....	" " " ".....	"	Check plots composited
509	Wheat.....	" " " ".....	"	Continuous Wheat
510	Wheat.....	" " " ".....	"	Plot 2
				" 3

TABLE II.—THE IODINE CONTENT OF FOODS—CLASSIFIED ARRANGEMENT—Continued  
(Dry Basis Unless Otherwise Stated)

Sample No.	Sample	Locality	Iodine content	Remarks
	CEREALS		Percent	Continuous Wheat
511	Wheat.....	Exp. Sta., Wooster, Ohio.....	None	Plot 5 " 6 " 8 " 9
512	Wheat.....	" " " " " " " " " " " " " "	"	
513	Wheat.....	" " " " " " " " " " " " " "	.00040	
514	Wheat.....	" " " " " " " " " " " " " "	None	
547	Wheat, Kharkov.....	Substation, Burns, Ore.....	"	
563	Wheat.....	Exp. Sta., State College, Pa.....	"	
607	Wheat, Poole 134.....	Clemson College, S. C.....	"	
608	Wheat, Improved Rice.....	" " " " " " " " " " " " " "	"	
609	Wheat, U. S. Dept. C. I. 32-77.....	" " " " " " " " " " " " " "	"	
610	Wheat, Miracle.....	" " " " " " " " " " " " " "	"	
611	Wheat, Malakoff.....	" " " " " " " " " " " " " "	"	
612	Wheat, Blue Straw G2 1915.....	" " " " " " " " " " " " " "	"	
613	Wheat, U. S. Dept. C. I. 36-17.....	" " " " " " " " " " " " " "	"	
614	Wheat.....	" " " " " " " " " " " " " "	"	
615	Wheat, Kentucky Wonder.....	" " " " " " " " " " " " " "	"	
616	Wheat, Dr. Stribling.....	" " " " " " " " " " " " " "	"	
617	Wheat, Kan. Mortgage Lifter.....	" " " " " " " " " " " " " "	"	
618	Wheat, Extra Early Oakley.....	" " " " " " " " " " " " " "	"	
619	Wheat, Poole.....	" " " " " " " " " " " " " "	"	
620	Wheat, Economist.....	" " " " " " " " " " " " " "	Trace	
621	Wheat, Alabama Station Blue Straw.....	" " " " " " " " " " " " " "	None	
622	Wheat, Gardner.....	" " " " " " " " " " " " " "	"	
623	Wheat, Jersey Fultz.....	" " " " " " " " " " " " " "	"	
624	Wheat, Fulcaster.....	" " " " " " " " " " " " " "	"	
625	Wheat, Lancaster Red.....	" " " " " " " " " " " " " "	"	
626	Wheat, U. S. Dept. C. I. 36-11.....	" " " " " " " " " " " " " "	"	
627	Wheat, Bearded Pooting.....	" " " " " " " " " " " " " "	"	
628	Wheat, Harvest King.....	" " " " " " " " " " " " " "	"	
629	Wheat, Red Jersey.....	" " " " " " " " " " " " " "	"	
630	Wheat, Red Wave.....	" " " " " " " " " " " " " "	"	
631	Wheat, Fulcaster.....	" " " " " " " " " " " " " "	"	
632	Wheat, Boggs.....	" " " " " " " " " " " " " "	"	
633	Wheat, Beechwood Hybrid.....	" " " " " " " " " " " " " "	"	
637	Wheat, Fulcaster.....	Univ. Farm, Knoxville, Tenn.....	"	
638	Wheat, Fulcaster.....	" " " " " " " " " " " " " "	"	



TABLE II.—THE IODINE CONTENT OF FOODS—CLASSIFIED ARRANGEMENT—Continued  
(Dry Basis Unless Otherwise Stated)

Sample No.	Sample	Locality	Iodine content	Remarks
CEREALS				
639	Wheat, Fulcaster .....	Univ. Farm, Knoxville, Tenn.....	Trace	
640	Wheat, Poole.....	Univ. Farm, Knoxville, Tenn.....	None	
649	Wheat.....	Knoxville, Tenn.....	None	
650	Wheat.....	Knoxville, Tenn.....	Trace	
673	Wheat, Turkey Red.....	Fountain Green, Utah.....	None	
680	Wheat, Koffoid.....	Freedom, Utah.....	Trace	
681	Wheat, Koffoid.....	" ".....	None	
682	Wheat, Turkey Red.....	" ".....	None	
683	Wheat, winter.....	" ".....	Trace	
684	Wheat, winter.....	" ".....	None	
700	Wheat, Crimean.....	Substation, Nephi, Utah.....	.000274	
701	Wheat, Crimean.....	" ".....	Trace	
703	Wheat, Ghirka.....	" ".....	.000286	
704	Wheat, Japanese.....	" ".....	Trace	
705	Wheat, Kharkov.....	" ".....	.000431	
706	Wheat, Koffoid.....	" ".....	None	
707	Wheat, Koffoid.....	" ".....	"	
708	Wheat, Koffoid.....	" ".....	"	
711	Wheat, Turkey Red.....	" ".....	"	
712	Wheat, Turkey Red.....	" ".....	"	
713	Wheat, Turkey Red.....	" ".....	Trace	
714	Wheat, Turkey Red.....	" ".....	None	
715	Wheat, Turkey Red.....	" ".....	"	
719	Wheat.....	Nephi, Utah.....	"	
722	Wheat, Turkey Red.....	" ".....	"	
723	Wheat, Turkey Red.....	" ".....	Trace	
730	Wheat.....	Oak City, Utah.....	None	
731	Wheat.....	" ".....	None	
732	Wheat.....	" ".....	Trace	
742	Wheat.....	Exp. Sta., Pullman, Wash.....	None	
FRUITS				
2	Apple, canned.....	Snowflake, Ariz.....	None	
3	Apple, dried.....	Snowflake, Ariz.....	None	

TABLE II.—THE IODINE CONTENT OF FOODS—CLASSIFIED ARRANGEMENT—Continued  
(Dry Basis Unless Otherwise Stated)

Sample No.	Sample	Locality	Iodine content	Remarks
<b>FRUITS</b>				
239	Apple.....	May's Landing, N. J.....	None	
262	Apple.....	Aztec, N. Mex.....	"	
749	Apple.....	Winthrop, Wash.....	"	
750	Apple, Jonathan.....	" ".....	Trace	
751	Apple, Rome Beauty.....	" ".....	None	
752	Apple, Wagener.....	" ".....	"	
770	Apricot.....	Market.....	"	
263	Apricot.....	Aztec, N. Mex.....	Trace	
264	Apricot, preserved.....	Aztec, N. Mex.....	None	
772	Banana.....	Market.....	"	
777	Blackberry.....	".....	"	
780	Blueberries.....	".....	Trace	
803	Cranberries.....	".....	None	
6	Currants, canned.....	Snowflake, Ariz.....	"	
804	Dates.....	Market.....	"	
807	Figs.....	".....	"	
818	Lemon.....	".....	"	
830	Olives, pickled.....	".....	"	
831	Orange.....	".....	Trace	
9	Peach, spiced.....	Snowflake, Ariz.....	None	
270	Peach.....	Aztec, N. Mex.....	"	
271	Peach, preserved.....	Aztec, N. Mex.....	"	
502	Peach.....	Exp. Sta., Wooster, Ohio.....	"	
10	Pear, canned.....	Snowflake, Ariz.....	"	
243	Pear, Kieffer.....	May's Landing, N. J.....	"	
272	Pear.....	Aztec, N. Mex.....	"	
273	Plum.....	Aztec, N. Mex.....	"	
504	Plum.....	Exp. Sta., Wooster, Ohio.....	"	
840	Prune.....	Market.....	"	
275	Prune.....	Aztec, N. Mex.....	"	
841	Raisin.....	Market.....	"	
542	Raspberry red.....	Wooster, Ohio.....	Trace	
<b>GARDEN VEGETABLES AND ROOT CROPS</b>				
198	Bean, green, string.....	Springhill Creek near Bozeman, Mont.....	None	
391	Bean, string.....	Miamisburg, Ohio.....	None	

TABLE II.—THE IODINE CONTENT OF FOODS—CLASSIFIED ARRANGEMENT—Continued  
(Dry Basis Unless Otherwise Stated)

Sample No.	Sample	Locality	Iodine content	Remarks
GARDEN VEGETABLES AND ROOT CROPS			Percent	
88	Bean, green, stringless.....	Exp. Sta., Urbana, Ill.....	None	
81	Beet, red.....	Substation, Sand Point, Idaho.....	None	
90	Beet, red, Crosby's Egyptian.....	Exp. Sta., Urbana, Ill.....	Trace	
123	Beet, red.....	Exp. Sta., Amherst, Mass.....	None	
155	Beet, red.....	Exp. Sta., Bozeman, Mont.....	"	
199	Beet, red.....	Springhill Creek near Bozeman.....	"	
200	Beet, red.....	" " " ".....	Trace	
201	Beet, red.....	" " " ".....	None	
190	Beet, red.....	Near Springhill Canon, Bozeman.....	.000343	
240	Beet, red.....	May's Landing, N. J.....	Trace	
286	Beet, red.....	Substation, Carpenter, Ohio.....	None	
392	Beet, red.....	Miamisburg, Ohio.....	None	
537	Beet, red.....	Wooster, Ohio.....	Trace	
552	Beet, red.....	Exp. Sta., State College, Pa.....	None	
568	Beet, red.....	North of Point Judith, R. I.....	None	
569	Beet, red.....	North of Point Judith, R. I.....	Trace	
587	Beet, red.....	Clemson College, S. C.....	None	
176	Beet, red, long.....	Savage, Mont.....	"	
177	Beet, red, round.....	Savage, Mont.....	"	
82	Beet, sugar.....	Substation, Sand Point, Idaho.....	"	
131	Beet, sugar.....	Exp. Sta., East Lansing, Mich.....	Trace	
156	Beet, sugar.....	Exp. Sta., Bozeman, Mont.....	Trace	
439	Beet, sugar.....	Exp. Sta., Wooster, Ohio.....	None	
670	Beet, sugar.....	Fountain Green, Utah.....	"	
734	Beet, sugar.....	Exp. Sta., Pullman, Wash.....	"	
753	Beet, sugar.....	Winthrop, Wash.....	Trace	
157	Cabbage.....	Exp. Sta., Bozeman, Mont.....	Trace	
178	Cabbage.....	Savage, Mont.....	None	
202	Cabbage.....	Springhill Creek near Bozeman.....	Trace	
191	Cabbage.....	Near Springhill Canon, Bozeman.....	None	
241	Cabbage.....	May's Landing, N. J.....	None	
393	Cabbage.....	Miamisburg, Ohio.....	Trace	
553	Cabbage.....	Exp. Sta., State College, Pa.....	None	
570	Cabbage.....	North of Point Judith, R. I.....	"	
588	Cabbage.....	Clemson College, S. C.....	"	

TABLE II.—THE IODINE CONTENT OF FOODS—CLASSIFIED ARRANGEMENT—Continued  
(Dry Basis Unless Otherwise Stated)

Sample No.	Sample	Locality	Iodine content	Remarks
GARDEN VEGETABLES AND ROOT CROPS				
91	Carrot, Chantenay.....	Exp. Sta., Urbana, Ill.....	Trace	
158	Carrot.....	Exp. Sta., Bozeman, Mont.....	None	
179	Carrot.....	Savage, Mont.....	"	
203	Carrot.....	Springhill Creek near Bozeman.....	"	
204	Carrot.....	" " " ".....	"	
205	Carrot.....	" " " ".....	"	
242	Carrot.....	May's Landing, N. J.....	"	
287	Carrot.....	Substation, Carpenter, Ohio.....	"	
394	Carrot.....	Miamisburg, Ohio.....	.000185	
554	Carrot.....	Exp. Sta., State College, Pa.....	Trace	
571	Carrot (1).....	North of Point Judith, R. I.....	None	
572	Carrot (2).....	North of Point Judith, R. I.....	Trace	
735	Carrot.....	Exp. Sta., Pullman, Wash.....	None	
754	Carrot.....	Winthrop, Wash.....	None	
395	Celery.....	Miamisburg, Ohio.....	.001697	
555	Celery.....	Exp. Sta., State College, Pa.....	None	
589	Celery.....	Clemson College, S. C.....	None	
93	Cucumber, White Spine.....	Exp. Sta., Urbana, Ill.....	.000666	
94	Cucumber, White Spine.....	Exp. Sta., Urbana, Ill.....	None	
475	Cucumber.....	Exp. Sta., Wooster, Ohio.....	.000399	
538	Endive.....	Wooster, Ohio.....	.000354	
591	Kale.....	Clemson College, S. C.....	None	
737	Kale.....	Exp. Sta., Pullman, Wash.....	None	
479	Kohl rabi.....	Exp. Sta., Wooster, Ohio.....	Trace	
539	Lettuce.....	Wooster, Ohio.....	.001230	
577	Mangel wurzel.....	North of Point Judith, R. I.....	None	
578	Mangel wurzel.....	North of Point Judith, R. I.....	None	
95	Onion.....	Exp. Sta., Urbana, Ill.....	Trace	
96	Onion, Crystal White Wex.....	" " " ".....	None	
97	Onion, Giant Gibraltar.....	" " " ".....	"	
98	Onion, Prize Taker.....	" " " ".....	"	
99	Onion, Yellow Globe.....	" " " ".....	"	
164	Onion.....	Exp. Sta., Bozeman, Mont.....	Trace	
187	Onion.....	Savage, Mont.....	None	
212	Onion.....	Springhill Creek, near Bozeman.....	None	

TABLE II.—THE IODINE CONTENT OF FOODS—CLASSIFIED ARRANGEMENT—Continued  
(Dry Basis Unless Otherwise Stated)

Sample No.	Sample	Locality	Iodine content	Remarks
GARDEN VEGETABLES AND ROOT CROPS			Percent	
213	Onion.....	Springhill Creek near Bozeman.....	.000433	
214	Onion.....	Springhill Creek near Bozeman.....	None	
269	Onion.....	Aztec, N. Mex.....	Trace	
396	Onion.....	Miamisburg, Ohio.....	None	
501	Onion.....	Exp. Sta., Wooster, Ohio.....	None	
540	Onion.....	Wooster, Ohio.....	.000411	
579	Onion.....	North of Point Judith, R. I.....	None	
137	Parsnip.....	Exp. Sta., East Lansing, Mich.....	Trace	
165	Parsnip.....	Exp. Sta., Bozeman, Mont.....	None	
215	Parsnip.....	Springhill Creek near Bozeman.....	None	
216	Parsnip.....	Springhill Creek near Bozeman.....	Trace	
559	Parsnip.....	Exp. Sta., State College, Pa.....	None	
580	Parsnip.....	North of Point Judith, R. I.....	"	
218	Peas, garden.....	Springhill Creek near Bozeman.....	"	
100	Pepper, mango.....	Exp. Sta., Urbana, Ill.....	"	
503	Pepper, mango.....	Exp. Sta., Wooster, Ohio.....	"	
77	Potato.....	Gooding, Idaho.....	"	
85	Potato.....	Substation, Sand Point, Idaho.....	.000297	
101	Potato, Early Ohio.....	Exp. Sta., Urbana, Ill.....	.000262	
128	Potato.....	Exp. Sta., Amherst, Mass.....	None	
138	Potato.....	Exp. Sta., East Lansing, Mich.....	"	
188	Potato.....	Savage, Mont.....	"	
219	Potato.....	Springhill Creek near Bozeman.....	Trace	
220	Potato.....	Springhill Creek near Bozeman.....	None	
237	Potato.....	Exp. Sta., Reno, Nev.....	.001126	
245	Potato.....	May's Landing, N. J.....	None	
274	Potato.....	Aztec, N. Mex.....	"	
309	Potato.....	Substation, Carpenter, Ohio.....	"	
567	Potato.....	Exp. Sta., Kingston, R. I.....	"	
581	Potato.....	North of Point Judith, R. I.....	Trace	
582	Potato.....	" " " " ".....	None	
583	Potato.....	" " " " ".....	"	
602	Potato, Lookout Mountain.....	Clemson College, S. C.....	"	
728	Potato.....	Oak City, Utah.....	"	
761	Potato.....	Winthrop, Wash.....	Trace	

TABLE II.—THE IODINE CONTENT OF FOODS—CLASSIFIED ARRANGEMENT—Continued  
(Dry Basis Unless Otherwise Stated)

Sample No.	Sample	Locality	Iodine content	Remarks
GARDEN VEGETABLES AND ROOT CROPS				
			Percent	
244	Potato, sweet.....	May's Landing, N. J.....	None	
541	Potato, sweet.....	Wooster, Ohio.....	"	
584	Pumpkin.....	North of Point Judith, R. I.....	"	
102	Rhubarb.....	Exp. Sta., Urbana, Ill.....	"	
543	Rhubarb.....	Wooster, Ohio.....	.000506	
397	Salsify.....	Miamisburg, Ohio.....	None	
560	Salsify.....	Exp. Sta., State College, Pa.....	None	
506	Spinach.....	Exp. Sta., Wooster, Ohio.....	Trace	
605	Spinach.....	Clemson College, S. C.....	Trace	
103	Squash, Henderson's Early Summer.....	Exp. Sta., Urbana, Ill.....	None	
221	Squash.....	Springhill Creek near Bozeman.....	"	
104	Tomato, Bonner's Best.....	Exp. Sta., Urbana, Ill.....	"	
507	Tomato.....	Exp. Sta., Wooster, Ohio.....	"	
224	Turnip.....	Springhill Creek near Bozeman.....	"	
276	Turnip.....	Aztec, N. Mex.....	"	
585	Turnip.....	North of Point Judith, R. I.....	"	
606	Turnip.....	Clemson College, S. C.....	"	
729	Turnip.....	Oak City, Utah.....	"	
86	Turnip, rutabaga.....	Substation, Sand Point, Idaho.....	"	
168	Turnip, rutabaga.....	Exp. Sta., Bozeman, Mont.....	.000292	
193	Turnip, rutabaga.....	Near Springhill Canon, Bozeman.....	None	
246	Turnip, rutabaga.....	May's Landing, N. J.....	"	
562	Turnip, rutabaga.....	Exp. Sta., State College, Pa.....	"	
741	Turnip, rutabaga.....	Exp. Sta., Pullman, Wash.....	"	
HAYS, SILAGE AND FORAGE CROPS				
1	Alfalfa.....	Snowflake, Ariz.....	None	
13	Alfalfa.....	Exp. Sta., Fayetteville, Ark.....	"	
32	Alfalfa.....	Exp. Sta., Berkeley, Cal.....	"	
52	Alfalfa.....	Experiment, Ga.....	Trace	
122	Alfalfa.....	Exp. Sta., Amherst, Mass.....	None	
153	Alfalfa.....	Exp. Sta., Bozeman, Mont.....	"	
172	Alfalfa.....	Savage, Mont.....	"	
173	Alfalfa.....	Savage, Mont.....	"	

TABLE II.—THE IODINE CONTENT OF FOODS—CLASSIFIED ARRANGEMENT—Continued  
(Dry Basis Unless Otherwise Stated)

Sample No.	Sample	Locality	Iodine content	Remarks
HAYS, SILAGE AND FORAGE CROPS				
174	Alfalfa.....	Savage, Mont.....	None	
189	Alfalfa.....	Sidney, Mont.....	"	
194	Alfalfa.....	Springhill Creek near Bozeman.....	"	
195	Alfalfa.....	Springhill Creek near Bozeman.....	"	
233	Alfalfa.....	Exp. Sta., Reno, Nev.....	Trace	
261	Alfalfa.....	Aztec, N. Mex.....	None	
438	Alfalfa.....	Exp. Sta., Wooster, Ohio.....	Trace	
551	Alfalfa.....	Exp. Sta., State College, Pa.....	None	
651	Alfalfa.....	Exp. Sta., College Station, Texas.....	"	
685	Alfalfa.....	Logan, Utah, Greenville Farm.....	"	
691	Alfalfa.....	Substation, Nephi, Utah.....	"	
724	Alfalfa.....	Oak City, Utah.....	"	
743	Alfalfa.....	Twisp, Wash.....	"	
745	Alfalfa.....	Winthrop, Wash.....	"	
746	Alfalfa.....	" ".....	"	
747	Alfalfa.....	" ".....	"	
748	Alfalfa.....	" ".....	"	
652	Alfalfa leaves.....	Exp. Sta., College Station, Texas.....	"	
49	Beggar weed.....	Exp. Sta., Gainesville, Fla.....	"	
56	Clover, red.....	Experiment, Ga.....	"	In bloom
124	Clover, red.....	Exp. Sta., Amherst, Mass.....	Trace	
169	Clover, red.....	Exp. Sta., Bozeman, Mont.....	Trace	
206	Clover, red.....	Springhill Creek, near Bozeman.....	None	
207	Clover, red.....	Springhill Creek, near Bozeman.....	Trace	
238	Clover.....	Substation, Carpenter, Ohio.....	None	Plot 1
289	Clover.....	" ".....	None	" 2
290	Clover.....	" ".....	Trace	" 3
291	Clover.....	" ".....	None	" 4
292	Clover.....	" ".....	"	" 5
293	Clover.....	" ".....	"	" 6
294	Clover.....	" ".....	"	" 7
295	Clover.....	" ".....	Trace	" 8
296	Clover.....	" ".....	"	" 9
297	Clover.....	" ".....	"	" 10
298	Clover.....	" ".....	None	" 11

TABLE II.—THE IODINE CONTENT OF FOODS—CLASSIFIED ARRANGEMENT—Continued  
(Dry Basis Unless Otherwise Stated)

Sample No.	Sample	Locality	Iodine content	Remarks
HAYS, SILAGE AND FORAGE CROPS				
299	Clover	Substation, Carpenter, Ohio	None	Plot 12
300	Clover	" " "	"	" 13
301	Clover	" " "	"	" 14
302	Clover	" " "	"	" 15
303	Clover	" " "	"	" 16
304	Clover	" " "	"	" 17
305	Clover	" " "	"	" 18
306	Clover	" " "	"	" 19
307	Clover	" " "	"	" 20
324	Clover	Substation, Germantown, Ohio	"	" 1
325	Clover	" " "	"	" 2
326	Clover	" " "	Trace	" 3
327	Clover	" " "	None	" 4
328	Clover	" " "	"	" 5
329	Clover	" " "	"	" 6
330	Clover	" " "	"	" 7
331	Clover	" " "	"	" 8
332	Clover	" " "	"	" 9
333	Clover	" " "	"	" 10
334	Clover	" " "	"	" 11
335	Clover	" " "	"	" 12
336	Clover	" " "	"	" 13
337	Clover	" " "	"	" 14
338	Clover	" " "	"	" 15
339	Clover	" " "	"	" 16
340	Clover	" " "	"	" 17
341	Clover	" " "	"	" 18
342	Clover	" " "	"	" 19
343	Clover	" " "	Trace	" 20
344	Clover	" " "	None	" 21
345	Clover	" " "	"	" 22
346	Clover	" " "	"	" 23
347	Clover	" " "	"	" 24
348	Clover	" " "	"	" 25



TABLE II.—THE IODINE CONTENT OF FOODS—CLASSIFIED ARRANGEMENT—Continued  
(Dry Basis Unless Otherwise Stated)

Sample No.	Sample	Locality	Iodine content	Remarks
HAYS, SILAGE AND FORAGE CROPS				
349	Clover	Substation, Germantown, Ohio	Trace	Plot 26
350	Clover	"	None	" 27
351	Clover	"	"	" 28
352	Clover	"	"	" 29
353	Clover	"	"	" 30
354	Clover	"	"	" 31
355	Clover	"	Trace	" 32
356	Clover	"	None	" 33
357	Clover	"	"	" 34
358	Clover	"	"	" 35
359	Clover	"	"	" 36
360	Clover	"	"	" 37
361	Clover	"	"	" 38
362	Clover	"	"	" 39
363	Clover	"	"	" 40
440	Clover	Exp. Sta., Wooster, Ohio	"	" 1
441	Clover	"	"	" 2
442	Clover	"	"	" 3
443	Clover	"	"	" 4
444	Clover	"	"	" 5
445	Clover	"	"	" 6
446	Clover	"	"	" 7
447	Clover	"	"	" 8
448	Clover	"	"	" 9
449	Clover	"	"	" 10
450	Clover	"	Trace	" 11
451	Clover	"	None	" 12
452	Clover	"	"	" 13
453	Clover	"	"	" 14
454	Clover	"	"	" 15
455	Clover	"	"	" 16
456	Clover	"	"	" 17
457	Clover	"	"	" 18
458	Clover	"	"	" 19
459	Clover	"	"	" 20

TABLE II.—THE IODINE CONTENT OF FOODS—CLASSIFIED ARRANGEMENT—Continued  
(Dry Basis Unless Otherwise Stated)

Sample No.	Sample	Locality	Iodine content	Remarks
HAYS, SILAGE AND FORAGE CROPS				
460	Clover.....	Exp. Sta., Wooster, Ohio.....	None	Plot 21
461	Clover.....	" " " ".....	Trace	" 22
462	Clover.....	" " " ".....	None	" 23
463	Clover.....	" " " ".....	Trace	" 24
464	Clover.....	" " " ".....	None	" 25
465	Clover.....	" " " ".....	"	" 26
466	Clover.....	" " " ".....	"	" 27
467	Clover.....	" " " ".....	"	" 28
468	Clover.....	" " " ".....	"	" 29
469	Clover.....	" " " ".....	"	" 30
791	Clover.....	Market.....	"	Fed in Experiment 8
792	Clover.....	".....	.000280	
793	Clover.....	".....	Trace	
556	Clover, red.....	Exp. Sta., State College, Pa.....	Trace	
736	Clover, red.....	Exp. Sta., Pullman, Wash.....	None	
54	Clover, alsike.....	Experiment, Ga.....	Trace	
159	Clover, alsike.....	Exp. Sta., Bozeman, Mont.....	None	
34	Clover, bur.....	Exp. Sta., Berkeley, Cal.....	"	
55	Clover, crimson.....	Experiment, Ga.....	"	Late bloom, seed nearly ripe
57	Clover, spotted bur.....	Experiment, Ga.....	.000254	Seed fully formed, but green
15	Clover, sweet.....	Exp. Sta., Fayetteville, Ark.....	None	
544	Clover, sweet.....	Substation, Burns, Ore.....	None	
58	Clover, white.....	Experiment, Ga.....	Trace	In bloom
470	Corn silage.....	Exp. Sta., Wooster, Ohio.....	"	Fed in Experiment 8, Period I, second half
471	Corn silage.....	" " " ".....	"	" " " 8, " I, first half
472	Corn silage.....	" " " ".....	None	" " " 8, " III
473	Corn silage.....	" " " ".....	"	" " " 8, " II
133	Corn stover.....	Exp. Sta., East Lansing, Mich.....	"	
249	Corn stover.....	Exp. Sta., New Brunswick, N. J.....	.000465	Plot 1 A-1913
250	Corn stover.....	Exp. Sta., New Brunswick, N. J.....	.001279	" 1 B-1913
265	Corn stover.....	Exp. Sta., Kingston, R. I.....	None	
687	Corn stover.....	Logan, Utah, Greenville Farm.....	"	
19	Cowpea hay.....	Exp. Sta., Fayetteville, Ark.....	"	
59	Cowpea hay.....	Experiment, Ga.....	.000380	
474	Cowpea hay.....	Exp. Sta., Wooster, Ohio.....	Trace	

TABLE II.—THE IODINE CONTENT OF FOODS—CLASSIFIED ARRANGEMENT—Continued  
(Dry Basis Unless Otherwise Stated)

Sample No.	Sample	Locality	Iodine content	Remarks
HAYS, SILAGE AND FORAGE CROPS				
230	Grass.....	Wibaux, Mont.....	Trace	
60	Grass, Bermuda.....	Experiment, Ga.....	None	
634	Grass, Bermuda.....	Univ. Farm, Knoxville, Tenn.....	Trace	
61	Grass, blue, Kentucky.....	Experiment, Ga.....	None	Full bloom
62	Grass, blue, Texas.....	Experiment, Ga.....	.000312	
476	Grass, blue.....	Exp. Sta., Wooster, Ohio.....	None	
477	Grass, blue.....	Exp. Sta., Wooster, Ohio.....	.000750	
35	Grass, canary.....	Exp. Sta., Berkeley, Cal.....	None	
641	Grass, mixed.....	Knoxville, Tenn.....	"	
7	Grass, native.....	Snowflake, Ariz.....	"	
267	Grass, native.....	Aztec, N. Mex.....	Trace	
64	Grass, orchard.....	Experiment, Ga.....	"	
65	Grass, <i>Paspalum dilatatum</i> .....	".....	"	In bloom
68	Grass, perennial, rye.....	".....	None	Past bloom
566	Grass, reedtop.....	Exp. Sta., Kingston, R. I.....	"	In bloom
66	Grass, rescue ( <i>B. schraderei</i> ).....	Experiment, Ga.....	"	Seed nearly ripe
36	Grass, rye.....	Exp. Sta., Berkeley, Cal.....	"	Seed not filled
67	Grass, rye.....	Experiment, Ga.....	Trace	Past bloom
63	Grass, tall, meadow, oat.....	Experiment, Ga.....	None	
642	Grass, tall, oat.....	Knoxville, Tenn.....	"	
545	Grass, Western rye.....	Substation, Burns, Ore.....	"	
20	Millet hay, Hungarian.....	Exp. Sta., Fayetteville, Ark.....	Trace	
127	Millet straw.....	Exp. Sta., Amherst, Mass.....	None	
744	Oat hay.....	Twisp, Wash.....	"	
69	Oat plant.....	Experiment, Ga.....	"	
662	Oat plant.....	Exp. Sta., College Station, Texas.....	.000390	
739	Oat plant.....	Exp. Sta., Pullman, Wash.....	None	
253	Oat straw.....	Exp. Sta., New Brunswick, N. J.....	None	Plot 1 A-1914
254	Oat straw.....	Exp. Sta., New Brunswick, N. J.....	.000649	Plot 1 B-1914
759	Oat straw.....	Withrop, Wash.....	None	
546	Peas, field, hay.....	Substation, Burns, Ore.....	Trace	
70	Rye, plant.....	Experiment, Ga.....	Trace	Seed half-filled
24	Sorghum, Amber, plant.....	Exp. Sta., Fayetteville, Ark.....	None	
25	Sorghum, Japanese, plant.....	".....	None	
26	Sorghum, Silver Drip, plant.....	".....	Trace	

TABLE II.—THE IODINE CONTENT OF FOODS—CLASSIFIED ARRANGEMENT—Continued  
(Dry Basis Unless Otherwise Stated)

Sample No.	Sample	Locality	Iodine content	Remarks
<b>HAYS, SILAGE AND FORAGE CROPS</b>				
28	Sudan, plant.....	Exp. Sta., Fayetteville, Ark.....	None	Fed in Experiment 8
869	Timothy.....	Market.....	"	
167	Timothy.....	Exp. Sta., Bozeman, Mont.....	"	
222	Timothy.....	Springhill Creek near Bozeman.....	"	
223	Timothy.....	Springhill Creek near Bozeman.....	"	
255	Timothy.....	Exp. Sta., New Brunswick, N. J.....	Trace	
256	Timothy.....	Exp. Sta., New Brunswick, N. J.....	.000323	
561	Timothy.....	Exp. Sta., State College, Pa.....	None	
636	Timothy.....	Univ. Farm, Knoxville, Tenn.....	"	
762	Timothy.....	Winthrop, Wash.....	"	
71	Vetch, hairy, plant.....	Experiment, Ga.....	"	In bloom
72	Vetch, native.....	".....	"	
73	Vetch, purple.....	".....	"	In bloom
38	Wheat hay.....	Exp. Sta., Berkeley, Cal.....	Trace	
74	Wheat, Blue Stem, hay.....	Experiment, Ga.....	.000252	Seed in milk stage
75	Wheat, Emmer, hay.....	Experiment, Ga.....	None	Grains half-filled
766	Wheat hay.....	Winthrop, Wash.....	None	Seed not filled
767	Wheat hay.....	Winthrop, Wash.....	"	Heads half-filled, half of stalk included
259	Wheat straw.....	Exp. Sta., New Brunswick, N. J.....	.000526	Plot 1 A-1911 Plot 1 B-1911
260	Wheat straw.....	Exp. Sta., New Brunswick, N. J.....	Trace	
549	Wheat straw.....	Substation, Burns, Ore.....	None	
550	Wheat straw, Kharkov.....	Substation, Burns, Ore.....	Trace	
690	Wheat straw, New Zealand.....	Logan, Utah, Greenville Farm.....	None	
<b>LEGUMINOUS SEEDS</b>				
46	Bean (916).....	Exp. Sta., Gainesville, Fla.....	Trace	
4	Bean, brown.....	Snowflake, Ariz.....	None	
265	Bean, brown.....	Aztec, N. Mex.....	.000244	
130	Bean, Cook.....	Exp. Sta., East Lansing, Mich.....	None	
47	Bean, Florida Velvet.....	Exp. Sta., Gainesville, Fla.....	"	
89	Bean, Lima.....	Exp. Sta., Urbana, Ill.....	"	
774	Bean, Lima.....	Market.....	"	
775	Bean, Navy.....	Market.....	Trace	
48	Bean, Yokohama.....	Exp. Sta., Gainesville, Fla.....	Trace	

TABLE II.—THE IODINE CONTENT OF FOODS—CLASSIFIED ARRANGEMENT—Continued  
(Dry Basis Unless Otherwise Stated)

Sample No.	Sample	Locality	Iodine content	Remarks
LEGUMINOUS SEEDS				
279	Clover seed.....	Exp. Sta., Fargo, N. Dak.....	None	
135	Cowpeas, Early Buff.....	Exp. Sta., East Lansing, Mich.....	None	
17	Cowpeas, Holstein.....	Exp. Sta., Fayetteville, Ark.....	.000253	
18	Cowpeas, Whippoorwill.....	Exp. Sta., Fayetteville, Ark.....	Trace	
655	<i>Dolichos biflorus</i> , seed.....	Exp. Sta., College Station, Texas.....	None	
656	<i>Dolichos sp.</i> , seed.....	" " " " " ".....	None	
658	Guar, seed.....	" " " " " ".....	Trace	
819	Lentils.....	Market.....	None	
834	Peas.....	".....	Trace	
835	Peas.....	".....	Trace	
166	Peas.....	Exp. Sta., Bozeman, Mont.....	None	
740	Peas.....	Exp. Sta., Pullman, Wash.....	"	
84	Peas, field.....	Substation, Sand Point, Idaho.....	"	Unripe
217	Peas, field.....	Springhill Creek near Bozeman.....	"	
236	Peas, field, Canadian Green.....	Exp. Sta., Reno, Nev.....	Trace	
282	Soybean.....	Exp. Sta., Fargo, N. Dak.....	None	
665	Soybean.....	Exp. Sta., College Station, Texas.....	"	
666	Soybean, Austin.....	Exp. Sta., College Station, Texas.....	"	
44	Soybean, Hollybrook.....	Exp. Sta., Storrs, Conn.....	Trace	
667	Soybean, Hollybrook.....	Exp. Sta., College Station, Texas.....	None	
27	Soybean, Ito San.....	Exp. Sta., Fayetteville, Ark.....	"	
505	Soybean, Medium Green.....	Exp. Sta., Wooster, Ohio.....	"	
152	Vetch, hairy, seed.....	Exp. Sta., Agricultural College, Miss.....	"	
MANUFACTURED FOODS AND MILLING AND MANUFACTORY BY-PRODUCTS				
773	Barley, pearl.....	Market.....	Trace	
783	Brewer's grains.....	".....	Trace	
785	Buckwheat flour, Larrowe's Kiln Dried.....	".....	None	
800	Corn germ.....	Corn Products Refining Co., New York.....	"	
149	Cottonseed.....	Exp. Sta., Agricultural College, Miss.....	"	
150	Cottonseed meal.....	Exp. Sta., Agricultural College, Miss.....	"	
801	Cottonseed meal.....	Market.....	.000280	
802	Cottonseed oil, "Snowdrift".....	Market.....	None	Fed in Experiment 8

TABLE II.—THE IODINE CONTENT OF FOODS—CLASSIFIED ARRANGEMENT  
(Dry Basis Unless Otherwise Stated)

Sample No.	Sample	Locality	Iodine content	Remarks
<b>MANUFACTURED FOODS, AND MILLING AND MANUFACTORY BY-PRODUCTS</b>				
			Percent	
805	Distiller's grains.....	Market.....	.000280	Fed in Experiment 8
280	Flax seed.....	Exp. Sta., Fargo, N. Dak.....	None	
810	Gluten feed.....	Market.....	Trace	Fed in Experiment 8
811	Gluten flour.....	Pure Gluten Food Co., New York.....	Trace	
816	Hominy, pearl.....	Market.....	None	
820	Linseed meal.....	".....	.000280	Fed in Experiment 8
823	Molasses, Red River Style, Duff's.....	".....	None	
826	Nucleic acid (yeast).....	E. Merck & Co., New York.....	Trace	
828	Oatmeal.....	Market.....	Trace	
829	Olive oil.....	Market.....	None	
842	Rice polish.....	Louisiana Rice Milling Co., Crowley, La.....	Trace	
843	Rice, polished.....	Market.....	Trace	
866	Tapioca, pearl.....	".....	None	
873	Wheat bran.....	".....	Trace	
875	Wheat flour.....	Washburn Crosby Milling Co., Minneapolis, Minn.....	None	
171	Wheat middlings.....	Bozeman, Mont.....	Trace	
874	Wheat middlings.....	Market.....	None	
<b>NUTS</b>				
769	Almond.....	Market.....	None	
782	Brazil nut.....	".....	"	
796	Coconut.....	".....	"	
833	Peanuts.....	".....	"	
836	Pecans.....	".....	"	
508	Walnuts, black.....	Exp. Sta., Wooster, Ohio.....	"	
872	Walnuts, English.....	Market.....	"	
<b>SEA WEEDS</b>				
768	Agar agar.....	Market.....	.005505	
824	Moss, Irish.....	Market.....	.025120	
<b>SPICES, CONDIMENTS AND STIMULANTS</b>				
788	Chocolate, bitter, Lowney's.....	Market.....	None	

TABLE II.—THE IODINE CONTENT OF FOODS—CLASSIFIED ARRANGEMENT—Concluded  
(Dry Basis Unless Otherwise Stated)

Sample No.	Sample	Locality	Iodine content	Remarks
SPICES, CONDIMENTS AND STIMULANTS				
789	Cinnamon.....	Market.....	Trace	
794	Cloves.....	".....	None	
795	Cocoa, Walter Baker & Co.....	".....	"	
798	Coffee.....	".....	"	
809	Ginger.....	".....	Trace	
827	Nutmeg.....	".....	None	
837	Pepper, black.....	".....	"	
838	Pepper, Cayenne.....	".....	"	
847	Salt, table.....	Inland Delray Salt Co., Detroit, Mich.....	"	
848	Salt, No. 1 Medium.....	Mulkey Salt Co., Detroit, Mich.....	"	
849	Salt, coarse.....	".....	"	
850	Salt.....	Morton Salt Co., Hutchison Factory.....	"	
851	Salt.....	" " " Ludington Factory.....	"	
852	Salt.....	" " " Port Huron Factory.....	"	
853	Salt, medium.....	Stearns Salt Co., Ludington, Mich.....	"	
854	Salt, table.....	Stearns Salt Co., Ludington, Mich.....	"	
855	Salt, Blue Star Brand.....	Michigan Salt Works, Marine City, Mich.....	"	
856	Salt.....	Diamond Crystal Salt Co., St. Clair, Mich.....	"	
857	Salt, vacuum, common fine.....	International Salt Co., Myers, N. Y.....	"	
858	Salt, "Worcester A".....	Worcester Salt Co., New York.....	"	
859	Salt, "Worcester B".....	Worcester Salt Co., New York.....	"	
860	Salt, table.....	Colonial Salt Co., Akron, Ohio.....	"	
861	Salt, U. S. table.....	Union Salt Co., Cleveland, Ohio.....	"	
862	Salt.....	Cleveland Salt Co., Cleveland, Ohio.....	"	
867	Tea, black.....	Market.....	"	
WATER				
763	Water, Bear Creek.....	Winthrop, Wash.....	.000077	
764	Water, well.....	Winthrop, Wash.....	.0000120	

TABLE III.—THE IODINE CONTENT OF FOODS—GEOGRAPHIC ARRANGEMENT  
(Dry Basis Unless Otherwise Stated)

Sample No.	Sample	Locality	Iodine content	Remarks
			Percent	
1	Alfalfa .....	Snowflake, Ariz. ....	None	
2	Apple, canned.....	" " .....	"	
3	Apple, dried.....	" " .....	"	
4	Bean, brown.....	" " .....	"	
5	Corn.....	" " .....	.000280	
6	Currants, canned .....	" " .....	None	
7	Grass, native.....	" " .....	"	
8	Milo maize, dwarf .....	" " .....	"	
9	Peach, spiced.....	" " .....	"	
10	Pear, canned .....	" " .....	"	
11	Pork, salt, fat.....	" " .....	*Trace	
12	Wheat.....	" " .....	None	
13	Alfalfa .....	Exp. Sta., Fayetteville, Ark. ....	"	
14	Barley, Southern Ohio.....	" " " " .....	Trace	
15	Clover, sweet.....	" " " " .....	None	
16	Corn, mixed Johnson Co. White and Hildreth.....	" " " " .....	"	
17	Cowpeas, Holstein.....	" " " " .....	.000253	
18	Cowpeas, Whippoorwill.....	" " " " .....	Trace	
19	Cowpea hay.....	" " " " .....	None	
20	Millet, Hungarian, hay .....	" " " " .....	Trace	
21	Oats, Early Champion.....	" " " " .....	.000311	
22	Oats, Winter Turf.....	" " " " .....	Trace	
23	Rye, Terraces.....	" " " " .....	None	
24	Sorghum, Amber, plant.....	" " " " .....	"	
25	Sorghum, Japanese, plant.....	" " " " .....	"	
26	Sorghum, Silver Drip, plant.....	" " " " .....	Trace	
27	Soybean, Ito San.....	" " " " .....	None	
28	Sudan, plant.....	" " " " .....	"	
29	Wheat, Bearded Fulcaster.....	" " " " .....	"	
30	Wheat, Kentucky Blue Stem.....	" " " " .....	"	
31	Wheat, Winter Emmer.....	" " " " .....	"	
32	Alfalfa .....	Exp. Sta., Berkeley, Cal. ....	"	
33	Barley.....	" " " " .....	"	Seed half-filled
34	Clover, bur.....	" " " " .....	"	
35	Grass, canary.....	" " " " .....	"	

\*Fresh basis.



TABLE III.—THE IODINE CONTENT OF FOODS—GEOGRAPHIC ARRANGEMENT—Continued  
(Dry Basis Unless Otherwise Stated)

Sample No.	Sample	Locality	Iodine content	Remarks
			Percent	
36	Grass, rye.....	Exp. Sta., Berkeley, Cal.....	None	Seed not filled
37	Oats.....	" " " ".....	Trace	Seed half-filled
38	Wheat, plant.....	" " " ".....	None	Seed in milk stage
39	Barley.....	Exp. Sta., Storrs, Conn.....	"	
40	Corn, dent.....	" " " ".....	"	
41	Corn, flint.....	" " " ".....	"	
42	Oats.....	" " " ".....	"	
43	Rye.....	" " " ".....	"	
44	Soybean, Hollybrook.....	" " " ".....	Trace	
45	Wheat, winter.....	" " " ".....	None	
46	Bean (916).....	Exp. Sta., Gainesville, Fla.....	Trace	No fertilizer
47	Bean, Florida Velvet.....	" " " ".....	None	" "
48	Bean, Yokohama.....	" " " ".....	Trace	" "
49	Beggar weed.....	" " " ".....	None	" "
50	Corn, Poor Land.....	" " " ".....	"	Fertilization—ammonium sulphate 50 lb.; acid phosphate 160 lb.; potassium sulphate 40 lb.
51	Sorghum, Sumac, seed.....	" " " ".....	Trace	Fertilization—ammonium sulphate 50 lb.; acid phosphate 160 lb.; potassium sulphate 40 lb.
52	Alfalfa.....	Experiment, Ga.....	"	
53	Barley, winter, six-row, bearded.....	" " " ".....	"	Seed half-filled
54	Clover, alsike.....	" " " ".....	"	Full bloom
55	Clover, crimson.....	" " " ".....	None	Late bloom, seed nearly ripe
56	Clover, red.....	" " " ".....	"	In bloom
57	Clover, spotted bur.....	" " " ".....	.000254	Seed fully formed, but green
58	Clover, white.....	" " " ".....	Trace	In bloom
59	Cowpea hay.....	" " " ".....	.000380	
60	Grass, Bermuda.....	" " " ".....	None	
61	Grass, blue, Kentucky.....	" " " ".....	"	Full bloom
62	Grass, blue, Texas.....	" " " ".....	.000312	
63	Grass, tall meadow, oat.....	" " " ".....	None	Out of bloom, seed half-filled
64	Grass, orchard.....	" " " ".....	Trace	In bloom
65	Grass, <i>Paspalum dilatatum</i> .....	" " " ".....	"	
66	Grass, rescue ( <i>B. schraderi</i> ).....	" " " ".....	None	Seed nearly ripe
67	Grass, rye.....	" " " ".....	Trace	Past bloom
68	Grass, perennial, rye.....	" " " ".....	None	"
69	Oats, plant.....	" " " ".....	Trace	Seed half-filled
70	Rye, plant.....	" " " ".....	Trace	Seed half-filled
71	Vetch, hairy, plant.....	" " " ".....	None	
72	Vetch, native, plant.....	" " " ".....	"	In bloom
73	Vetch, purple, plant.....	" " " ".....	Trace	"

TABLE III.—THE IODINE CONTENT OF FOODS—GEOGRAPHIC ARRANGEMENT—Continued  
(Dry Basis Unless Otherwise Stated)

Sample No.	Sample	Locality	Iodine content	Remarks
74	Wheat, Blue Stem, plant.....	Experiment, Ga. ....	Percent	Seed half-filled Seed not filled
75	Wheat, Speltz, plant.....	.....	.000252	
76	Oats.....	Gooding, Idaho.....	None	Virgin sage-brush soil
77	Potato.....	" ".....	"	
78	Rye.....	" ".....	"	
79	Wheat.....	" ".....	Trace	
80	Barley.....	Substation, Sand Point, Idaho.....	"	
81	Beet, red.....	" " " ".....	None	
82	Beet, sugar.....	" " " ".....	"	
83	Oats.....	" " " ".....	"	
84	Peas, field.....	" " " ".....	"	
85	Potato.....	" " " ".....	.000297	
86	Turnip, rutabaga.....	" " " ".....	None	
87	Wheat.....	" " " ".....	"	
88	Bean, green, stringless.....	Exp. Sta., Urbana, Ill.....	"	4-5 inch
89	Bean, Lima.....	" " " ".....	"	
90	Beet, red, Crosby's Egyptian.....	" " " ".....	Trace	
91	Carrot, Chantenay.....	" " " ".....	"	
92	Corn, sweet.....	" " " ".....	None	
93	Cucumber, White Spine.....	" " " ".....	.000666	
94	Cucumber, White Spine.....	" " " ".....	None	
95	Onion.....	" " " ".....	Trace	
96	Onion, Crystal White Wex.....	" " " ".....	None	
97	Onion, Giant Gibraltar.....	" " " ".....	"	
98	Onion, Prize Taker.....	" " " ".....	"	
99	Onion, Yellow Globe.....	" " " ".....	"	
100	Pepper, mango.....	" " " ".....	"	
101	Potato, Early Ohio.....	" " " ".....	.000262	
102	Rhubarb.....	" " " ".....	None	
103	Squash, Henderson's Early Summer.....	" " " ".....	"	
104	Tomato, Bonner's Best.....	" " " ".....	"	
105	Barley.....	Colby, Kan.....	"	
106	Oats.....	" ".....	Trace	
107	Wheat.....	" ".....	None	
108	Wheat, spring (No. 1).....	" ".....	"	
109	Wheat, spring (No. 2).....	" ".....	"	
110	Wheat.....	Chapman, Dickinson Co., Kan.....	"	
111	Wheat.....	Cheney, Sedgwick Co., Kan.....	"	

TABLE III.—THE IODINE CONTENT OF FOODS—GEOGRAPHIC ARRANGEMENT—Continued  
(Dry Basis Unless Otherwise Stated)

Sample No.	Sample	Locality	Iodine content	Remarks
			Percent	
112	Wheat.....	Concordia, Cloud Co., Kan.....	None	
113	Wheat.....	Conway, McPherson Co., Kan.....	Trace	
114	Wheat.....	Halstead, Harvey Co., Kan.....	Trace	
115	Wheat.....	Louisburg, Miami Co., Kan.....	None	
116	Wheat.....	Medicine Lodge, Barber Co., Kan.....	Trace	
117	Wheat.....	Minneapolis, Ottawa Co., Kan.....	None	
118	Wheat.....	Sabetha, Nemaha Co., Kan.....	None	
119	Wheat.....	Nickerson, Reno Co., Kan.....	Trace	
120	Wheat.....	Osborne, Osborne Co., Kan.....	None	
121	Wheat.....	Wellington, Sumner Co., Kan.....	Trace	
122	Alfalfa.....	Exp. Sta., Amherst, Mass.....	None	
123	Beet, red.....	" " " ".....	None	
124	Clover, red.....	" " " ".....	Trace	
125	Corn, flint.....	" " " ".....	None	
126	Millet seed.....	" " " ".....	"	
127	Millet straw.....	" " " ".....	"	
128	Potato.....	" " " ".....	"	
129	Barley.....	Exp. Sta., East Lansing, Mich.....	"	
130	Bean, Cook.....	" " " ".....	"	
131	Beet, sugar.....	" " " ".....	Trace	
132	Corn, flint.....	" " " ".....	None	
133	Corn stover.....	" " " ".....	None	
134	Corn, sweet, cross between Stowell's Evergreen and Pickett.....	" " " ".....	None	
135	Cowpeas, Early Buff.....	" " " ".....	"	
136	Oats, Danish Grant.....	" " " ".....	"	
137	Parsnip.....	" " " ".....	Trace	
138	Potato.....	" " " ".....	None	
139	Wheat, Gypsy.....	" " " ".....	Trace	
140	Wheat, winter.....	" " " ".....	None	
141	Oats No. 295.....	Exp. Sta., Univ. Farm, St. Paul, Minn.....	"	Field C, Series II, Plot 14; 5-year rotation, 1914
142	Wheat No. 163.....	" " " ".....	"	" C, " I, " 14; 5-year rotation, 1913
143	Wheat No. 163.....	" " " ".....	.000268	" C, " III, " 3; no rotation, 1913
144	Wheat No. 163.....	" " " ".....	.000258	" C, " IV, " 13; 3-year rotation, 1913
145	Wheat No. 163.....	" " " ".....	None	" C, " I, " 13; 5-year rotation, 1914
146	Wheat No. 163.....	" " " ".....	None	" C, " III, " 3; no rotation, 1914
147	Wheat No. 163.....	" " " ".....	.000301	" C, " IV, " 14; 3-year rotation, 1914
148	Corn.....	Exp. Sta., Agricultural College, Miss.....	Trace	No fertilizer



TABLE III.—THE IODINE CONTENT OF FOODS—GEOGRAPHIC ARRANGEMENT—Continued  
(Dry Basis Unless Otherwise Stated)

Sample No.	Sample	Locality	Iodine content	Remarks
			Percent	
185	Oats.....	Savage, Mont.....	None	
186	Oats.....	" ".....	Trace	
187	Onion.....	" ".....	None	
188	Potato.....	" ".....	"	
189	Alfalfa.....	Sidney, Mont.....	"	
190	Beet, red.....	Near Springhill Canon, Bozeman.....	.000343	
191	Cabbage.....	" " " ".....	None	Roasting-ear stage
192	Corn.....	" " " ".....	"	
193	Turnip, rutabaga.....	" " " ".....	"	
194	Alfalfa.....	Springhill Creek near Bozeman.....	"	
195	Alfalfa.....	" " " ".....	"	
196	Barley.....	" " " ".....	"	
197	Barley.....	" " " ".....	"	
198	Beans, green, string.....	" " " ".....	"	
199	Beet, red.....	" " " ".....	"	
200	Beet, red.....	" " " ".....	Trace	
201	Beet, red.....	" " " ".....	None	
202	Cabbage.....	" " " ".....	Trace	
203	Carrot.....	" " " ".....	None	
204	Carrot.....	" " " ".....	"	
205	Carrot.....	" " " ".....	"	
206	Clover, red.....	" " " ".....	"	
207	Clover, red.....	" " " ".....	Trace	
208	Corn.....	" " " ".....	None	Roasting-ear stage
209	Corn.....	" " " ".....	"	Roasting-ear stage
210	Oats.....	" " " ".....	"	
211	Oats.....	" " " ".....	"	
212	Onion.....	" " " ".....	"	
213	Onion.....	" " " ".....	.000433	
214	Onion.....	" " " ".....	None	
215	Parsnip.....	" " " ".....	None	
216	Parsnip.....	" " " ".....	Trace	
217	Peas, field.....	" " " ".....	None	Unripe
218	Peas, garden.....	" " " ".....	None	
219	Potato.....	" " " ".....	Trace	
220	Potato.....	" " " ".....	None	

TABLE III.—THE IODINE CONTENT OF FOODS—GEOGRAPHIC ARRANGEMENT—Continued  
(Dry Basis Unless Otherwise Stated)

Sample No.	Sample	Locality	Iodine content	Remarks
			Percent	
221	Squash.....	Springhill Creek near Bozeman.....	None	
222	Timothy.....	" " " ".....	"	
223	Timothy.....	" " " ".....	"	
224	Turnip.....	" " " ".....	"	
225	Wheat.....	" " " ".....	Trace	
226	Wheat, Marquis.....	" " " ".....	None	
227	Wheat, Turkey Red.....	" " " ".....	"	
228	Wheat, Turkey Red.....	" " " ".....	"	
229	Barley.....	Wibaux, Mont.....	"	
230	Grass.....	" " " ".....	Trace	
231	Oats.....	" " " ".....	None	
232	Oats.....	" " " ".....	.000580	
233	Alfalfa.....	Exp. Sta., Reno, Nev.....	Trace	
234	Barley, New Zealand.....	" " " ".....	"	Unfertilized
235	Oats, Abundance.....	" " " ".....	"	Unfertilized
236	Peas, field, Canadian Green.....	" " " ".....	"	
237	Potato.....	" " " ".....	.001126	
238	Wheat, Marquis.....	" " " ".....	Trace	Unfertilized
239	Apple.....	May's Landing, N. J.....	None	
240	Beet, red.....	" " " ".....	Trace	
241	Cabbage.....	" " " ".....	None	
242	Carrot.....	" " " ".....	"	
243	Pear, Kieffer.....	" " " ".....	"	
244	Potato.....	" " " ".....	"	
245	Potato, sweet.....	" " " ".....	"	
246	Turnip, rutabaga.....	" " " ".....	"	
247	Corn.....	Exp. Sta., New Brunswick, N. J.....	"	Plot 1A-1913
248	Corn.....	" " " ".....	"	" 1B-1913
249	Corn stover.....	" " " ".....	.000465	" 1A-1913
250	Corn stover.....	" " " ".....	.001279	" 1B-1913
251	Oats.....	" " " ".....	None	" 1A-1914
252	Oats.....	" " " ".....	"	" 1B-1914
253	Oat straw.....	" " " ".....	"	" 1A-1914
254	Oat straw.....	" " " ".....	.000649	" 1B-1914
255	Timothy.....	" " " ".....	Trace	" 1A-1912
256	Timothy.....	" " " ".....	.000323	" 1B-1912

TABLE III.—THE IODINE CONTENT OF FOODS—GEOGRAPHIC ARRANGEMENT  
(Dry Basis Unless Otherwise Stated)

Sample No.	Sample	Locality	Iodine content	Remarks
			Percent	
257	Wheat, winter.....	Exp. Sta., New Brunswick, N. J.....	None	Plot 1A-1911
258	Wheat, winter.....	" " " " " " " ".....	"	" 1B-1911
259	Wheat straw.....	" " " " " " " ".....	.000526	" 1A-1911
260	Wheat straw.....	" " " " " " " ".....	Trace	" 1B-1911
261	Alfalfa.....	Aztec, N. Mex.....	None	
262	Apple.....	" " " " " " " ".....	None	
263	Apricot.....	" " " " " " " ".....	Trace	
264	Apricot, preserved.....	" " " " " " " ".....	None	
265	Bean, brown.....	" " " " " " " ".....	.00244	
266	Corn, white dent.....	" " " " " " " ".....	None	
267	Grass, native.....	" " " " " " " ".....	Trace	
268	Oats.....	" " " " " " " ".....	None	
269	Onion.....	" " " " " " " ".....	Trace	
270	Peach.....	" " " " " " " ".....	None	
271	Peach, preserved.....	" " " " " " " ".....	"	
272	Pear.....	" " " " " " " ".....	"	
273	Plum.....	" " " " " " " ".....	"	
274	Potato.....	" " " " " " " ".....	"	
275	Prune.....	" " " " " " " ".....	"	
276	Turnip.....	" " " " " " " ".....	"	
277	Wheat.....	" " " " " " " ".....	"	
278	Barley.....	Exp. Sta., Fargo, N. Dak.....	"	
279	Clover seed.....	" " " " " " " ".....	"	
280	Flax seed.....	" " " " " " " ".....	"	
281	Oats.....	" " " " " " " ".....	.00330	
282	Soybeans.....	" " " " " " " ".....	None	
283	Wheat, spring.....	" " " " " " " ".....	"	1914 crop, No. 1
284	Wheat, spring.....	" " " " " " " ".....	"	1914 " No. 2
285	Wheat, winter.....	" " " " " " " ".....	"	1913 " No. 7
286	Beet.....	Substation, Carpenter, Ohio.....	"	
287	Carrot.....	" " " " " " " ".....	"	
288	Clover.....	" " " " " " " ".....	"	Plot 1
289	Clover.....	" " " " " " " ".....	"	" 2
290	Clover.....	" " " " " " " ".....	Trace	" 3
				Three-year Rotation

TABLE III.—THE IODINE CONTENT OF FOODS—GEOGRAPHIC ARRANGEMENT—Continued  
(Dry Basis Unless Otherwise Stated)

Sample No.	Sample	Locality	Iodine content	Remarks
				Three-year Rotation
291	Clover.....	Substation, Carpenter, Ohio.....	None	Plot 4
292	Clover.....	" " " ".....	"	" 5
293	Clover.....	" " " ".....	"	" 6
294	Clover.....	" " " ".....	"	" 7
295	Clover.....	" " " ".....	Trace	" 8
296	Clover.....	" " " ".....	"	" 9
297	Clover.....	" " " ".....	"	" 10
298	Clover.....	" " " ".....	None	" 11
299	Clover.....	" " " ".....	"	" 12
300	Clover.....	" " " ".....	"	" 13
301	Clover.....	" " " ".....	"	" 14
302	Clover.....	" " " ".....	"	" 15
303	Clover.....	" " " ".....	"	" 16
304	Clover.....	" " " ".....	"	" 17
305	Clover.....	" " " ".....	"	" 18
306	Clover.....	" " " ".....	"	" 19
307	Clover.....	" " " ".....	"	" 20
308	Oats.....	" " " ".....	"	
309	Potato.....	" " " ".....	"	
				Three-year Rotation
310	Wheat.....	" " " ".....	"	Plot 2; acid phos. 120
311	Wheat.....	" " " ".....	"	" 3; acid phos. 120; mur. potash 20
312	Wheat.....	" " " ".....	"	" 5; mur. potash 20; dried blood 30; nit. soda 60
313	Wheat.....	" " " ".....	"	" 6; acid phos. 120; dried blood 30; nit. soda 60
314	Wheat.....	" " " ".....	"	" 8; acid phos. 120; mur. potash 20; dried blood 30; nit. soda 60
315	Wheat.....	" " " ".....	"	" 9; acid phos. 120; mur. potash 20; dried blood 30; nit. soda 140
316	Wheat.....	" " " ".....	"	" 11; acid phos. 120; mur. potash 40; dried blood 30; nit. soda 140
317	Wheat.....	" " " ".....	"	" 12; acid phos. 240; mur. potash 20; dried blood 30; nit. soda 60
318	Wheat.....	" " " ".....	"	" 14; acid phos. 240; mur. potash 40; dried blood 30; nit. soda 140
319	Wheat.....	" " " ".....	"	" 17; untreated shed manure 5 tons on corn; lime 1000 lb. on wheat
320	Wheat.....	" " " ".....	"	" 18; untreated shed manure 10 tons, 1904-5-6; lime 1000 lb., 1907-8-9; manure and lime on corn only
321	Wheat.....	" " " ".....	"	" 20; untreated shed manure 10 tons, 1903-4-5; lime 1000 lb., 1906-7-8; manure and lime on wheat only
322	Wheat.....	" " " ".....	"	Check plots composited; unfertilized
323	Wheat, Emmer.....	" " " ".....	"	



TABLE III.—THE IODINE CONTENT OF FOODS—GEOGRAPHIC ARRANGEMENT—Continued  
(Dry Basis Unless Otherwise Stated)

Sample No.	Sample	Locality	Iodine content	Remarks
				Three-year Rotation
324	Clover.....	Substation, Germantown, Ohio.....	None	Plot 1
325	Clover.....	" " " ".....	None	" 2
326	Clover.....	" " " ".....	Trace	" 3
327	Clover.....	" " " ".....	None	" 4
328	Clover.....	" " " ".....	"	" 5
329	Clover.....	" " " ".....	"	" 6
330	Clover.....	" " " ".....	"	" 7
331	Clover.....	" " " ".....	"	" 8
332	Clover.....	" " " ".....	"	" 9
333	Clover.....	" " " ".....	"	" 10
334	Clover.....	" " " ".....	"	" 11
335	Clover.....	" " " ".....	"	" 12
336	Clover.....	" " " ".....	"	" 13
337	Clover.....	" " " ".....	"	" 14
338	Clover.....	" " " ".....	"	" 15
339	Clover.....	" " " ".....	"	" 16
340	Clover.....	" " " ".....	"	" 17
341	Clover.....	" " " ".....	"	" 18
342	Clover.....	" " " ".....	"	" 19
343	Clover.....	" " " ".....	Trace	" 20
344	Clover.....	" " " ".....	None	" 21
345	Clover.....	" " " ".....	"	" 22
346	Clover.....	" " " ".....	"	" 23
347	Clover.....	" " " ".....	"	" 24
348	Clover.....	" " " ".....	"	" 25
349	Clover.....	" " " ".....	Trace	" 26
350	Clover.....	" " " ".....	None	" 27
351	Clover.....	" " " ".....	"	" 28
352	Clover.....	" " " ".....	"	" 29
353	Clover.....	" " " ".....	"	" 30
354	Clover.....	" " " ".....	"	" 31
355	Clover.....	" " " ".....	Trace	" 32
356	Clover.....	" " " ".....	None	" 33
357	Clover.....	" " " ".....	"	" 34
358	Clover.....	" " " ".....	"	" 35
359	Clover.....	" " " ".....	"	" 36
360	Clover.....	" " " ".....	"	" 37
361	Clover.....	" " " ".....	"	" 38
362	Clover.....	" " " ".....	"	" 39
363	Clover.....	" " " ".....	"	" 40

TABLE III.—THE IODINE CONTENT OF FOODS—GEOGRAPHIC ARRANGEMENT—Continued  
(Dry Basis Unless Otherwise Stated)

Sample No.	Sample	Locality	Iodine content	Remarks
				Three-year Rotation
364	Wheat.....	Substation, Germantown, Ohio...	None	Plot 2; acid phos. 120
365	Wheat.....	" "	"	3; acid phos. 120; mur. potash 20
366	Wheat.....	" "	"	5; mur. potash 20; dried blood 30; nit. soda 60
367	Wheat.....	" "	"	6; acid phos. 120; dried blood 30; nit. soda 60
368	Wheat.....	" "	"	8; acid phos. 120; mur. potash 20; dried blood 30; nit. soda 60
369	Wheat.....	" "	"	9; acid phos. 120; mur. potash 20; dried blood 30; nit. soda 140
370	Wheat.....	" "	Trace	11; acid phos. 120; mur. potash 40; dried blood 30; nit. soda 140
371	Wheat.....	" "	None	12; acid phos. 240; mur. potash 20; dried blood 30; nit. soda 60
372	Wheat.....	" "	"	14; acid phos. 240; mur. potash 40; dried blood 30; nit. soda 140
373	Wheat.....	" "	"	15; lime 1000 lb.
374	Wheat.....	" "	"	17; untreated shed manure 5 tons on corn; lime 1000 lb. on wheat
375	Wheat.....	" "	"	18; untreated shed manure 10 tons, 1904-5-6; lime 1000 lb., 1907-8-9; manure and lime on corn only
376	Wheat.....	" "	"	20; untreated shed manure 10 tons, 1903-4-5; lime 1000 lb., 1906-7-8; manure and lime on wheat only
377	Wheat.....	" "	"	21; lime 1000 lb. on corn; untreated shed manure 5 tons on wheat
378	Wheat.....	" "	"	23; untreated yard manure 5 tons on corn only
379	Wheat.....	" "	"	24; untreated shed manure 5 tons on corn only
380	Wheat.....	" "	"	26; phosphated yard manure 5 tons on corn only
381	Wheat.....	" "	"	27; phosphated shed manure 5 tons on corn only
382	Wheat.....	" "	"	30; tankage 680; mur. potash 80; nit. soda 80 on corn; lime 1000 lb. on wheat
383	Wheat.....	" "	"	29; phosphated shed manure 5 tons on corn; lime 1000 lb. on wheat
384	Wheat.....	" "	"	32; tankage 340; mur. potash 40; nit. soda 40 on corn; same on wheat
385	Wheat.....	" "	"	33; tankage 340; mur. potash 60; nit. soda 125 on corn; same on wheat
386	Wheat.....	" "	"	35; tankage 220; acid phos. 200; mur. potash 20 on corn; same on wheat
387	Wheat.....	" "	Trace	36; tankage 220; acid phos. 200; mur. potash 40; nit. soda 80 on corn; same on wheat
388	Wheat.....	" "	None	38; tankage 500; mur. potash 60; nit. soda 60 on corn; same on wheat
389	Wheat.....	" "	"	39; tankage 170; nit. soda 18 on corn; same on wheat
390	Wheat.....	" "	"	Check plots composited
391	Bean, string.....	Miamisburg, Ohio.....	"	
392	Beet, red.....	" "	"	

TABLE III.—THE IODINE CONTENT OF FOODS—GEOGRAPHIC ARRANGEMENT—Continued  
(Dry Basis Unless Otherwise Stated)

Sample No.	Sample	Locality	Iodine content	Remarks
393	Cabbage.....	Miamisburg, Ohio.....	Trace	
394	Carrot.....	" ".....	.000185	
395	Celery.....	" ".....	.001697	
396	Onion.....	" ".....	None	
397	Salsify.....	" ".....	"	
			Percent	
398	Wheat.....	Substation, Strongsville, Ohio.....	"	Five-year Rotation
399	Wheat.....	" ".....	"	Plot 1; check plot, unfertilized
400	Wheat.....	" ".....	"	" 2; acid phos. 320
401	Wheat.....	" ".....	"	" 3; mur. potash 260
402	Wheat.....	" ".....	Trace	" 4; check plot, unfertilized
403	Wheat.....	" ".....	.000768	" 5; nit. soda 440; dried blood 50
404	Wheat.....	" ".....	None	" 6; acid phos. 320; nit. soda 440; dried blood 50
405	Wheat.....	" ".....	None	" 7; check plot, unfertilized
406	Wheat.....	" ".....	.000280	" 8; acid phos. 320; mur. potash 260
407	Wheat.....	" ".....	None	" 9; mur. potash 260; nit. soda 440; dried blood 50
408	Wheat.....	" ".....	"	" 10; check plot, unfertilized
409	Wheat.....	" ".....	"	" 11; acid phos. 320; mur. potash 260; nit. soda 440; dried blood 50
410	Wheat.....	" ".....	"	" 12; acid phos. 320; mur. potash 260; nit. soda 680; dried blood 50
411	Wheat.....	" ".....	"	" 13; check plot, unfertilized
412	Wheat.....	" ".....	"	" 14; acid phos. 240; mur. potash 180; nit. soda 280; dried blood 50
413	Wheat.....	" ".....	"	" 15; acid phos. 160; mur. potash 100; nit. soda 120; dried blood 50
414	Wheat.....	" ".....	"	" 16; check plot, unfertilized
415	Wheat.....	" ".....	"	" 17; acid phos. 480; mur. potash 260; nit. soda 220; dried blood 25
416	Wheat.....	" ".....	"	" 18; yard manure 16 tons
417	Wheat.....	" ".....	"	" 19; check plot, unfertilized
418	Wheat.....	" ".....	"	" 20; yard manure 8 tons
419	Wheat.....	" ".....	"	" 21; same elements as 17, but nitrogen in oilmeal
420	Wheat.....	" ".....	"	" 22; check plot, unfertilized
421	Wheat.....	" ".....	"	" 23; same elements as 17, but nitrogen in dried blood
422	Wheat.....	" ".....	"	" 24; same elements as 17, but nitrogen in sulphate ammonia
423	Wheat.....	" ".....	"	" 25; check plot, unfertilized
424	Wheat.....	" ".....	"	" 26; same elements as 17, but phosphorus in bonemeal
425	Wheat.....	" ".....	"	" 27; same elements as 17, but phosphorus in dissolved boneblack
426	Wheat.....	" ".....	"	" 28; check plot, unfertilized
				" 29; same elements as 17, but phosphorus in basic slag

TABLE III.—THE IODINE CONTENT OF FOODS—GEOGRAPHIC ARRANGEMENT—Continued  
(Dry Basis Unless Otherwise Stated)

Sample No.	Sample	Locality	Iodine content	Remarks
				Five-year Rotation
427	Wheat.....	Substation, Strongsville, Ohio.....	None	Plot 30; same elements as 17, but nitrogen in tankage
428	Wheat.....	" " " ".....	"	31; check plot, unfertilized
429	Wheat.....	" " " ".....	"	32; acid phos. 320; mur. potash 260; nit. soda 220; dried blood 25
430	Wheat.....	" " " ".....	"	33; acid phos. 320; mur. potash 260; nit. soda 110; dried blood 15
431	Wheat.....	" " " ".....	"	34; check plot, unfertilized
432	Wheat.....	" " " ".....	"	35; acid phos. 320; mur. potash 130; nit. soda 440; dried blood 50
433	Wheat.....	" " " ".....	"	36; acid phos. 320; mur. potash 65; nit. soda 440; dried blood 50
434	Wheat.....	" " " ".....	"	37; check plot, unfertilized
435	Wheat.....	" " " ".....	"	38; acid phos. 100; mur. potash 10; tankage (7-30) 100
436	Wheat.....	" " " ".....	"	39; yard manure 16 tons
437	Wheat.....	" " " ".....	"	40; check plot, unfertilized
438	Alfalfa.....	Exp. Sta., Wooster, Ohio.....	Trace	
439	Beet, sugar.....	" " " ".....	None	
				Five-year Rotation
440	Clover.....	" " " ".....	"	Plot 1
441	Clover.....	" " " ".....	"	2
442	Clover.....	" " " ".....	"	3
443	Clover.....	" " " ".....	"	4
444	Clover.....	" " " ".....	"	5
445	Clover.....	" " " ".....	"	6
446	Clover.....	" " " ".....	"	7
447	Clover.....	" " " ".....	"	8
448	Clover.....	" " " ".....	"	9
449	Clover.....	" " " ".....	"	10
450	Clover.....	" " " ".....	Trace	11
451	Clover.....	" " " ".....	None	12
452	Clover.....	" " " ".....	"	13
453	Clover.....	" " " ".....	"	14
454	Clover.....	" " " ".....	"	15
455	Clover.....	" " " ".....	"	16
456	Clover.....	" " " ".....	"	17
457	Clover.....	" " " ".....	"	18
458	Clover.....	" " " ".....	"	19
459	Clover.....	" " " ".....	"	20

TABLE III.—THE IODINE CONTENT OF FOODS—GEOGRAPHIC ARRANGEMENT—Continued  
(Dry Basis Unless Otherwise Stated)

Sample No.	Sample	Locality	Iodine content	Remarks
			Percent	Five-year Rotation
460	Clover.....	Exp. Sta., Wooster, Ohio	None	Plot 21
461	Clover.....	" " " "	Trace	" 22
462	Clover.....	" " " "	None	" 23
463	Clover.....	" " " "	Trace	" 24
464	Clover.....	" " " "	None	" 25
465	Clover.....	" " " "	"	" 26
466	Clover.....	" " " "	"	" 27
467	Clover.....	" " " "	"	" 28
468	Clover.....	" " " "	"	" 29
469	Clover.....	" " " "	"	" 30
470	Corn silage.....	" " " "	Trace	Fed in Experiment 8, Period I, second half
471	Corn silage.....	" " " "	"	" " " 8, Period I, first half
472	Corn silage.....	" " " "	None	" " " 8, Period III
473	Corn silage.....	" " " "	"	" " " 8, Period II
474	Cowpea hay.....	" " " "	Trace	
475	Cucumber.....	" " " "	.000399	
476	Grass, blue.....	" " " "	None	Lawn
477	Grass, blue.....	" " " "	.000750	Irrigated with sewage
478	Hair and hoof from swine.....	" " " "	.000774	
479	Kohl rabi.....	" " " "	Trace	
				Five-year Rotation
480	Oats.....	" " " "	None	Plot 2; acid phosphate 80
481	Oats.....	" " " "	"	" 3; muriate potash 80
482	Oats.....	" " " "	"	" 5; nitrate soda 160
483	Oats.....	" " " "	"	" 6; acid phosphate 80; nitrate soda 160
484	Oats.....	" " " "	"	" 8; acid phosphate 80; muriate potash 80
485	Oats.....	" " " "	"	" 9; muriate potash 80; nitrate soda 160
486	Oats.....	" " " "	"	" 11; acid phosphate 80; muriate potash 80; nitrate soda 160
487	Oats.....	" " " "	"	" 12; acid phosphate 80; muriate potash 80; nitrate soda 240
488	Oats.....	" " " "	"	" 14; fertilized on corn and wheat only
489	Oats.....	" " " "	"	" 15; fertilized on wheat only
490	Oats.....	" " " "	"	" 17; acid phosphate 160; muriate potash 80; nitrate soda 80
491	Oats.....	" " " "	"	" 18; manured on corn and wheat
492	Oats.....	" " " "	"	" 20; manured on corn and wheat
493	Oats.....	" " " "	"	" 21; same elements as 17, but nitrogen in oilmeal
494	Oats.....	" " " "	"	" 23; same elements as 17, but nitrogen in dried blood

TABLE III.—THE IODINE CONTENT OF FOODS—GEOGRAPHIC ARRANGEMENT—Continued  
(Dry Basis Unless Otherwise Stated)

Sample No.	Sample	Locality	Iodine content	Remarks
			Percent	Five-year Rotation
495	Oats.....	Exp. Sta., Wooster, Ohio .....	None	Plot 24; same elements as 17, but nitrogen in sulphate ammonia
496	Oats.....	" " " " .....	Trace	" 26; same elements as 17, but phosphorus in bonemeal
497	Oats.....	" " " " .....	None	" 27; same elements as 17, but nitrogen in nitrate of lime
498	Oats.....	" " " " .....	"	" 29; same elements as 17, but phosphorus in basic slag
499	Oats.....	" " " " .....	"	" 30; same elements as 17, but nitrogen in tankage
500	Oats.....	" " " " .....	"	Check plots composited
501	Onion.....	" " " " .....	"	
502	Peach.....	" " " " .....	"	
503	Pepper, mango.....	" " " " .....	"	
504	Plum.....	" " " " .....	"	
505	Soybean, Medium Green.....	" " " " .....	"	
506	Spinach.....	" " " " .....	Trace	
507	Tomato.....	" " " " .....	None	
508	Walnuts, black.....	" " " " .....	"	
				Continuous Wheat
509	Wheat.....	" " " " .....	"	Plot 2; acid phos. 160; mur. potash 100; nit. soda 120; dried blood 50
510	Wheat.....	" " " " .....	"	" 3; acid phos. 45; mur. potash 30; nit. soda 120; dried blood 50
511	Wheat.....	" " " " .....	"	" 5; yard manure 2½ tons
512	Wheat.....	" " " " .....	"	" 6; yard manure 5 tons
513	Wheat.....	" " " " .....	.00040	" 8; acid phos. 160; mur. potash 100; nit. soda 280; dried blood 50
514	Wheat.....	" " " " .....	None	" 9; acid phos. 90; mur. potash 60; nit. soda 280; dried blood 50
515	Wheat.....	" " " " .....	"	Check plots composited, unfertilized
				Five-year Rotation
516	Wheat.....	" " " " .....	"	Plot 2; acid phosphate 160
517	Wheat.....	" " " " .....	.000405	" 3; muriate potash 100
518	Wheat.....	" " " " .....	.000403	" 5; dried blood 50; nitrate soda 120
519	Wheat.....	" " " " .....	Trace	" 6; acid phosphate 160; dried blood 50; nitrate soda 120
520	Wheat.....	" " " " .....	"	" 8; acid phosphate 160; muriate potash 100
521	Wheat.....	" " " " .....	None	" 9; muriate potash 100; dried blood 50; nitrate soda 120
522	Wheat.....	" " " " .....	"	" 11; acid phos. 160; mur. potash 100; dried blood 50; nit. soda 120
523	Wheat.....	" " " " .....	"	" 12; acid phos. 160; mur. potash 100; dried blood 50; nit. soda 200
524	Wheat.....	" " " " .....	"	" 14; acid phos. 160; mur. potash 100; dried blood 50; nit. soda 120
525	Wheat.....	" " " " .....	"	" 15; acid phos. 160; mur. potash 100; dried blood 50; nit. soda 120
526	Wheat.....	" " " " .....	"	" 17; acid phos. 160; mur. potash 100; dried blood 25; nit. soda 60
527	Wheat.....	" " " " .....	"	" 18; barnyard manure 3 tons
528	Wheat.....	" " " " .....	"	" 20; barnyard manure 4 tons







TABLE III.—THE IODINE CONTENT OF FOODS—GEOGRAPHIC ARRANGEMENT—Continued

(Dry Basis Unless Otherwise Stated)

Sample No.	Sample	Locality	Iodine content	Remarks
600	Oats, Hastings 100-1.....	Clemson College, S. C.....	None	Residual soil
601	Oats, Wanamaker & Sons.....	" " " ".....	"	Residual soil
602	Potato, Lookout Mountain.....	" " " ".....	"	Alluvial loam
603	Rye, Abruzzi.....	" " " ".....	"	Residual soil
604	Rye, Mountain.....	" " " ".....	"	Residual soil
605	Spinach.....	" " " ".....	Trace	Alluvial loam
606	Turnip.....	" " " ".....	None	Alluvial loam
607	Wheat, Poole 134.....	" " " ".....	"	Residual soil
608	Wheat, Improved Rice.....	" " " ".....	"	" " "
609	Wheat, U. S. Dept. C-I 32-77.....	" " " ".....	"	" " "
610	Wheat, Miracle.....	" " " ".....	"	" " "
611	Wheat, Malakoff.....	" " " ".....	"	" " "
612	Wheat, Blue Straw G2 1915.....	" " " ".....	"	" " "
613	Wheat, U. S. Dept. C-I 36-17.....	" " " ".....	"	" " "
614	Wheat.....	" " " ".....	"	" " "
615	Wheat, Kentucky Wonder.....	" " " ".....	"	" " "
616	Wheat, Dr. Stribling.....	" " " ".....	"	" " "
617	Wheat, Kansas Mortgage Lifter.....	" " " ".....	"	" " "
618	Wheat, Extra Early Oakley.....	" " " ".....	"	" " "
619	Wheat, Poole.....	" " " ".....	"	" " "
620	Wheat, Economist.....	" " " ".....	Trace	" " "
621	Wheat, Alabama Station Blue Straw.....	" " " ".....	None	" " "
622	Wheat, Gardner.....	" " " ".....	"	" " "
623	Wheat, Jersey Fultz.....	" " " ".....	"	" " "
624	Wheat, Fulcaster.....	" " " ".....	"	" " "
625	Wheat, Lancaster Red.....	" " " ".....	"	" " "
626	Wheat, U. S. Dept. C-I 36-11.....	" " " ".....	"	" " "
627	Wheat, Bearded Pooting.....	" " " ".....	"	" " "
628	Wheat, Harvest King.....	" " " ".....	"	" " "
629	Wheat, Red Jersey.....	" " " ".....	"	" " "
630	Wheat, Red Wave.....	" " " ".....	"	" " "
631	Wheat, Fulcaster.....	" " " ".....	"	" " "
632	Wheat, Boggs.....	" " " ".....	"	" " "
633	Wheat, Beechwood Hybrid.....	" " " ".....	"	" " "
634	Grass, Bermuda.....	Univ. Farm, Knoxville, Tenn.....	Trace	Poor soil, unfertilized for many years

TABLE III.—THE IODINE CONTENT OF FOODS—GEOGRAPHIC ARRANGEMENT—Continued  
(Dry Basis Unless Otherwise Stated)

Sample No.	Sample	Locality	Iodine content	Remarks
			Percent	
635	Oats, winter.....	Univ. Farm, Knoxville, Tenn.....	None	Soil rich, gravelly, well fertilized
636	Timothy.....	" " " " .....	"	Fertile soil but unfertilized during 10 years
637	Wheat, Fulcaster.....	" " " " .....	"	Soil unfertilized
638	Wheat, Fulcaster.....	" " " " .....	"	Rich soil, fertilized during many years
639	Wheat, Fulcaster.....	" " " " .....	Trace	Rich soil, fertilized during many years
640	Wheat, Poole .....	" " " " .....	None	Soil abundantly fertilized every year
641	Grass, mixed.....	Knoxville, Tenn.....	"	Farm 3½ miles west of city
642	Grass, oat, tall.....	" " .....	"	Soil rich, but not artificially fertilized
643	Oats.....	" " .....	"	Farm south of river; soil fairly rich but unfertilized
644	Oats.....	" " .....	"	Badly worn soil, unfertilized
645	Oats.....	" " .....	"	Rich soil, frequently fertilized
646	Oats.....	" " .....	"	South of river; soil poor, unfertilized
647	Oats, winter.....	" " .....	"	Farm 7 miles south of city; soil of fair fertility
648	Oats, winter.....	" " .....	"	Farm 2½ miles east of city; soil rich, well fertilized
649	Wheat.....	" " .....	"	Farm south of city; land worn and unfertilized
650	Wheat.....	" " .....	Trace	Farm 6 miles west of city; soil of fair fertility
651	Alfalfa.....	Exp. Sta., College Station, Texas.....	None	
652	Alfalfa leaves.....	" " " " .....	"	
653	Cane, Black Amber, seed.....	" " " " .....	"	
654	Cane, White Amber, seed.....	" " " " .....	"	
655	<i>Dolichos biflorus</i> , seed.....	" " " " .....	"	
656	<i>Dolichos sp.</i> , seed.....	" " " " .....	"	
657	Feterita, seed.....	" " " " .....	"	
658	Guar, seed.....	" " " " .....	Trace	
659	Kafir corn.....	" " " " .....	None	
660	Milo maize, dwarf red.....	" " " " .....	"	
661	Milo maize, red.....	" " " " .....	"	
662	Oats, plant.....	" " " " .....	.000390	
663	Sorghum, red amber, seed.....	" " " " .....	None	
664	Sorghum, Sumac, seed.....	" " " " .....	"	
665	Soybean.....	" " " " .....	"	
666	Soybean, Austin.....	" " " " .....	"	
667	Soybean, Hollybrook.....	" " " " .....	"	
668	Sudan, seed.....	" " " " .....	"	

TABLE III.—THE IODINE CONTENT OF FOODS—GEOGRAPHIC ARRANGEMENT—Continued  
(Dry Basis Unless Otherwise Stated)

Sample No.	Sample	Locality	Iodine content	Remarks
			Percent	
669	Barley.....	Fountain Green, Utah.....	None	Old alfalfa land; irrigated
670	Beet, sugar.....	" " ".....	"	Irrigated
671	Oats.....	" " ".....	"	Irrigated; third crop
672	Wheat, spring.....	" " ".....	"	Virgin soil; dry farming
673	Wheat, Turkey Red.....	" " ".....	"	Virgin soil; dry farming
674	Barley.....	Freedom, Utah.....	"	Alfalfa land after potatoes; irrigated
675	Corn.....	" " ".....	Trace	Alfalfa fallow; irrigated
676	Corn, flint.....	" " ".....	None	Irrigated
677	Oats.....	" " ".....	"	Alfalfa land after potatoes; irrigated
678	Oats.....	" " ".....	"	Virgin soil; dry farming
679	Rye, spring.....	" " ".....	"	Continuously cropped 3 years; dry farming
680	Wheat, Koffoid.....	" " ".....	Trace	Alternately cropped and fallow; dry farming
681	Wheat, Koffoid.....	" " ".....	None	Alternately cropped and fallow; dry farming
682	Wheat, Turkey Red.....	" " ".....	None	Alternately cropped and fallow; dry farming
683	Wheat, winter.....	" " ".....	Trace	Alternately cropped and fallow; dry farming
684	Wheat, winter.....	" " ".....	None	Continuously cropped 3 years; dry farming
685	Alfalfa.....	Logan, Utah, Greenville Farm.....	"	Unfertilized
686	Corn, Northwestern Dent.....	" " ".....	"	Unfertilized
687	Corn stover, Northwestern Dent.....	" " ".....	"	"
688	Oats, Danish.....	" " ".....	Trace	Unfertilized
689	Wheat, New Zealand.....	" " ".....	None	"
690	Wheat straw, New Zealand.....	" " ".....	"	Unfertilized
691	Alfalfa.....	Substation, Nephi, Utah.....	"	Dry farming
692	Barley, Utah Winter.....	" " ".....	"	Alternately cropped and fallow; dry farming
693	Barley, Utah Winter.....	" " ".....	"	Alfalfa land; alternately cropped and fallow; dry farming
694	Oats, Boswell Winter.....	" " ".....	"	Alternately cropped and fallow; dry farming
695	Oats, Boswell Winter.....	" " ".....	"	Alfalfa land; alternately cropped and fallow; dry farming
696	Oats, New Roosevelt.....	" " ".....	"	C. I. 752-1914
697	Oats, Sixty Day.....	" " ".....	"	C. I. 165-1914
698	Oats, Swedish Select.....	" " ".....	"	C. I. 134-1914
699	Wheat, Arnautka, durum.....	" " ".....	"	C. I. 1494-1914
700	Wheat, Crimean.....	" " ".....	.000274	C. I. 1559-1913
701	Wheat, Crimean.....	" " ".....	Trace	C. I. 1432-1913
702	Wheat, Ghirka, spring.....	" " ".....	None	C. I. 1517-1914
703	Wheat, Ghirka, winter.....	" " ".....	.000286	C. I. 1438-1913
704	Wheat, Japanese.....	" " ".....	Trace	C. I. 1787

TABLE III—THE IODINE CONTENT OF FOODS—GEOGRAPHIC ARRANGEMENT—Continued  
(Dry Basis Unless Otherwise Stated)

Sample No.	Sample	Locality	Iodine content	Remarks
			Percent	
705	Wheat, Kharkov.....	Substation, Nephi, Utah.....	.000431	C. I. 1442-1914
706	Wheat, Koffoid.....	" " " ".....	None	Alfalfa land; alternately cropped and fallow; dry farming
707	Wheat, Koffoid.....	" " " ".....	"	Alternately cropped and fallow; dry farming
708	Wheat, Koffoid.....	" " " ".....	"	C. I. 2997-1914
709	Wheat, Kubanka.....	" " " ".....	Trace	Alternately cropped and fallow; dry farming
710	Wheat, spring durum.....	" " " ".....	None	Fallow; manured 20 tons; dry farming
711	Wheat, Turkey Red.....	" " " ".....	"	C. I. 2998
712	Wheat, Turkey Red.....	" " " ".....	"	After alfalfa; dry farming
713	Wheat, Turkey Red.....	" " " ".....	Trace	Alfalfa land; alternately cropped and fallow; dry farming
714	Wheat, Turkey Red.....	" " " ".....	None	Continuously cropped 11 years; dry farming
715	Wheat, Turkey Red.....	" " " ".....	"	Cropped 2 years every 3 during 11 years, no fertilizer; dry farming
716	Barley.....	Nephi, Utah.....	"	Irrigated; continuously cropped
717	Oats.....	" " " ".....	"	Alfalfa land; irrigated
718	Oats.....	" " " ".....	"	Alfalfa land; irrigated
719	Wheat.....	" " " ".....	"	Alternately cropped and fallow; irrigated
720	Wheat, California Club.....	" " " ".....	"	Continuously cropped 3 years; irrigated
721	Wheat, Red Chaff.....	" " " ".....	"	Irrigated
722	Wheat, Turkey Red.....	" " " ".....	"	Irrigated; continuously cropped
723	Wheat, Turkey Red.....	" " " ".....	Trace	Alternately cropped and fallow; dry farming
724	Alfalfa.....	Oak City, Utah.....	None	
725	Barley.....	" " " ".....	"	J. C. Lovell
726	Corn.....	" " " ".....	"	
727	Corn, sweet.....	" " " ".....	"	
728	Potato.....	" " " ".....	"	
729	Turnip.....	" " " ".....	"	
730	Wheat.....	" " " ".....	"	J. E. Lovell
731	Wheat.....	" " " ".....	"	J. E. Lovell
732	Wheat.....	" " " ".....	Trace	J. C. Lovell
733	Barley.....	Exp. Sta., Pullman, Wash.....	None	
734	Beet, sugar.....	" " " ".....	"	
735	Carrot.....	" " " ".....	"	
736	Clover, red.....	" " " ".....	"	
737	Kale.....	" " " ".....	"	
738	Oats.....	" " " ".....	"	

TABLE III.—THE IODINE CONTENT OF FOODS—GEOGRAPHIC ARRANGEMENT—Concluded  
(Dry Basis Unless Otherwise Stated)

Sample No.	Sample	Locality	Iodine content	Remarks
739	Oats, plant.....	Exp. Sta., Pullman, Wash.....	Percent	
740	Peas.....	" " " ".....	None	
741	Turnip, rutabaga.....	" " " ".....	"	
742	Wheat.....	" " " ".....	"	
743	Alfalfa.....	Floyd Zimmerman, Twisp, Wash.....	"	Irrigated
744	Oat hay.....	Floyd Zimmerman, Twisp, Wash.....	"	Not irrigated
745	Alfalfa.....	W. C. Hanks, Winthrop, Wash.....	"	Second crop; irrigated
746	Alfalfa.....	Alan Wetzel, Winthrop, Wash.....	"	Irrigated
747	Alfalfa.....	Frank Bean, Winthrop, Wash.....	"	Irrigated
748	Alfalfa.....	C. W. Gunn, Winthrop, Wash.....	"	
749	Apple.....	W. C. Hanks, Winthrop, Wash.....	"	Irrigated
750	Apple, Jonathan.....	" " " ".....	Trace	Not irrigated
751	Apple, Rome Beauty.....	" " " ".....	None	" "
752	Apple, Wagener.....	" " " ".....	None	" "
753	Beet, sugar.....	" " " ".....	Trace	
754	Carrot.....	" " " ".....	None	
755	Corn.....	" " " ".....	"	Irrigated, virgin soil
756	Corn.....	" " " ".....	"	Irrigated, old alfalfa field
757	Oats.....	" " " ".....	Trace	Irrigated, old alfalfa field
758	Oats.....	" " " ".....	None	Irrigated
759	Oat straw.....	" " " ".....	"	"
760	Oat straw and grain.....	Frank Bean, Winthrop, Wash.....	"	"
761	Potato.....	W. C. Hanks, Winthrop, Wash.....	Trace	"
762	Timothy.....	C. W. Gunn, Winthrop, Wash.....	None	
763	Water, Bear Creek.....	W. C. Hanks, Winthrop, Wash.....	.0000077	
764	Water, well.....	W. C. Hanks, Winthrop, Wash.....	.0000120	
765	Wheat, Blue Stem.....	C. W. Gunn, Winthrop, Wash.....	None	Not irrigated
766	Wheat hay.....	C. W. Gunn, Winthrop, Wash.....	"	Heads half-filled; half of stalk included
767	Wheat plant.....	Alan Wetzel, Winthrop, Wash.....	"	

## DISCUSSION OF RESULTS

The alphabetical arrangement of foods (Table I, pages 493 to 495) sets forth the total number of determinations on a given product, the number of these containing iodine, and the maximum amount of iodine found. An inspection of this table impresses one with the smallness of the proportion of our food products which contain iodine, the minute quantities in which iodine is ordinarily found, and the haphazard nature of its distribution.

We have no evidence, in the kinds of foods containing iodine, that its presence is usually essential. In most cases, at least, it must be strictly an accidental constituent.

Table II (pages 496 to 521) sets forth the entire list of food products grouped in accord with the following summary:

SUMMARY OF TABLE II

	Total number of samples	Number containing iodine
Animal products.....	35	13
Cereals.....	378	60
Fruits.....	34	5
Garden vegetables and root crops.....	131	39
Hays, silage and forage crops.....	205	50
Leguminous seeds.....	32	11
Manufactured foods, and milling and manufactory by-products.....	25	13
Nuts.....	7	0
Sea weeds.....	2	2
Spices, condiments and stimulants.....	27	2
Water.....	2	2

This summary shows that in order of increasing abundance of iodine in the several groups, mentioning first the one in which iodine is most rarely found, these groups would rate in the following order: (1) nuts, (2) spices, condiments and stimulants, (3) fruits, (4) cereals, (5) hays, silage and forage crops, (6) garden vegetables and root crops, (7) leguminous seeds, (8) animal products and (9) manufactured foods, and milling and manufactory by-products.

Among the animal products the only one containing iodine in more than traces was hair and hoof, from swine, a sample prepared in the course of a complete chemical accounting for the bodies of some experimental subjects. No iodine was found in 18 samples each of cow's milk, urine and feces, but traces were found in butter, in eggs, and in several kinds (but by no means in all samples examined) of meat, fish and crustacea.

Among the cereals iodine was found as an uncommon constituent, usually in traces only, and without apparent relation to the methods of fertilization and treatment.

None of the fruits contained more than the smallest recognizable traces of iodine, and very few contained even so much.

Among the garden vegetables and root crops beets rather commonly contained traces of iodine (9 samples out of 25), and in one case a larger amount. Two out of three samples of cucumber contained iodine; also one out of three samples of celery. Iodine was found in single samples of endive, kohlrabi and lettuce. Among onions five samples out of 15 contained iodine, and in parsnips two out of six. Six samples of potatoes out of 21 contained iodine; it was also found in spinach and in rhubarb. We found iodine in one sample of turnips out of 11, but none in tomatoes, pumpkin and squash.

Of the hays, silage and forage crops about one sample in four contained iodine. Among leguminous seeds iodine was found in 11 samples out of 32; more commonly among beans, peas and cowpeas than among soybeans.

The manufactured foods, and milling and manufactory by-products contained iodine in 13 samples out of 25; of those containing iodine 10 were made from cereals. The offal portions of the grains are richer in iodine than the more starchy parts.

Agar agar and Irish moss (used in making *blanc-mange*) were richer in iodine than any other products examined. They are the only marine plants included in this study.

Nuts, spices, condiments and table salt are not important sources of iodine in the dietary; none at all being found in seven kinds of nuts and in 16 samples of table salt.

The more important sources of iodine in the human dietary, then, are the garden vegetables, though some is also found in the cereal foods and in several foods of animal origin, mostly of the sorts less commonly used.

Among the foods used by livestock the more important sources of iodine are the hay, silage and forage crops, and also the milling and manufactory by-products, comparatively little being found in the natural grain foods.

The evidence in Table III (pages 522 to 541) shows that iodine is more commonly present in the foods from some regions than from others; thus, iodine was found more commonly in wheat from Nephi, Utah, than in samples of this cereal from any other point; and wheat from one lot of seed grown in 13 localities in Kansas (samples 110-121) contained traces of iodine in samples from six of the situations; also while iodine was found, on an average, in about one food sample to every five among those included in this grouping, each of the six samples from Reno, Nev., contained iodine, while 13 out of

24 from Experiment, Ga., 7 out of 14 from New Brunswick, N. J., 8 out of 19 from Bozeman, Mont., and 7 out of 19 from Fayetteville, Ark., contained iodine.

It is true, however, that in consideration of the small proportion of the food samples which contained iodine; also the facts that even when present the iodine was usually found only in traces, and that there was not commonly a consistent character of the iodine content of foods from a given region, we conclude that we have no satisfactory basis for statements as to the general geographic distribution of iodine in the foodstuffs of the United States. The evidence seems much more to emphasize the rarity and the accidental nature of iodine as a food constituent.

Among the many situations represented by these food samples there is, of course, much variability in the prevalence of goiter. Those localities in which goiter appears to be found most commonly are represented by samples from the following places: Fountain Green, Freedom, Nephi, Oak City and Logan, Utah; Sand Point and Gooding, Idaho; Twisp and Winthrop, Wash.; Savage, Mont., and farms along Springhill Creek and near Springhill Canon in the vicinity of Bozeman, Mont.; Aztec, N. Mex.; East Lansing, Mich.; Knoxville, Tenn., and Strongsville, Ohio. The iodine content of foods grown in these goitrous regions appears not to be lower than in foods grown elsewhere—nor is a high iodine content characteristic of foods grown in goitrous regions.

Variations in the iodine content of the same grain crop from several plots in the same field are often comparatively prominent. None of the ordinary methods of fertilization, or other details of management of the soil have been found, in any regular way, to affect the iodine content of field crops. Variations in the iodine content of the foods included in this study have not been successfully related to any associated conditions.

It is possible that the iodine content of the drinking water would contribute valuable evidence to this consideration. It is also conceivable that food habits, in a given region, should stand in closer connection with the cause of goiter than does the iodine content of the foods grown in the same region, since the residents of any particular place ordinarily enjoy, in the selection of the dietary, a very considerable independence of locally grown products.

The results of this investigation direct us toward a study of factors other than the diet which affect the amount and condition of the iodine present in the thyroid, as promising results of greatest significance in relation to the cause of goiter.