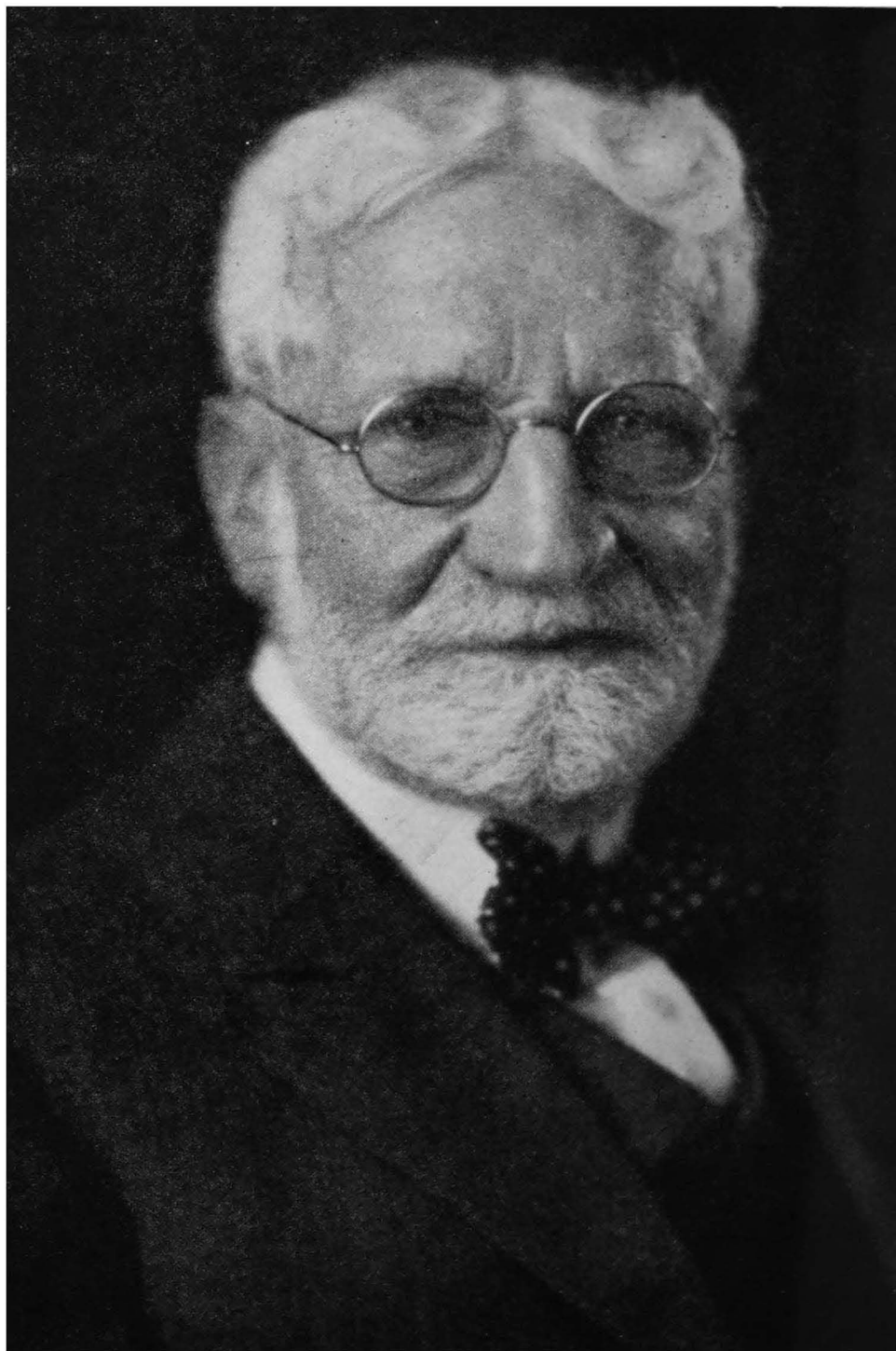


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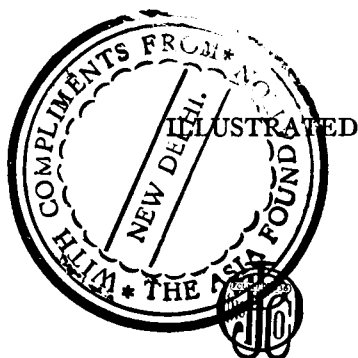


DR. LUCIUS L. VAN SLYKE

FERTILIZERS AND CROP PRODUCTION

By DR. LUCIUS L. VAN SLYKE, PH.D.

*Formerly Chemist of the
New York Agricultural Experiment Station*



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PREFACE

THIS book is the successor to the author's "Fertilizers and Crops," published in 1912. The intervening years have been filled with the ever-increasing activity of agricultural research workers in the study of problems relating to plant nutrition and crop production, covering all of the various phases,—chemical, physical, and biological. Many definite facts have thus been added to our knowledge.

Like its predecessor, this book has for its purpose not merely to give information but also to present it in such a systematic way as to make clear fundamental relations and to emphasize the reasons that underlie every practice suggested. The conditions are studied under which plant-foods, whether in the form of soil compounds, of farm-produced materials, or of commercial fertilizers, can be conserved and, at the same time, utilized with the greatest efficiency and economy in the production of crops.

Not only is it desirable but essential that a book that treats of the practical use of fertilizers on the farm be something more than a mere collection of formulas or recipes, that give the number of pounds of nitrogen, phosphorus, potassium or other compounds to apply to individual crops. Important also is it to make as prominent as possible other vital factors that influence or control the effectiveness with which a crop utilizes the nutrient materials supplied to it.

It has been the privilege of the writer for a period of forty years to be in touch with work relating to plant nutrition. Through personal contact he has been enabled to learn the practices, difficulties, and needs of farmers in relation to many of the problems of crop growing with the use of fertilizers. In no small degree, this book is, therefore, the outgrowth of an appreciation of the farmer's point of view. It seeks to assemble and arrange many of the facts and principles the farmer desires and needs to know.

As Chemist of the New York Agricultural Experiment Station, the author in 1890 had the responsibility of organizing the New York State fertilizer inspection work, with which he continued in close official relations until his retirement in 1929. He was thus for many years brought into intimate contact with the various aspects connected with the distribution and use of commercial fertilizers. He has been able to know at first hand the changes and developments that have taken place in the fertilizer trade. There is thus made

possible a full discussion of the new synthetic fertilizer compounds now coming into increasing use and also of the highly concentrated mixtures of commercial fertilizers now in the market.

In the preparation of this book, it has been the author's aim to keep in mind not only the requirements of students in agricultural colleges and high schools but as well the needs of student farmers who, in increasing numbers, are directly and vitally concerned in the profitable production of crops. The book can be used to advantage in the educational work promoted by granges and other farmers' organizations.

For the marked favor which has been accorded its predecessor, as shown by its extensive use during nearly twenty years, appreciation can not be expressed in any way more appropriate than by writing the present book and bringing the fertilizer subject up to date.

LUCIUS L. VAN SLYKE

Geneva, N. Y.

It is greatly to be regretted that Dr. Van Slyke did not live to see this book through the press. He died only a few weeks after completing the manuscript. Fortunately his son, Dr. Donald D. Van Slyke, Chemist, Member of Rockefeller Institute for Medical Research, has edited and proofread the text which is thus given the further stamp of authority.

PUBLISHER'S EDITOR

Ammo-phos-ko. After this book was in plate form the United States Court of Customs and Patent Appeals cancelled the registration of this trade mark name on the grounds that it is an infringement of the previously established trade mark term "nitrophoska." At the date of publication it is not known whether the former product has been renamed.—(See page 180.)

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APPENDIX

APPENDIX

In the following pages, we give, for convenience of reference, the approximate amounts of nitrogen, phosphoric acid (P_2O_5), and potash (K_2O), with equivalent amounts of phosphorus (P) and potassium (K) commonly present in materials used as sources of plant-food in fertilizers and also in farm products and other materials that may be of interest to crop growers:

TABLE 62.—COMPOSITION OF FERTILIZING MATERIALS USED AS SOURCES OF NITROGEN, PHOSPHORUS AND POTASSIUM

| Material | Pounds in 100 | | | |
|--------------------------------------|---------------|------------------------------|----------------------|-----------------------------|
| | Nitrogen | Phosphoric Acid (P_2O_5) | | Potash (K_2O) |
| | | Total | Available | |
| Ammonium sulfate (p. 166) | 20 | | | |
| Apatite (p. 175) | | 33 to 44 (15 to 20P) | | |
| Ashes | | | | |
| anthracite coal | | 0.1 to 0.15 (0.04 to 0.07P) | | 0.1 to 0.15 (0.08 to 0.12K) |
| bituminous coal | | 0.4 to 0.5 (0.15 to 0.20P) | | 0.4 to 0.5 (0.3 to 0.4K) |
| lime-kiln (p. 190) | | 0.5 to 1 (0.2 to 0.4P) | | 0.1 to 1.5 (0.08 to 1.2K) |
| spent tan-bark | | 1.5 to 2 (0.7 to 0.9P) | | 1.5 to 2.5 (1.2 to 2K) |
| wood, leached (p. 190) | | 1 to 1.5 (0.4 to 0.7P) | | 1 to 3 (0.8 to 2.5K) |
| wood, unleached (p. 190) | | 1 to 2 (0.4 to 0.9P) | | 4 to 6 (3.3 to 6.6K) |
| Azotin. See meat-meal (p. 169) | | | | |
| Basic-slag phosphate (p. 290) | | 10 to 18 (4.4 to 8P) | | |
| Blood, dried red (p. 169) | 13 to 15 | | | |
| " black | 6 to 12 | | | |
| Bone (p. 183) | | | | |
| " ash | | 30 to 35 (13 to 15.5P) | | |
| " black (p. 185) | | 25 to 35 (11 to 15.5P) | | |
| " black, dissolved | | 13 to 16 (5.7 to 7P) | 12 to 14 (5.3 to 6P) | |
| " dissolved | 1 to 2 | 13 to 16 (5.7 to 7P) | 12 to 14 (5.3 to 6P) | |
| " meal, steamed (p. 183) | 2 to 3 | 23 to 25 (10 to 11P) | | |
| " " from glue-making | 1 to 1.5 | 25 to 30 (11 to 13P) | | |
| " " raw | 3 to 4 | 21 to 25 (9 to 11P) | | |
| Carnallit | | | | 13 to 14 (10.8 to 11.6K) |
| Castor-bean pomace (p. 168) | 5 to 6 | 2 to 2.5 (0.9 to 1.1P) | | 1 to 1.25 (0.8 to 1K) |
| Cottonseed-hull ashes (p. 190) | | 7 to 12 (3 to 5.3P) | | 15 to 25 (12.5 to 20K) |
| Cottonseed-meal (p. 168) | 7 to 8 | 2 to 3 (0.9 to 1.3P) | | 1.5 to 2 (1.25 to 1.65K) |
| Cotton waste from factory | 1.32 | 0.45 (0.20P) | | 0.36 (0.30K) |

| | | | | |
|---|------------|-----------------------------|----------------------|----------------------------|
| Fish, dried and ground. (p. 170) | | | | |
| “ menhaden | 8 to 10 | 5.5 to 7 (2.5 to 3P) | | |
| “ acidulated | 5 | 3 (1.3P) | | |
| “ dog-fish scrap | 7.5 to 9 | 3 to 6 (1.3 to 2.5P) | | |
| “ whale scrap | 11.5 | 0.8 (0.35P) | | |
| Garbage rubbish (N. Y. City) | 3.4 to 3.7 | 0.10 to 1.47 (0.04 to 0.65) | | 2.25 to 4.25 (1.8 to 3.5K) |
| Grape refuse from wine factory | 0.75 | 0.20 (0.09P) | | 0.4 (0.3K) |
| Hair (p. 172) | 14 to 16 | | | |
| Hoof-meal and horn-dust (p. 171) | 10 to 15 | 1.5 to 2 (0.7 to 0.9P) | | |
| Kainite (p. 189) | | | | 12 to 13 (10 to 11K) |
| Leather, ground (p. 172) | 10 to 12 | | | |
| “ acidulated | 7 to 8 | | | |
| Meat scraps (p. 169) | 13 to 14 | | | |
| Muriate of potash (see potassium chloride). | | | | |
| Nitrate of soda (see sodium nitrate) | | | | |
| “ “ potash (see potassium nitrate) | | | | |
| Phosphates (p. 173) | | | | |
| Florida hard rock (p. 174) | | 36 (16P) | | |
| Florida land pebble | | 31 (14P) | | |
| Peace River pebble | | 28 (12P) | | |
| South Carolina land (p. 174) | | 27-28 (11 to 12P) | | |
| Tennessee blue (p. 175) | | 30 (13P) | | |
| Tennessee domestic | | 32 to 34.5 (14 to 15P) | | |
| Potassium chloride, 80 to 85% (p. 188) | | | | 50 to 53 (41.5 to 44K) |
| “ carbonate, 90 to 95% (p. 189) | | | | 61 to 64.5 (50 to 53.5K) |
| “ “ 96 to 98% | | | | 65 to 66.5 (54 to 55K) |
| “ nitrate (p. 165) | 13 | | | 44 (36.5K) |
| “ sulfate, 90 to 95% (p. 188) | | | | 48 to 51 (40 to 42K) |
| “ double manure salt 48 to 53% (p. 189) | | | | 26 to 29 (22 to 24K) |
| “ manure salt, 20% (p. 189) | | | | 11 (9K) |
| Powder-works waste | 2 to 3 | | | 16 to 18 (13 to 15K) |
| Sodium nitrate (p. 165) | 15 to 16 | | | |
| Superphosphate (p. 176) | | 13 to 18 (5.7 to 8P) | 12 to 16 (5.3 to 7P) | |
| Tankage, general range (p. 169) | 4 to 10 | 2 to 18 (1 to 8P) | | |
| “ concentrated | 10 to 12 | 2 to 4 (0.9 to 1.8P) | | |
| “ crushed | 4 to 9 | 3 to 18 (1.3 to 8P) | | |
| “ garbage (p. 171) | 1 to 2 | 0.5 to 1 (0.2 to 0.4P) | | 0.5 to 1 (0.4 to 0.8K) |
| Thomas slag (see basic slag). | | | | |
| Tobacco waste (p. 190) | 2 to 4 | 0.5 to 1 (0.2 to 0.4P) | | 5 to 10 (4 to 8K) |
| Wool waste (p. 172) | 5 to 6 | 2 to 4 (0.9 to 0.18P) | | 1 to 3 (0.8 to 2.5K) |

COMPOSITION OF FARM MANURES. See Tables 25 to 32, pp. 216 to 225.

TABLE 63—AMOUNTS OF NITROGEN, PHOSPHORUS AND POTASSIUM IN FARM PRODUCTS, FEEDING MATERIALS, BY-PRODUCTS, ETC.

| <i>Material</i> | <i>Nitrogen</i> | <i>POUNDS IN 100</i> | |
|-----------------------------------|-----------------|---|--------------------------------|
| | | <i>Phosphoric acid (P₂O₅)</i> | <i>Potash (K₂O)</i> |
| Ajax flakes..... | 5.20 | 0.70 (0.31P) | 0.20 (0.17K) |
| Alfalfa, green | 0.60 | 0.15 (0.07P) | 0.50 (0.42K) |
| “ hay | 2.45 | 0.50 (0.22P) | 2.10 (1.74K) |
| Alsike clover (see clover) | | | |
| American poultry food..... | 2.20 | 1.20 (0.53P) | 0.90 (0.75K) |
| Animal meal..... | 6.10 | | |
| Apple: | | | |
| Fruit | 0.05 | 0.02 (0.01P) | 0.10 (0.08K) |
| Leaves | 1.00 | 0.15 (0.07P) | 0.35 (0.30K) |
| New wood | 0.50 | 0.15 (0.07P) | 0.25 (0.21K) |
| Pomace | 0.20 | 0.02 (0.01P) | 0.15 (0.12K) |
| Apricot | 0.20 | 0.05 (0.02P) | 0.30 (0.25K) |
| Artichoke | 0.35 | 0.15 (0.07P) | 0.45 (0.37K) |
| Asparagus, young shoots..... | 0.35 | 0.10 (0.04P) | 0.25 (0.21K) |
| “ full-grown plant..... | 0.40 | 0.12 (0.05P) | 0.75 (0.62K) |
| “ berries | 1.10 | 0.35 (0.15P) | 0.85 (0.70K) |
| Atlas meal, distillery feed..... | 5.50 | 0.25 (0.11P) | 0.15 (0.12K) |
| Balm, fresh stems and leaves..... | 0.50 | 0.20 (0.09P) | 0.70 (0.58K) |
| Barley, bran | 1.75 | 0.90 (0.40P) | 0.85 (0.70K) |
| “ brewers' grains, dry..... | 3.50 | 1.25 (0.55P) | 0.20 (0.16K) |
| “ “ wet..... | 0.90 | 0.30 (0.13P) | 0.05 (0.04K) |
| “ chaff | 1.00 | 0.25 (0.11P) | 1.00 (0.83K) |
| “ feed | 2.70 | 1.30 (0.57P) | 0.90 (0.75K) |
| “ flour | 1.60 | 0.85 (0.37P) | 0.60 (0.50K) |
| “ grain | 1.75 | 0.75 (0.33P) | 0.50 (0.42K) |
| “ green forage | 0.40 | 0.15 (0.07P) | 0.50 (0.42K) |
| “ ground | 1.50 | 0.65 (0.30P) | 0.35 (0.30K) |
| “ malt | 1.60 | 0.95 (0.42P) | 0.45 (0.37K) |
| “ malt-sprouts | 3.75 | 1.65 (0.73P) | 1.80 (1.50K) |
| “ meal | 1.55 | 0.65 (0.30P) | 0.25 (0.21K) |
| “ middlings | 2.00 | 1.75 (0.77P) | 0.70 (0.58K) |
| “ straw | 0.60 | 0.20 (0.09P) | 1.10 (0.91K) |
| Bean, field, hay | 3.00 | 0.65 (0.30P) | 2.00 (1.65K) |
| “ “ meal | 3.75 | 1.00 (0.44P) | 1.50 (1.25K) |
| “ “ seed | 4.00 | 1.20 (0.53P) | 1.30 (1.10K) |
| “ “ shells | 1.70 | 0.30 (0.13P) | 0.35 (0.30K) |
| “ “ straw | 1.30 | 0.25 (0.11P) | 1.90 (1.60K) |
| Beans, garden, beans and pods.... | 0.25 | 0.08 (0.03P) | 0.30 (0.25K) |
| “ “ leaves | 0.50 | 0.10 (0.04P) | 0.50 (0.40K) |
| “ “ stalks | 0.40 | 0.10 (0.04P) | 0.55 (0.45K) |
| Beets, red, roots | 0.25 | 0.10 (0.04P) | 0.50 (0.42K) |
| “ “ tops | 0.35 | 0.10 (0.04P) | 0.55 (0.45K) |
| “ young roots and tops..... | 0.35 | 0.10 (0.04P) | 0.65 (0.55K) |
| “ mangolds or mangels..... | 0.15 | 0.10 (0.04P) | 0.35 (0.30K) |
| “ sugar | 0.20 | 0.10 (0.04P) | 0.45 (0.37K) |
| “ yellow fodder..... | 0.20 | 0.10 (0.04P) | 0.50 (0.42K) |
| Blackberries, fruit | 0.22 | 0.06 (0.03P) | 0.23 (0.20K) |
| “ leaves | 1.00 | 0.12 (0.05P) | 0.77 (0.64K) |

| <i>Material</i> | <i>POUNDS IN 100</i> | | |
|-------------------------------|----------------------|---|--------------------------------|
| | <i>Nitrogen</i> | <i>Phosphoric acid (P₂O₅)</i> | <i>Potash (K₂O)</i> |
| Blackberries, new wood | 0.55 | 0.15 (0.07P) | 0.25 (0.21K) |
| “ old wood..... | 0.27 | 0.03 (0.02P) | 0.15 (0.12K) |
| Brewers' grains (see barley). | | | |
| Buckwheat, bran | 2.75 | 1.50 (0.66P) | 1.10 (0.90K) |
| “ feed | 3.00 | 1.60 (0.70P) | 1.00 (0.80K) |
| Buckwheat, flour | 0.75 | 0.50 (0.22P) | 0.15 (0.13K) |
| “ grain | 1.50 | 0.60 (0.26P) | 0.30 (0.25K) |
| “ green | 0.40 | 0.08 (0.03P) | 0.35 (0.30K) |
| “ hay | 0.80 | 0.60 (0.26P) | 2.40 (2.00K) |
| “ hulls | 0.55 | 0.06 (0.02P) | 0.75 (0.62K) |
| “ in blossom | 0.50 | 0.03 (0.01P) | 0.40 (0.33K) |
| “ middlings | 4.75 | 3.00 (1.32P) | 2.25 (1.85K) |
| “ straw | 1.25 | 0.15 (0.07P) | 1.15 (0.95K) |
| “ Japanese, green | 0.25 | 0.15 (0.07P) | 0.55 (0.45K) |
| “ “ hay | 1.60 | 0.85 (0.37P) | 3.30 (2.75K) |
| “ silverhull | 0.30 | 0.15 (0.07P) | 0.40 (0.33K) |
| Butter | 0.15 | 0.05 (0.02P) | 0.03 (0.02K) |
| Buttermilk | 0.50 | 0.15 (0.07P) | 0.15 (0.12K) |
| Cabbage, head | 0.30 | 0.10 (0.04P) | 0.40 (0.33K) |
| “ stump and outside leaves | 0.37 | 0.10 (0.04P) | 0.45 (0.37K) |
| Carrot, root | 0.23 | 0.13 (0.08P) | 0.53 (0.44K) |
| “ tops | 0.54 | 0.13 (0.08P) | 0.11 (0.09K) |
| Cauliflower, head | 0.28 | 0.10 (0.04P) | 0.33 (0.27K) |
| “ leaves | 0.35 | 0.10 (0.04P) | 0.47 (0.40K) |
| Celery | 0.25 | 0.20 (0.09P) | 0.75 (0.62K) |
| Cheese, whole-milk | 3.75 | 0.75 (0.33P) | 0.30 (0.25K) |
| “ skim-milk | 7.50 | 0.75 (0.33P) | 0.30 (0.25K) |
| Cherry, fruit pulp | 0.17 | 0.04 (0.02P) | 0.20 (0.17K) |
| “ stones | 0.47 | 0.15 (0.07P) | 0.25 (0.20K) |
| “ stems | 0.35 | 0.13 (0.06P) | 0.60 (0.50K) |
| “ leaves | 0.60 | 0.11 (0.05P) | 0.72 (0.60K) |
| “ wood | 0.45 | 0.15 (0.07P) | 0.30 (0.25K) |
| Clover, alsike, green | 0.50 | 0.12 (0.05P) | 0.30 (0.25K) |
| “ “ hay | 2.10 | 0.50 (0.22P) | 1.25 (1.05K) |
| “ crimson, green | 0.45 | 0.12 (0.05P) | 0.40 (0.33K) |
| “ “ hay | 2.10 | 0.45 (0.20P) | 1.50 (1.25K) |
| “ mammoth, green | 0.50 | 0.12 (0.05P) | 0.40 (0.33K) |
| “ “ hay | 2.20 | 0.55 (0.24P) | 1.20 (1.00K) |
| “ red, green | 0.55 | 0.13 (0.06P) | 0.50 (0.42K) |
| “ “ hay | 2.10 | 0.50 (0.22P) | 2.00 (1.65K) |
| “ “ seed | 3.00 | 1.50 (0.66P) | 1.40 (1.15K) |
| “ sweet, green | 0.55 | 0.15 (0.07P) | 0.50 (0.42K) |
| “ “ hay | 2.00 | 0.55 (0.25P) | 1.85 (1.55K) |
| “ white, green | 0.50 | 0.20 (0.09P) | 0.30 (0.25K) |
| “ “ hay | 2.25 | 0.50 (0.22P) | 1.25 (1.05K) |
| Cocoonut meal..... | 3.90 | 1.60 (0.70P) | 2.40 (2.00K) |
| Corn, bran | 1.65 | 1.20 (0.53P) | 0.70 (0.58K) |
| “ broom, green fodder..... | 0.30 | 0.15 (0.07P) | 0.70 (0.58K) |
| “ “ seed | 1.70 | 0.70 (0.30P) | 0.50 (0.42K) |
| “ “ stalks | 0.85 | 0.45 (0.20P) | 1.85 (1.55K) |
| “ cobs | 0.40 | 0.06 (0.02P) | 0.45 (0.37K) |

FERTILIZERS AND CROP PRODUCTION

| <i>Material</i> | <i>POUNDS IN 100</i> | | |
|--------------------------------|----------------------|---|--------------------------------|
| | <i>Nitrogen</i> | <i>Phosphoric acid (P₂O₅)</i> | <i>Potash (K₂O)</i> |
| Corn products: | | | |
| “ and cob meal..... | 1.40 | 0.60 (0.26P) | 0.50 (0.42K) |
| “ fodder with ears..... | 1.75 | 0.55 (0.24P) | 0.90 (0.75K) |
| “ “ without ears..... | 1.00 | 0.30 (0.13P) | 1.40 (1.15K) |
| “ grain | 1.65 | 0.65 (0.30P) | 0.40 (0.33K) |
| “ husks | 0.20 | 0.07 (0.03P) | 0.25 (0.21K) |
| “ green forage | 0.30 | 0.13 (0.06P) | 0.33 (0.27K) |
| “ kafir, red, green forage.... | 0.30 | 0.13 (0.06P) | 0.45 (0.37K) |
| “ “ white “ “ | 0.65 | 0.12 (0.05P) | 0.50 (0.42K) |
| “ meal | 1.60 | 0.65 (0.30P) | 0.40 (0.33K) |
| “ middlings | 1.40 | 0.35 (0.15P) | 0.25 (0.21K) |
| “ silage | 0.30 | 0.12 (0.05P) | 0.35 (0.30K) |
| “ stalks | 0.75 | 0.40 (0.18P) | 0.90 (0.75K) |
| Cerealine feed..... | 1.70 | 1.25 (0.55P) | 0.65 (0.54K) |
| Germ meal..... | 1.80 | 0.40 (0.18P) | 0.20 (0.16K) |
| Germ oil meal..... | 3.00 | 0.90 (0.40P) | 0.10 (0.08K) |
| Gluten feed, grano | 5.00 | 0.65 (0.30P) | 0.20 (0.16K) |
| “ “ Queen | 3.90 | 0.35 (0.15P) | trace |
| “ “ Star | 3.70 | 0.35 (0.15P) | “ |
| “ “ Warner's | 2.80 | 0.30 (0.13P) | “ |
| Gluten meal, Buffalo | 4.20 | 1.15 (0.51P) | 0.60 (0.50K) |
| “ “ Chicago | 5.75 | 0.35 (0.15P) | trace |
| “ “ cream | 6.70 | 0.30 (0.13P) | “ |
| “ “ globe | 4.15 | 0.60 (0.26P) | 0.10 (0.08K) |
| “ “ Hammond | 4.50 | 0.50 (0.22P) | 0.10 (0.08K) |
| “ “ Iowa | 4.70 | 0.45 (0.20P) | 0.10 (0.08K) |
| “ “ King | 6.00 | 0.65 (0.30P) | 0.05 (0.04K) |
| “ “ Nebraska | 3.15 | 0.45 (0.20P) | 0.10 (0.08K) |
| Hominy feed | 1.65 | 1.00 (0.44P) | 0.50 (0.42K) |
| “ meal | 1.75 | 1.40 (0.62P) | 0.75 (0.62K) |
| Maizeline | 1.60 | 1.40 (0.62P) | 0.80 (0.66K) |
| Sprouts | 4.15 | 1.55 (0.70P) | 1.85 (1.55K) |
| Starch feed, wet..... | 0.80 | trace | trace |
| Sugar feed..... | 1.60 | 0.20 (0.09P) | 0.10 (0.08K) |
| Corn, sweet, cobs | 0.20 | 0.10 (0.04P) | 0.26 (0.22K) |
| “ “ cobs and kerne's.... | 0.45 | 0.20 (0.09P) | 0.30 (0.25K) |
| “ “ green fodder..... | 0.30 | 0.12 (0.05P) | 0.30 (0.25K) |
| “ “ husks | 0.20 | 0.10 (0.04P) | 0.35 (0.30K) |
| “ “ kernels | 0.65 | 0.30 (0.13P) | 0.35 (0.30K) |
| “ “ leaves | 0.40 | 0.12 (0.05P) | 0.55 (0.45K) |
| “ “ stalks | 0.20 | 0.06 (0.03P) | 0.55 (0.45K) |
| Cottonseed | 3.15 | 1.25 (0.55P) | 1.15 (0.95K) |
| “ feed | 1.50 | 0.45 (0.20P) | 1.10 (0.90K) |
| “ hulls | 0.75 | 0.20 (0.09P) | 1.10 (0.90K) |
| “ meal | 7.00 | 3.00 (1.30P) | 1.75 (1.45K) |
| Cow-peas, green forage | 0.45 | 0.12 (0.05P) | 0.45 (0.37K) |
| “ hay | 2.50 | 0.55 (0.25P) | 1.75 (1.45K) |
| “ seed | 3.10 | 1.00 (0.44P) | 1.20 (1.00K) |
| Cream | 0.50 | 0.15 (0.07P) | 0.13 (0.11K) |
| Cucumbers, edible part..... | 0.10 | 0.06 (0.03P) | 0.20 (0.17K) |
| “ leaves | 0.40 | 0.08 (0.03P) | 0.70 (0.60K) |
| “ vines | 0.20 | 0.08 (0.03P) | 0.60 (0.50K) |

| <i>Material</i> | <i>Nitrogen</i> | <i>POUNDS IN 100</i> | |
|----------------------------------|-----------------|---|--------------------------------|
| | | <i>Phosphoric acid (P₂O₅)</i> | <i>Potash (K₂O)</i> |
| Currants, fruit | 0.30 | 0.12 (0.05P) | 0.30 (0.25K) |
| “ leaves | 0.70 | 0.20 (0.09P) | 0.95 (0.82K) |
| “ stems | 1.00 | 0.35 (0.15P) | 0.75 (0.62K) |
| “ new wood | 0.45 | 0.22 (0.10P) | 0.35 (0.30K) |
| “ old wood | 0.57 | 0.23 (0.10P) | 0.22 (0.18K) |
| Daisy, white, hay | 0.25 | 0.40 (0.18P) | 1.20 (1.00K) |
| “ ox-eye, hay | 0.30 | 0.45 (0.20P) | 1.25 (1.05K) |
| Dandelion, green..... | 0.35 | 0.10 (0.04P) | 0.60 (0.50K) |
| Dewberries | 0.22 | 0.06 (0.03P) | 0.20 (0.17K) |
| Eggplant, edible part | 0.20 | 0.05 (0.02P) | 0.30 (0.25K) |
| “ leaves | 0.85 | 0.15 (0.07P) | 1.00 (0.83K) |
| Eggs | 2.25 | 0.40 (0.18P) | 0.15 (0.12K) |
| Endive | 0.30 | 0.07 (0.03P) | 0.75 (0.62K) |
| Flax seed | 4.35 | 1.60 (0.66P) | 0.95 (0.80K) |
| “ straw | 0.85 | 0.20 (0.09P) | 1.00 (0.83K) |
| Fox-grass hay..... | 1.20 | 0.20 (0.09P) | 0.95 (0.80K) |
| Germ-meal (see corn products). | | | |
| Gluten-meal (see corn products). | | | |
| Gooseberries, fruit | 0.16 | 0.08 (0.03P) | 0.03 (0.02K) |
| “ leaves | 0.70 | 0.23 (0.10P) | 1.13 (0.94K) |
| “ new wood | 0.40 | 0.21 (0.09P) | 0.40 (0.33K) |
| “ old wood..... | 0.50 | 0.25 (0.11P) | 0.40 (0.33K) |
| Grape-pomace, fresh | 0.95 | 0.14 (0.06P) | 0.63 (0.52K) |
| Grapes, fruit | 0.15 | 0.07 (0.03P) | 0.30 (0.13K) |
| “ leaves | 0.45 | 0.10 (0.04P) | 0.35 (0.30K) |
| “ new wood..... | 0.30 | 0.10 (0.04P) | 0.30 (0.25K) |
| Hempseed | 2.50 | 1.75 (0.77P) | 1.00 (0.83K) |
| Herd grass | 1.00 | 0.35 (0.15P) | 1.50 (1.25K) |
| Hominy feed (see corn products). | | | |
| Hops, entire plant, air-dry..... | 1.00 | 0.60 (0.26P) | 1.40 (1.15K) |
| “ cones or fruit, dry..... | 1.70 | 1.10 (0.48P) | 1.50 (1.25K) |
| “ refuse | 1.00 | 0.20 (0.09P) | 0.10 (0.04K) |
| “ vines, air dry..... | 0.65 | 0.30 (0.13P) | 1.35 (1.12K) |
| Horehound | 0.70 | 0.15 (0.07P) | 1.00 (0.83K) |
| Horse-radish, root..... | 0.40 | 0.10 (0.04P) | 1.00 (0.83K) |
| Hungarian grass, green | 0.35 | 0.15 (0.07P) | 0.50 (0.42K) |
| “ “ hay | 1.20 | 0.40 (0.18P) | 1.40 (1.15K) |
| “ “ seed | 1.60 | 0.45 (0.20P) | 0.40 (0.33K) |
| Hyssop | 0.50 | 0.15 (0.07P) | 0.55 (0.46K) |
| June grass, hay..... | 1.05 | 0.35 (0.15P) | 1.45 (1.20K) |
| Kentucky blue-grass, hay..... | 1.20 | 0.40 (0.18P) | 1.55 (1.30K) |
| Kohl-rabi | 0.50 | 0.25 (0.11P) | 0.45 (0.37K) |
| Lemon culls, Calif. | 0.15 | 0.06 (0.02P) | 0.26 (0.22K) |
| Lettuce | 0.25 | 0.08 (0.03P) | 0.45 (0.37K) |
| Linseed: | | | |
| “ meal, old process..... | 5.30 | 1.75 (0.77P) | 1.30 (1.10K) |
| “ “ new process..... | 5.70 | 1.85 (0.80P) | 1.40 (1.16K) |
| Maize (see corn). | | | |
| Malt (see barley). | | | |
| Mangolds (see beets). | | | |
| Marsh rosemary, hay..... | 0.85 | 0.05 (0.03P) | 0.25 (0.21K) |
| Meadow, fescue, hay..... | 0.95 | 0.40 (0.18P) | 2.00 (1.65K) |

FERTILIZERS AND CROP PRODUCTION

| <i>Material</i> | <i>POUNDS IN 100</i> | | |
|----------------------------------|----------------------|---|--------------------------------|
| | <i>Nitrogen</i> | <i>Phosphoric acid (P₂O₅)</i> | <i>Potash (K₂O)</i> |
| Meadow, foxtail, hay | 1.50 | 0.45 (0.20P) | 0.20 (0.17K) |
| “ hay, mixed grasses..... | 1.50 | 0.40 (0.18P) | 1.35 (1.12K) |
| Milk | 0.50 | 0.30 (0.13P) | 0.18 (0.15K) |
| Millet, common, green | 0.30 | 0.10 (0.04P) | 0.50 (0.42K) |
| “ “ hay | 1.25 | 0.45 (0.20P) | 1.50 (1.25K) |
| “ “ straw | 0.70 | 0.20 (0.09P) | 1.70 (1.40K) |
| “ “ seed | 2.00 | 0.95 (0.42P) | 0.40 (0.33K) |
| “ barnyard, green | 0.25 | 0.15 (0.07P) | 0.75 (0.63K) |
| “ “ hay | 1.30 | 0.45 (0.20P) | 2.75 (2.30K) |
| “ Japanese, green | 0.30 | 0.20 (0.09P) | 0.70 (0.58K) |
| “ “ hay | 1.10 | 0.40 (0.18P) | 1.20 (1.00K) |
| “ “ seed | 1.60 | 0.65 (0.54P) | 0.40 (0.33K) |
| “ pearl, green | 0.20 | 0.15 (0.07P) | 0.45 (0.37K) |
| “ chaff | 0.75 | 0.20 (0.09P) | 0.45 (0.37K) |
| Molasses feed | 3.00 | 0.85 (0.37P) | 2.00 (1.65K) |
| Mushrooms | 1.10 | 0.40 (0.18P) | 0.70 (0.58K) |
| Muskmelons, fruit | 0.22 | 0.08 (0.03P) | 0.40 (0.33K) |
| “ vines and leaves..... | 0.35 | 0.08 (0.03P) | 0.60 (0.50K) |
| Oak leaves | 0.80 | 0.35 (0.15P) | 0.15 (0.13K) |
| Oat products: | | | |
| Canada oat feed..... | 0.70 | 0.30 (0.13P) | 0.60 (0.50K) |
| Cream oat feed..... | 1.15 | 0.55 (0.24P) | 0.65 (0.54K) |
| Friend's oat feed..... | 1.40 | 0.60 (0.26P) | 0.65 (0.54K) |
| Iowa oat feed..... | 1.70 | 0.50 (0.22P) | 0.55 (0.45K) |
| Monarch oat chop..... | 1.40 | 0.65 (0.30P) | 0.45 (0.37K) |
| Royal oat feed..... | 1.40 | 0.50 (0.22P) | 0.70 (0.58K) |
| Vim oat feed..... | 1.10 | 0.55 (0.24P) | 0.70 (0.58K) |
| “X” oat feed..... | 1.20 | 0.60 (0.26P) | 0.75 (0.62K) |
| Oats and vetch, green fodder ... | 0.30 | 0.15 (0.07P) | 0.30 (0.25K) |
| “ “ “ hay | 2.00 | 0.60 (0.26P) | 1.25 (1.05K) |
| Oats, bran | 1.35 | 0.20 (0.09P) | 0.70 (0.58K) |
| “ chaff | 0.75 | 0.15 (0.07P) | 0.45 (0.37K) |
| “ chop | 1.35 | 0.65 (0.30P) | 0.70 (0.58K) |
| “ grain | 2.00 | 0.80 (0.35P) | 0.60 (0.50K) |
| “ green fodder..... | 0.60 | 0.15 (0.07P) | 0.45 (0.37K) |
| “ ground | 1.85 | 0.75 (0.33P) | 0.60 (0.50K) |
| “ hay | 1.50 | 0.65 (0.30P) | 2.20 (1.80K) |
| “ hulls | 0.55 | 0.25 (0.11P) | 0.50 (0.42K) |
| “ middlings | 2.40 | 1.35 (0.60P) | 1.10 (0.90K) |
| “ straw | 0.60 | 0.20 (0.09P) | 1.25 (1.05K) |
| “ and peas, green fodder..... | 0.35 | 0.15 (0.07P) | 0.50 (0.42K) |
| “ “ “ hay | 1.65 | 0.60 (0.26P) | 1.80 (1.50K) |
| “ “ “ seeds | 2.70 | 1.00 (0.44P) | 0.90 (0.75K) |
| “ “ “ straw | 0.75 | 0.40 (0.18P) | 3.20 (2.65K) |
| Olives, pomace | 1.00 | 0.14 (0.06P) | 0.26 (0.22K) |
| “ refuse | 1.22 | 0.18 (0.08P) | 0.32 (0.27K) |
| Onions, bulb | 0.23 | 0.09 (0.04P) | 0.22 (0.18K) |
| “ top | 0.30 | 0.06 (0.03P) | 0.55 (0.45K) |
| Oranges, California | 0.18 | 0.05 (0.02P) | 0.21 (0.17K) |
| “ culls | 0.20 | 0.13 (0.06P) | 0.21 (0.17K) |
| “ Florida | 0.12 | 0.07 (0.03P) | 0.48 (0.40K) |

POUNDS IN 100

| <i>Material</i> | <i>Nitrogen</i> | <i>Phosphoric acid (P₂O₅)</i> | <i>Potash (K₂O)</i> |
|----------------------------------|-----------------|---|--------------------------------|
| Orchard grass, green fodder..... | 0.45 | 0.15 (0.07P) | 0.55 (0.45K) |
| “ hay | 1.20 | 0.35 (0.15P) | 1.75 (1.45K) |
| Parsnips, root | 0.22 | 0.20 (0.09P) | 0.65 (0.54K) |
| “ top | 0.42 | 0.15 (0.07P) | 0.10 (0.08K) |
| Pasture grass | 0.90 | 0.25 (0.11P) | 0.75 (0.62K) |
| Peaches, fruit pulp | 0.08 | 0.04 (0.02P) | 0.20 (0.17K) |
| “ stones | 0.27 | 0.07 (0.03P) | 0.08 (0.07K) |
| “ leaves | 0.90 | 0.15 (0.07P) | 0.60 (0.50K) |
| “ new wood | 0.43 | 0.10 (0.04P) | 0.22 (0.18K) |
| Peanuts, meal cake | 1.40 | 1.30 (0.55P) | 1.50 (1.25K) |
| “ feed | 7.50 | 0.25 (0.11P) | 0.80 (0.66K) |
| “ shells | 0.80 | 0.15 (0.07P) | 0.50 (0.42K) |
| “ meal and shells | 1.15 | 0.15 (0.07P) | 0.60 (0.50K) |
| “ seeds or kernels | 3.60 | 0.70 (0.31P) | 0.45 (0.37K) |
| Pears, fruit | 0.05 | 0.02 (0.01P) | 0.10 (0.08K) |
| “ leaves | 0.70 | 0.12 (0.05P) | 0.40 (0.33K) |
| “ wood | 0.30 | 0.10 (0.04P) | 0.25 (0.20K) |
| Peas, field, green forage | 0.50 | 0.15 (0.07P) | 0.50 (0.42K) |
| “ “ hay | 2.00 | 0.40 (0.18P) | 1.00 (0.83K) |
| “ “ meal | 3.00 | 0.80 (0.35P) | 1.00 (0.83K) |
| “ “ middlings | 3.75 | 0.65 (0.30P) | 0.75 (0.62K) |
| “ “ seeds | 3.75 | 0.80 (0.35P) | 1.00 (0.83K) |
| “ “ straw | 1.40 | 0.35 (0.15P) | 1.00 (0.83K) |
| “ garden, green | 1.15 | 0.30 (0.13P) | 0.45 (0.37K) |
| “ “ leaves | 0.55 | 0.07 (0.03P) | 0.50 (0.42K) |
| “ “ pods | 0.25 | 0.05 (0.02P) | 0.20 (0.17K) |
| “ “ vines | 0.25 | 0.05 (0.02P) | 0.70 (0.58K) |
| Peppermint, garden | 0.35 | 0.20 (0.09P) | 0.65 (0.54K) |
| “ wild | 0.45 | 0.17 (0.07P) | 0.55 (0.45K) |
| Plums, fruit pulp..... | 0.12 | 0.05 (0.02P) | 0.20 (0.17K) |
| Plums, fruit stones | 0.50 | 0.15 (0.07P) | 0.10 (0.08K) |
| “ leaves | 0.75 | 0.17 (0.08P) | 0.80 (0.66K) |
| “ new wood | 0.50 | 0.18 (0.08P) | 0.28 (0.23K) |
| “ stems | 0.35 | 0.12 (0.05P) | 0.30 (0.25K) |
| Potatoes, leaves and stalks..... | 0.60 | 0.15 (0.07P) | 0.45 (0.37K) |
| “ tubers | 0.35 | 0.15 (0.07P) | 0.50 (0.42K) |
| “ sweet | 0.25 | 0.10 (0.07P) | 0.50 (0.42K) |
| Pot marjoram | 0.50 | 0.16 (0.07P) | 0.60 (0.50K) |
| Prickly comfrey | 0.40 | 0.15 (0.07P) | 0.70 (0.58K) |
| Prunes, refuse | 0.18 | 0.07 (0.03P) | 0.31 (0.26K) |
| Pumpkins, flesh | 0.16 | 0.07 (0.03P) | 0.26 (0.22K) |
| “ vines and seeds | 0.42 | 0.10 (0.04P) | 0.57 (0.47K) |
| “ seeds | 0.87 | 0.50 (0.22P) | 0.45 (0.37K) |
| Quinces, fruit | 0.12 | 0.05 (0.02P) | 0.25 (0.20K) |
| “ leaves | 0.90 | 0.17 (0.08P) | 0.40 (0.33K) |
| “ new wood | 0.50 | 0.20 (0.09P) | 0.40 (0.33K) |
| Radishes, root | 0.15 | 0.06 (0.02P) | 0.35 (0.30K) |
| “ top | 0.42 | 0.06 (0.02P) | 0.45 (0.37K) |
| Rape, green | 0.40 | 0.15 (0.07P) | 0.45 (0.37K) |
| Raspberries, fruit | 0.20 | 0.10 (0.04P) | 0.25 (0.21K) |
| “ leaves | 1.35 | 0.27 (0.12P) | 0.63 (0.52K) |
| “ new wood | 0.45 | 0.15 (0.07P) | 0.25 (0.21K) |

POUNDS IN 100

| <i>Material</i> | <i>Nitrogen</i> | <i>Phosphoric acid (P₂O₅)</i> | <i>Potash (K₂O)</i> |
|---------------------------|-----------------|---|--------------------------------|
| Raspberries, old wood | 0.30 | 0.06 (0.02P) | 0.25 (0.21K) |
| Redtop hay | 1.20 | 0.35 (0.30P) | 1.00 (0.82K) |
| Rhubarb, leaves | 0.30 | 0.08 (0.03P) | 0.50 (0.42K) |
| “ stems | 0.10 | 0.04 (0.02P) | 0.35 (0.30K) |
| Rice bran | 0.70 | 0.30 (0.13P) | 0.25 (0.21K) |
| “ grain | 1.10 | 0.20 (0.09P) | 0.10 (0.08K) |
| “ hulls | 0.60 | 0.20 (0.09P) | 0.15 (0.13K) |
| “ polish | 2.30 | 3.30 (1.45P) | 1.20 (1.00K) |
| Roses, flowers | 0.30 | 0.10 (0.04P) | 0.40 (0.33K) |
| “ leaves | 0.40 | 0.10 (0.04P) | 0.50 (0.42K) |
| “ wood | 0.15 | 0.07 (0.03P) | 0.12 (0.10K) |
| Rue | 0.55 | 0.15 (0.07P) | 0.65 (0.54K) |
| Rutabagas | 0.20 | 0.12 (0.05P) | 0.50 (0.42K) |
| Rye, bran | 2.25 | 2.15 (0.95P) | 1.30 (1.08K) |
| “ chaff | 0.60 | 0.55 (0.24P) | 0.50 (0.42K) |
| “ feed | 1.55 | 0.75 (0.33P) | 0.45 (0.37K) |
| “ flour | 1.75 | 0.85 (0.37P) | 0.65 (0.54K) |
| “ grain | 1.70 | 0.85 (0.37P) | 0.60 (0.50K) |
| “ green forage | 0.45 | 0.20 (0.09P) | 0.65 (0.54K) |
| “ hay | 1.05 | 0.40 (0.18P) | 1.25 (1.05K) |
| “ middlings | 2.00 | 1.00 (0.44P) | 0.75 (0.63K) |
| “ straw | 0.50 | 0.30 (0.13P) | 0.85 (0.70K) |
| Rye grass, Italian, green | 0.55 | 0.30 (0.13P) | 1.15 (0.95K) |
| “ “ “ hay | 1.10 | 0.55 (0.24P) | 1.20 (1.00K) |
| “ “ perennial, green | 0.50 | 0.30 (0.13P) | 1.10 (0.90K) |
| “ “ “ hay | 1.15 | 0.55 (0.24P) | 1.50 (1.25K) |
| Sage | 0.55 | 0.10 (0.04P) | 0.60 (0.56K) |
| Sainfoin, green | 0.70 | 0.20 (0.09P) | 0.55 (0.46K) |
| “ hay | 2.20 | 0.50 (0.22P) | 1.40 (1.16K) |
| Salsify, root | 0.50 | 0.15 (0.07P) | 0.55 (0.46K) |
| “ top | 0.50 | 0.10 (0.04P) | 1.10 (0.90K) |
| Salt marsh hay | 1.10 | 0.25 (0.11P) | 0.75 (0.63K) |
| Sedge, creek, hay | 1.30 | 0.05 (0.02P) | 0.50 (0.42K) |
| “ short, hay | 0.15 | 0.15 (0.07P) | 1.15 (0.95K) |
| Serradella, grass | 0.40 | 0.15 (0.07P) | 0.40 (0.33K) |
| “ hay | 2.40 | 0.75 (0.33P) | 2.00 (1.65K) |
| Skim-milk | 0.50 | 0.35 (0.15P) | 0.20 (0.17K) |
| Sorghum, green fodder | 0.30 | 0.12 (0.05P) | 0.30 (0.25K) |
| “ seed | 1.50 | 0.80 (0.35P) | 0.45 (0.37K) |
| Soy beans, green | 0.50 | 0.15 (0.07P) | 0.60 (0.50K) |
| “ “ hay | 2.30 | 0.70 (0.31P) | 1.10 (0.90K) |
| “ “ seed | 5.30 | 1.80 (0.80P) | 2.00 (1.65K) |
| “ “ straw | 0.90 | 0.30 (0.13P) | 0.75 (0.62K) |
| Spanish moss | 0.60 | 0.10 (0.04P) | 0.55 (0.46K) |
| Sphagnum moss | 0.64 | 0.10 (0.04P) | 0.26 (0.22K) |
| Spinach | 0.50 | 0.15 (0.07P) | 0.25 (0.21K) |
| Strawberries, fruit | 0.15 | 0.06 (0.03P) | 0.25 (0.21K) |
| “ hulls | 0.30 | 0.09 (0.04P) | 0.40 (0.33K) |
| Street sweepings | 0.38 | 0.40 (0.18P) | 0.30 (0.25K) |
| Sucrene dairy feed | 3.10 | 0.60 (0.26P) | 0.25 (0.21K) |
| Sugar-beet feed, dry | 1.30 | 0.25 (0.11P) | 0.60 (0.50K) |
| “ pulp, fresh | 0.20 | 0.30 (0.13P) | 0.10 (0.08K) |

| <i>Material</i> | <i>POUNDS IN 100</i> | | |
|---------------------------------|----------------------|---|--------------------------------|
| | <i>Nitrogen</i> | <i>Phosphoric acid (P₂O₅)</i> | <i>Potash (K₂O)</i> |
| Sugar beets (see beets). | | | |
| Sugar-cane | 0.20 | 0.10 (0.04P) | 0.45 (0.37K) |
| Sunflower seed | 2.25 | 1.25 (0.55P) | 0.75 (0.62K) |
| Sweet clover (see clover). | | | |
| Sweet corn (see corn). | | | |
| Tall meadow oat grass, hay..... | 1.15 | 0.30 (0.13P) | 1.70 (1.40K) |
| Tansy, garden | 0.50 | 0.15 (0.07P) | 0.75 (0.62K) |
| Tarragon | 0.55 | 0.15 (0.07P) | 0.75 (0.62K) |
| Teosinte grass | 0.35 | 0.10 (0.04P) | 0.25 (0.21K) |
| Thyme, French | 0.40 | 0.15 (0.07P) | 0.65 (0.55K) |
| Timothy, green | 0.50 | 0.25 (0.11P) | 0.75 (0.62K) |
| “ hay | 1.25 | 0.55 (0.24P) | 1.00 (0.83K) |
| Tobacco, leaves | 4.00 | 0.50 (0.22P) | 6.00 (5.00K) |
| “ stalks | 3.70 | 0.65 (0.32P) | 4.50 (3.70K) |
| “ stems | 2.50 | 0.90 (0.40P) | 7.00 (5.80K) |
| Tomatoes, fruit | 0.20 | 0.07 (0.03P) | 0.35 (0.30K) |
| “ leaves | 0.35 | 0.10 (0.04P) | 0.40 (0.33K) |
| “ stalks | 0.35 | 0.10 (0.04P) | 0.50 (0.42K) |
| Turnips, root | 0.25 | 0.10 (0.04P) | 0.45 (0.37K) |
| “ top | 0.40 | 0.12 (0.05P) | 0.55 (0.46K) |
| “ rutabagas | 0.20 | 0.12 (0.05P) | 0.50 (0.42K) |
| Velvet bean, green | 0.55 | 0.15 (0.07P) | 0.55 (0.46K) |
| Vetch, hairy, green | 0.50 | 0.10 (0.04P) | 0.45 (0.37K) |
| “ hay | 2.80 | 0.75 (0.33P) | 2.30 (2.00K) |
| “ seed | 3.70 | 1.40 (0.60P) | 0.85 (0.71K) |
| “ straw | 1.00 | 0.25 (0.11P) | 0.65 (0.54K) |
| “ and oats (see oats). | | | |
| “ kidney, green | 0.45 | 0.10 (0.04P) | 0.30 (0.25K) |
| “ sand, green | 0.55 | 0.15 (0.07P) | 0.50 (0.42K) |
| “ spring, green | 0.35 | 0.10 (0.04P) | 0.45 (0.37K) |
| Watermelons, fruit | 0.17 | 0.06 (0.03P) | 0.30 (0.25K) |
| “ vines and leaves.... | 0.50 | 0.07 (0.03P) | 0.50 (0.42K) |
| Wheat, bran | 2.65 | 2.90 (1.28P) | 1.60 (1.33K) |
| “ chaff | 0.75 | 0.80 (0.35P) | 0.45 (0.37K) |
| “ feed | 2.70 | 2.00 (0.88P) | 0.55 (0.46K) |
| “ flour | 2.00 | 0.60 (0.26P) | 0.50 (0.42K) |
| “ grain | 2.00 | 0.85 (0.37P) | 0.50 (0.42K) |
| “ middlings | 2.50 | 1.35 (0.60P) | 0.70 (0.58K) |
| “ shorts | 2.80 | 1.35 (0.60P) | 0.65 (0.54K) |
| “ straw | 0.50 | 0.15 (0.07P) | 0.60 (0.50K) |
| Whey | 0.12 | 0.30 (0.13P) | 0.15 (0.13K) |
| Winter savory | 0.55 | 0.20 (0.09P) | 0.70 (0.58K) |
| Wormwood | 0.70 | 0.22 (0.10P) | 0.85 (0.70K) |

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