

AGRICULTURE

Commercial Fertilizers and How They Should Be Selected. Analysis Printed on the Bag Cannot Afford to Be Neglected.

When are all the people to disregard the size of the fertilizer bag and the color and perfume of the contents? These matters need not concern them if they have made up their minds to do with values; but the analysis printed on the bag—printed there for the protection of the farmer—cannot afford to be neglected. One hundred pounds of fertilizer may be bought at \$2. It depends upon the amount and form of the plant food present.

It is of prime importance that the farmer should know that what is supplied in the fertilizer, if fertilizer is complete, is potassium, phosphorus and nitrogen—the three plant foods which become exhausted in the soil. He also knows that these elements in various proportions exist in the fertilizer in the form of compounds, that the potassium is present in the form of potash, and the total nitrogen may be present partly as a nitrate and partly as ammonia, or other form stated in terms of ammonia. All these matters are of importance.

The farmer will not have succeeded when he will conclude that the amount of essential food in the bag is very small and that he will wonder why he cannot purchase them in a pure state and apply them directly to the soil. He will find that a few pounds of plant food, and no more, are contained in one hundred of the mixed and complete fertilizer. He will find that the attempt to apply plant food as elements would be far from practical and would never pay. Nitrogen is abundant, but a gas. As such it would be found exceedingly difficult to purchase and harder to apply.

The form in which the food is found in the fertilizer is second in importance to the food itself. Plants take up their food from the soil in solution, so that, if the chemical applied is insoluble they are not used. For example, the phosphorus present may be stated as: (1) phosphate soluble in water; (2) reverted phosphates; (3) insoluble phosphates; (4) phosphorus; which would be the sum of the other three. Reverted phosphates are soluble in a solution of ammonia citrate, and are sometimes referred to as "water soluble phosphates." Ammonium citrate, to a certain extent, exerts a solvent power upon the reverted phosphate comparable with that exhibited by the roots of plants. Such phosphates are less valuable than those soluble in water. To make the total phosphorus appear large the insoluble part is added to the soluble and reverted, but it is only fair that the farmer should know this.

The materials used as sources of nitrogen by the fertilizer manufacturer are quite varied. One of the commonest forms is nitrate of soda, commonly called Chile salt. This important substance is found in large deposits, occurring in the rainless regions of Chile. The nitrogenous material article is about 95 per cent. pure, and contains about 15 or 16 per cent. of nitrogen. Sulphate of ammonia is a by-product of the coal gas works. It contains about 20 per cent. of nitrogen.

Calcium cyanamide is a new compound containing nitrogen, which promises well for extensive mining operations, and remains the exploration of these mines by others for mining purposes. Mr. Boyce's examination of Brazil will stimulate interest in that rich country. The vast extent of territory there, and its wealth, lend additional interest to Germany's reported ambitions in Brazil. Two of the provinces are already controlled by Germans and men of German descent, but though Germany has a large trade with the country, Great Britain still leads in that direction and is likely to do so. Any definite evidence of German intervention would be so direct a challenge of the Monroe doctrine that the United States would be compelled to tear up the treaty of Monroe or confront Germany with an explicit threat of war.

Ground bone is one of the chief sources of phosphoric acid. It is a very rich source of phosphoric acid, however, so slow that for many purposes it is of little immediate value. It is used in the manufacture of bone meal, which is immediately available for plants. This material is known as superphosphate. On account of the limited quantity of bone available for use, it is used for the same purpose. In many cases this dissolved rock acid phosphate as it is commonly called, has given good results. In other cases results have not been striking.

Basic slag is a by-product of the Bessemer steel manufacture. The slag is ground to a fine powder. It contains about 12 per cent. of phosphoric acid. One of the best potash fertilizers is the muriate of potash, a salt mined in Germany. It contains about 50 per cent. potash. It is a low-grade potash salt, varying somewhat in composition but averaging about 12 per cent. potash.

Phosphorus is a valuable source of potash, which also contains lime. It is a salt which should be used in New Brunswick, as it is a cheap source of supplying potash. The various amounts of plant food are known as stated on the bag. It is an easy matter to compute what should be added per hundred, if the commercial values of the fertilizer constituents are known. These values vary from year to year, and that the commercial prices are to indicate that the price is on a par with what the farmer can afford to pay. This must be determined by comparing prices with those in other parts of the country. Commercial prices at present are somewhat as follows:

Nitrogen in dried blood and tankage, 15 to 20 cents. Phosphorus in water-soluble phosphates, 10 cents. Phosphorus in ammonium citrate-soluble phosphates, 9 cents. Potassium, 6 to 8 cents. The mixing of fertilizers is not a difficult matter and may be performed by any farmer. A sand sieve is used in getting rid of lumps and in bringing the mixture to uniform mass. There can be no doubt that there is a saving in the home mixing of fertilizers. The amount of saving will depend somewhat upon the quantities of chemical purchased—wholesale or retail. Sulphate of ammonia should not be mixed with wood ashes or lime. Bone manure should not be mixed with lime or nitrate of soda. Thomas slag should not be mixed with nitrate of soda, lime or muriate of potash. If some fertilizing constituents are mixed, valuable plant food may be lost in the air, or hard lumpy masses obtained. The common fertilizers, other than those mentioned, may be mixed with safety.

It is an easy matter to determine the required amount of each material with which to make a fertilizer. The given formulae. Suppose we desire to mix a fertilizer containing 4 per cent. nitrogen, 8 per cent. phosphoric acid, and 10 per cent. potash, and that we have on hand nitrate of soda, and phosphate and muriate of potash. Nitrate of soda contains about 18 per cent.

of land available for the support of human life and productive industry. The total investment of British capital in Brazil—and British leads all investors there—is almost \$200,000,000. Although the United States possesses great advantages in the matter of its commercial relations with South America, it is noteworthy that the last Brazilian year book shows that of the foreign joint-stock companies organized in Brazil, fifty-six were incorporated in Great Britain, fifteen in the United States, seven in France, three in Germany, nine in Belgium and two in Canada, the latter being light and power companies.

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THESE METHODS TO ABOLISH DUTY ON FISH

Macadam Roads Very Much Out of Date, Expert Explains. Concrete Better. Address to Members of Provincial Good Roads Association—How Good Streets Increase Value of Property—The Automobile Here to Stay.

Friday, Apr. 4. Members of the Provincial Good Roads Association met in the board of trade rooms yesterday afternoon and heard a very interesting lecture on roads by Mr. Harold William Tingey, of Hopewell Cape, which was given by Mr. Tingey, who took place on Wednesday evening, which was performed by Rev. Mr. Corbett, of the Holy Trinity Baptist church, took place at 8 o'clock and was witnessed by about fifty invited guests. The bride, who was given away by her father, was charmingly gowned in white silk, and carried a superb bouquet of white roses and lilies of the valley, her only ornament being a pearl and diamond pendant, the gift of the groom. The bridegroom, who was given away by his father, was dressed in a tuxedo, and carried a superb bouquet of white roses and lilies of the valley, her only ornament being a pearl and diamond pendant, the gift of the groom.

Other dealers say that the small fish dealers who are unable to send vessels to the banks and pay the duty on the fish will be able to compete with the big companies if fish are admitted free. According to the telegram, all green fish, fish dried, smoked, pickled, fresh, or in any state of preservation, upon which a duty of three-quarters of a cent a pound is now being paid, will be admitted free. Skinned and boned fish, which now has a duty of one and one-quarter cents, will be cut in the new tariff to one-half cent per pound.

W. P. Burditt said that he did not own an automobile but he thought that the motor car was the best thing that has ever been invented. He said that he had seen a number of them and that he thought they were very convenient. He said that he had seen a number of them and that he thought they were very convenient. He said that he had seen a number of them and that he thought they were very convenient.

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You Will Need Extra Power

WHEN you buy your engine, get it big enough to do more than your present work. It's an IHC engine it will last a long time. Your farm work is bound to increase in volume. Very likely you can save yourself the price of another engine from now, by getting an engine a size larger than you need now.

Over-speeding and straining harm any engine. There is one correct speed for each IHC engine, a speed at which the parts balance and the engine runs without harmful vibration. When you buy an engine powerful enough to handle your work easily running at the correct speed you add years to its life. Get your engine big enough to last.

IHC Oil and Gas Engine. An IHC oil and gas engine will deliver 10 to 20 per cent above the rated horse power when occasion requires, but it gives the longest service when carrying a normal load. All parts are carefully, accurately ground and perfectly balanced. The best material obtainable is used. Combustion is perfect and the maximum power is secured.

Size—1 to 50-horse power. Styles—stationary, portable, skidded, vertical, horizontal, fan-cooled, hot-air-cooled, air-cooled. Fuels—gasoline, kerosene, distillate, alcohol. Kerosene gasolene tractors, 12 to 60-horse power.

The IHC local agent will help you decide on the size of IHC engine you need. Get catalogue from him, or write the nearest branch house.

International Harvester Company of Canada, Ltd. BRANCH HOUSES. At Brandon, Calgary, Edmonton, Estevan, Hamilton, Lethbridge, London, Montreal, Regina, Winnipeg, Yorkton.

Tramping Dr. Luxe. "Please gimme a nickel, mister?" said the tramp. "I never give money to beggars on the street," replied the kindly pedestrian. "Oh, dat's all right," said the hard luck victim. "Here's one uv my cards, your contribution will be appreciated."

When you married me, Phoebe Jane, you seemed to think I was a pretty good match. And you're never once kindled a fire for me from that day to this.

Would You Like to Be a Real Man Again? Here is a new method by which you (like thousands of men all over the world) are doing today may secretly treat yourself without drugs or medicine with a view to quickly restoring your feelings of youth that you may get back your complete, vigorous vital health and strength. Everything is explained in my illustrated booklet for men, which I will gladly send to you, free, sealed, by mail, just as soon as you write to me. Please use the free coupon below.

As to your own present physical condition, let me say from a close personal observation of hundreds of thousands of cases of lost vitality in young, middle-aged and elderly men, covering an experience of over 30 years, I honestly believe that "Real Vitality," as we term it, is actually no real disease in itself at all, and that under certain favorable circumstances, any man anywhere, can easily and permanently restore his own full strength and nerve force if he but make an honest, conscientious effort along certain common sense lines, which I am able to suggest, and which include absolutely no medicine or drugs of any kind. You simply use a little vitalizing appliance of my invention called the "Health Belt," which you wear comfortably around your waist during sleep for 60 to 90 days. This is absolutely all there is to the whole treatment, excepting, of course, you are expected to lead a decent, manly life, free from debilitating excesses and dissipations. This Health Belt in itself is a marvel of power, and sends a great, soft, even flow of vitality into your blood, organs and nerves. Wearing the world over say it takes all pain and weakness out of the back, often from any application, and builds up the strength, thus giving back to the full vigor of youth so many men find themselves "Real Vitality" men. "Real Vitality" is your friend's greeting; while they secretly marvel at the great change for the better which has come over you. With special attachments the Health Belt is also a wonderful treatment for rheumatism, kidney, liver, stomach, bladder disorders, etc.

Get This Book FREE BY MAIL. I have compiled (and will send to you free) a little 80-page illustrated book (booklet size) which is meant as a complete private guide for men, young or elderly, single or married. You can size yourself up exactly from a careful reading of this book. It reveals certain truths and gives you a clear, wholesome idea of those great vital subjects which should be familiar to every man. It fully describes by Health Belt and tells you how and where you may secure one free of cost to the restoration of your own strength. As soon as you send me your name, I will forward the book free of charge to you. There is absolutely no obligation involved in accepting this free book. Over a million have been sent all over the world. If in or near this city it will pay you to call and test the Health Belt. Hours 9 to 6, Sundays 10 to 1.

DR. E. F. SANDEN CO., 140 Yonge St., Toronto, Ont. Dear Sir—Please forward me your book, as advertised, free, sealed.

NAME ADDRESS

Colds Chamberlain's Cough Remedy. The ORIGINAL and ONLY GENUINE. DR. J. COLLIS BROWNE'S Chamberlain's Cough Remedy. The Best Remedy known for COUGHS, COLDS, ASTHMA, BRONCHITIS, DIARRHOEA, DYSENTERY, and CHOLERA. Wholesale Agents: Lyman Bros. & Co., Toronto, Limited.

NOTE AND COMMENT

The death of Mr. John A. Bovee removes one of the most experienced of Maritime Province newspapermen. Mr. Bovee had acquired a wide knowledge of news and provincial affairs, and this he brought to bear in his writing for the press. He worked with most of the older news men and was conspicuous of the press, and made the St. John papers in the twenties and the eighties, and his association with them, together with a few years on the staff of the New York World, were of high value to a man of his keen intellect. His associates of the press will extend to the mourning circle the most sincere sympathy.

Another supposition altogether. "We will suppose now, that I have just seen you, Dorothy." "But, Charlie, that's impossible. Then you destroy my line of argument." "Well, we will suppose that you are out to kill me. Now go on with your argument."

ABE MARTIN. "There's no horn on 't' water wagon." "I know where Tell Binkley drinks out, but he's mighty thirsty. 'T' water wagon is much 't' live in 't' good days."

AGETOWN. Gagetown, N. B., April 2.—The fog had reached here from St. John last evening about 7:30 o'clock, the first fog to get this far this season.

CHIPMAN. Chipman, April 3.—Miss Clara Katz, of Campbellton, N. B., is visiting her sister, Mrs. N. L. McDougall.

REXTON. Rexton, N. B., April 4.—Wednesday evening about twenty of the friends of Mr. and Mrs. William Perry called on them at their home to celebrate Mrs. Perry's 87th birthday.

PORT ELGIN. Port Elgin, April 4.—Mr. and Mrs. Fred Magee went to St. John on Saturday morning for the night.

HOPWELL HILL. Hopewell Hill, N. B., April 3.—Albert Circuit Court concluded its business this evening. The case against George H. Prosser, charged with breaking into and stealing from a store in Elgin, was before the court today and on advice of the judge, was withdrawn from the jury after several witnesses had been examined.

CODY'S. Cody's, April 2.—F. W. Crawford, of the Wilkie Realty and Investment Company, spent Sunday with his family.

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