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Farm Queries

Henry G. Bell, B.S.A., Dept. of Chemistry, O.A.C.
Address All Letters to Farm Editor, 73 Adelaide St.
West, Toronto. All Answers Will Appear in this
Column. If Personal Reply is Desired, Enclose
Stamped and Addressed Envelope.

Timely Common Questions

The time is here when many market gardeners and farmers are figuring on their fertilizer needs, and there are some questions which come to us very often. Here are five with their answers:

1. What does a fertilizer analysis mean?

Answer.—On every fertilizer shipment there is a tag attached which bears two sets of figures. Let us say, for instance, the top one is 402 and beneath it you find 2-12-6. The 402 means the license number for the making of this type of fertilizer. Every fertilizer manufacturer has to take out a license for the manufacturing of every brand which he sells, the same as every car owner has to buy a license for every car that he owns. This is merely to aid in identifying the manufacturer of the fertilizer after it has gone out to the store house or to the farm.

2. I have read about a filler and I heard a neighbour talking about a carrier. What do they mean?

Answer.—Everyone interested in soil fertility should get definitely in mind that the crop cannot use the elements—nitrogen, phosphorus and potassium. It gets these elements combined with others from the soil, from manure, and from fertilizers. This, then, establishes the need of a carrier. Manure is a carrier of all three. The average ton of well stored manure carries from 10 to 15 lbs. of nitrogen, 4 to 7 lbs. phosphoric acid and about 19 lbs. of potash. One hundred pounds of nitrate of soda carries 15 lbs. of nitrogen, the rest of sulphate of sodium and oxygen and impurities. One hundred pounds of sulphate of ammonia carries 20 lbs. of nitrogen. The rest is made up of hydrogen, sulphur and oxygen. In other words, the purest forms of the plant foods as they are commonly but rather incorrectly called, are simply carriers, since the pure element itself must be mixed with some other thing before it can be carried to the plant and taken up by it.

3. How do you figure out a fertilizer analysis?

Answer.—Let us take 2-12-6 as an instance. This means 2 lbs. of nitrogen, 12 lbs. phosphoric acid, and 6 lbs. potash. Let us take all these percentages of a ton. This would mean that the ton of 2-12-6 would supply, of nitrogen 40 lbs., of phosphoric acid 240 lbs., of potash 120 lbs. Now let us, theoretically, and practically if you wish, make this fertilizer up from the following constituents: nitrogen from tankage and sulphate of ammonia; phosphate from muriate of potash. Let us say in the 2% of nitrogen that is required we get 4% or 5 lbs. from tankage supplying 6% of nitrogen. This means that there are 6 lbs. of nitrogen in 100 lbs. of tankage. There is 1 lb. in 100/6; there are 5 lbs. in 100 x 5 = 84 lbs. We will therefore need 84 lbs. tankage.

Let us get 12% of nitrogen from sulphate of ammonia. There are 20 lbs. nitrogen in 100 lbs. sulphate of ammonia. Therefore there are 35 lbs. in 100/20 x 35 = 175 lbs. sulphate of ammonia.

Our formula calls for 12% phosphoric acid or 240 lbs. of phosphoric acid. In superphosphate there are 16 lbs. phosphoric acid in 100 lbs. of superphosphate. There are 240 lbs. phosphoric acid in 100/16 x 240 = 1500 lbs. superphosphate. We will require, therefore, 1500 lbs. superphosphate.

Regarding potash, our formula calls

for 6% or 120 lbs. potash. There are approximately 50 lbs. of potash in 100 lbs. muriate of potash. There are 120 lbs. in 100/50 x 120 = 240 lbs. muriate of potash. Therefore we will require 240 lbs. muriate of potash.

Now let us add together all of our requirements. 84 lbs. tankage + 175 lbs. sulphate of ammonia + 1500 lbs. superphosphate + 240 lbs. muriate of potash = 1999 lbs. fertilizer. To make this up to a ton we will have to add one pound, and this one pound is made up of composed of fine dry sand or ground limestone, or something of the sort, to give good drilling condition to the fertilizer.

The above is the way that fertilizers are made up. Lower grade fertilizers such as 2-8-2, which is now not lawful to be made, used to require much more filler than 2-12-6. Speaking generally, the higher the grade of fertilizer, the less filler it contains.

Before Lambing Paralysis

This disease occurs in pregnant ewes, shortly before the lambs are due to be born. It is most frequently seen on farms where sheep are kept closely confined and too liberally fed. Too much concentrated feed without sufficient exercise to use up the digested food, from day to day, results in an accumulation of fat and glycogen, which brings about such body changes as will cause interference with the removal of poisonous body wastes. Pregnant sheep that are not given range, or forced to exercise, should be carefully fed. Another factor favoring the development of the condition "before lambing paralysis," is seen in the production of heavy twin lambs. This is due to the fact that the wastes from the bodies of the developing lambs must be removed through the circulation of the pregnant ewe. This puts an additional tax on the ewe, and the more numerous the lambs the heavier the tax. So the ewe carrying but one lamb is less likely to develop the disease. Proper feeding and provision for exercise will largely eliminate these losses. Overfeeding pregnant ewes with alfalfa and other nitrogenous hays has frequently been blamed. It would be better to reserve the alfalfa and other rich feeds until after the ewes come into milk. Epsom salts can be used to advantage in such cases.

English Poetry

O heavenly Eloquence,
That with the strong rein of commanding words
Dost manage, guide, and master th' eminence
Of men's affections, more than all their swords,
Shall we not offer to thy excellence
The richest treasure that our wit affords?

That thou canst do much more with one poor pen
Than all the powers of princes can effect.

And draw, divert, dispose and fashion men,
Better than force or rigour can direct!

Should we this ornament of glory then,
As th' unmaterial fruits of shades, neglect?

From "Musophilus," by Samuel Daniel, (1599.)

"I know I'm going to have trouble with my new neighbor."
"What makes you think so?"
"He's already begun advertising himself as a lover of peace."



A speculative despair is unpardonable where it is our duty to act.—Burke.

Amusing Anecdotes Of Famous People

A few years ago an anxious mother wrote to W. Somerset Maugham, the novelist, asking him to tell her in a few words what was the next step for her son, who was soon leaving Harvard and was determined to adopt a literary career. Maugham's answer was quite brief:

"Give your son one thousand dollars a year for five years and tell him to go to the mischief. The lady, who lived in Boston, was quite shocked at the idea and explained that what she wanted on was "more the technique of novel writing if you understand what I mean."

Maugham did understand, and in the goodness of his heart sent the lady a long letter, since published in the "Bookman"—filled with valuable advice. In it he modestly said:

"I am sure that there are a great many people who are much better qualified than me to give your son hints on this difficult matter." To which the lady from Boston replied, in part: "It is very good of you to have written me such a long and careful letter, but since I wrote to you last my son has decided to go into the bond business."

Then she add a P.S. "I am surprised at your writing 'than me.' Surely it should be 'than I.'"

George Saintsbury—who passed on recently—gave this as his definition of Idealism: "It is something that you think nice, something that you claim for yourself, and especially something that you refuse to your opponents."

Tibetans exchange no word of greeting with those they meet on the road. The lowliest ones instead stick out their tongues, says Henrietta Sands Merrick (in "Spoken in Tibet"—a delightful account of her adventurous journey to the Forbidden Land.)

"It is related that this custom originated during the religious wars," she explains, "when the red sect lamas had power to cast spells from great distances by means of the simple recitation of mantras. Their oft-repetition of these re-velent spells turned their tongues black, it is said, so in order to detect their enemies, the opposing yellow-cap lamas forced all captives to show their tongues, that those found to have black ones might be put to death. The voluntary showing of the tongue is intended to prove that they are not hostile."

Well, well!

Mrs. Merrick—a seasoned traveller and absolutely fearless—went part of the way by air. She flew from England to India—5,600 miles in seven days! A thrilling adventure in itself. Once on the long voyage, the pilot passed a note to the passenger, reading:

"Don't be alarmed if you're knocked about a bit now. We're about to land and it's apt to be rough with this wind. Look out that things in the racks don't fall on your heads."

Later the pilot gave a humorous impersonation of the passengers as seen from the cockpit—which will be recognized by all who have flown any distance:

"The sudden cessation of automatic chewing; the rolling of eyes in the direction of the engines, especially if one of them back-fired or ceased to purr evenly; the gestures of distress when 'bumbers' occurred; the slow, thoughtful resumption of chewing when anxiety is momentarily relieved; the very rapid chewing when they want to assure themselves there is no need for alarm; the frantic way they jump up and punch already secure articles in the rack when such a warning as we had just received was given them. That was what we all did."

Here is a story of Augustine Birrell, the author-statesman, who was Secretary for Ireland at the time of the Easter rebellion in 1916. In his early days at the bar he accepted a brief marked fifteen shillings. The same evening he was arraigned before an impromptu court at the bar mess and accused of unprofessional conduct for taking so low a fee. His defence, which was deemed satisfactory, was that his conduct could not

be called unprofessional inasmuch as he had taken all that his client had.

Rodin had no head for titles for his works and was usually indebted to his friends for the names by which his sculptures were known. For instance, this is the history of his "St. John the Baptist," as told by him to Frank Rutter, the art critic, and retold by Rutter in his reminiscences:

One morning things had gone very badly. Rodin could not get his model to take up a satisfactory pose, and having wasted several hours he gave up in despair and told the model he could go. The man strode across the room to fetch his clothes—his movement was admirable. "Stop!" cried the sculptor, "stop you are, and hold it."

Then he began feverishly to make a sketch.

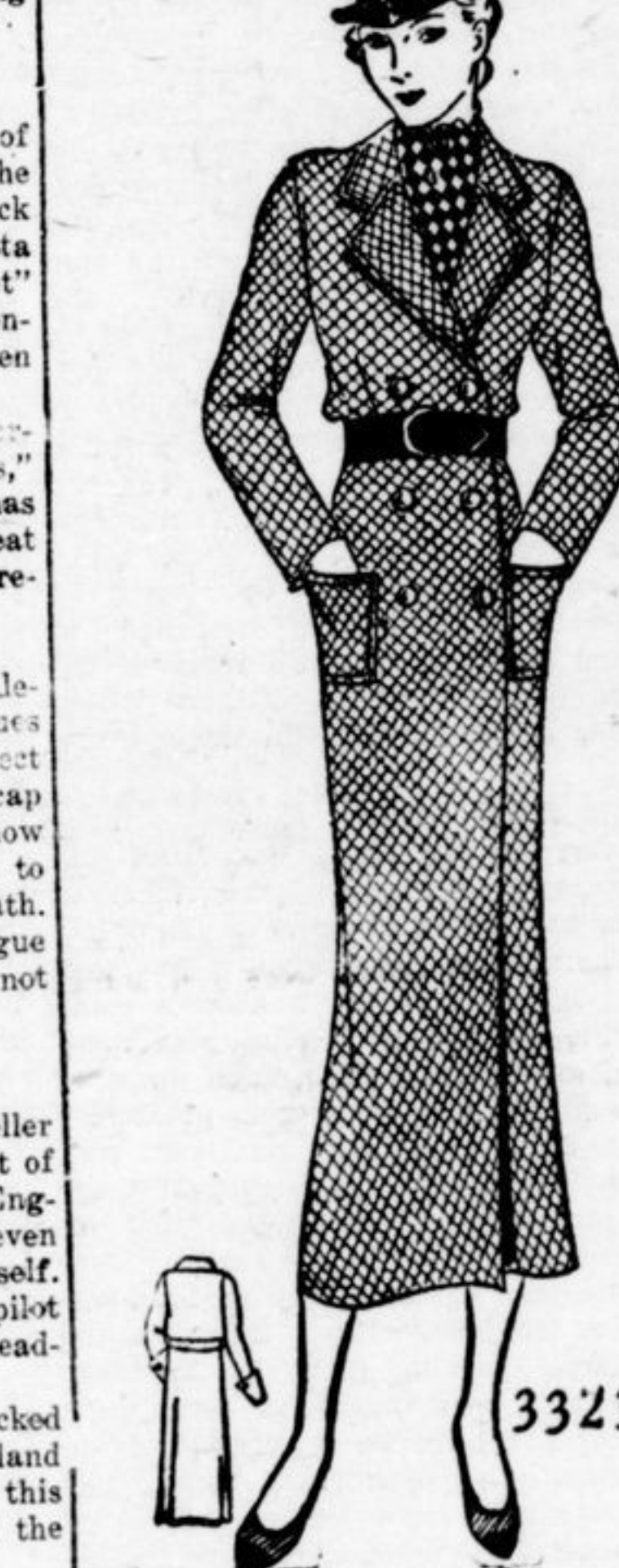
When the statue was finished Rodin had no idea but to exhibit it with the title, "A Man Walking," but soon afterwards in came his friend Octave Mirbeau, the critic and novelist. "Magnificent!" said Mirbeau. "I read your purpose: 'It's John the Baptist, of course.'"

"It was an idea," Rodin naively confessed to Mr. Rutter, "and I wrote it down at once for fear that I might forget it."

A Good Looking Sport Model

By HELEN WILLIAMS.

Illustrated Dress-making Lesson Finished With Every Pattern



A good-looking sports coat that is exceedingly youthful besides being smart and practical.

It is simplicity itself to fashion it. And the saving in cost, simply enormous. The original carried a sportive-air in brown and yellow tweed-like woolen.

Style No. 3323 is designed for sizes 12, 14, 16, 18, 20 years, 36 and 38 inches bust. Size 16 requires 2 1/2 yards of 54-inch material with 2 1/2 yards of 39-inch lining.

HOW TO ORDER PATTERNS Write your name and address plainly, giving number and size of such patterns as you want. Enclose 15c in stamps or coin (coin preferred); wrap it carefully for each number, and address your order to Wilson Pattern Service, 73 West Adelaide St., Toronto.

The gamester, if he die a martyr to his profession, is doubly ruined. He adds his soul to every other loss, and by the act of suicide renounces earth to forfeit heaven.—Colton.

Money dishonestly acquired is never worth its cost, while a good conscience never costs as much as it is worth.—J. Pitt-Senn.



WITH THE LONE SCOUTS

Indian Wisdom For Lone Scouts The Indian, from earliest childhood, was always taught to keep silence. You will find in all Red Indian stories that the stolid silence of the Indian is described.

Above all a Chief was expected to be a man who could "hold his tongue" until such time as it became necessary for him to speak, to his braves, words of wisdom in the Council Lodge or around the Council Fire.

The Indian knew only too well the "folly of words" and it was considered very out of place for a youth, who had completed his tests of manhood and had been admitted to the council, to have too much talk. They considered that a man who could at all times control his tongue could also control his whole body.

Too much talk is the sign of the Tenderfoot. The old hand, the "moss-back," does not "jaw." He only speaks when there is something important to say.

There are two wise sayings which every Lone Scout would do well to remember. They are—"A still tongue makes a wise head" and "Empty vessels make most sound."

Remember, if you are too busy making a noise yourself, you will not be able to hear the opinions and the information which is being offered by others.

So Lone Scouts will follow the example of the Indians, and remember the value of silence.

A 90-Year Old Rover Scout A Rover Scout Crew of Saskatoon, Limbrey's Own, recently invested as an honorary member Scout E. Parr, nearing his 90th birthday. Scout Parr announced that his special good turn would be kicking banana peels off the sidewalks so that others older than himself might not slip and fall.

Royal Interest in Scouting On invitation of the King of Siam 76 Siamese Scout leaders attended a month's training camp on the Rama Palace grounds at Bejrapuri.

At the Heart of the Empire A happening at the foot of the Nelson Monument, Trafalgar Square, London, was described by the Hon. Wm. Finlayson, Provincial Minister of Lands and Forests, at the annual meeting dinner of the Ontario Scout Association, as the incident that had first interpreted to him the significance of the Boy Scout Movement.

Baling Old Autos The remarkable growth of the automobile industry has sharpened the problem of how to dispose of worn-out and junked cars.

Some are disassembled for usable parts and remelting scrap; some are sunk behind breakwaters to serve as ballast; but the majority are abandoned to rust away.

Every automobile has some value as scrap-metal. Three years ago the Ford Motor Company conceived the idea of dismantling cars in a large-scale way and remelting the steel scrap in open-hearth furnaces. Satisfied with its first efforts, the company increased its operations about a year ago by the installation of a 1,000-ton hydraulic press for reducing the cars to bales, and a 400-ton furnace to remelt these large bales. Says a writer in "Steel" (Cleveland):

"The press, said to be the world's largest baling press, was designed and built by Logemann Bros. Co., Milwaukee, and has sufficient size and power to hold a complete automobile or truck, and to reduce it to a compressed bundle of open-hearth charging size.

"The derelict automobiles or trucks, stripped of engines and many parts of saleable value, roll one at a time down an incline from the disassembly line into the maw of the hydraulically operated steel gate is dropped down to close the opening behind the car, and with the charging chamber sealed, the compression cycle is commenced.

"First, a low-pressure horizontal traveling ram, capable of exerting 360 tons' pressure, advances against the front of the car and crushes it from a 17-foot length to 30 inches. The 697 cubic foot capacity of the charging chamber is reduced to 102 1/2 cubic feet when the horizontal

ram reaches its maximum stroke. "As the horizontal ram holds the partially compressed car firmly forward, a vertical ram, weighing 17 tons and operating at right angles, descends from above to effect the final compression. Backed by a 1,500-ton pressure, this down-stroke ram crushes the car to an average height of from 10 to 30 inches. Heavy trucks are compressed into a 30-inch high bale.

"Upon release of the pressure, the high and low-pressure rams recede, the gate raises, and an ejector ram moves forward from the left side of the compression chamber. At the same time a bucker-up ram recedes to the right; thus between the two rams the densely compacted bale of steel scrap is discharged onto a conveyor and then taken to the open-hearth furnace.

"The powerful rams and their tremendous pressure operate from large double-pressure cylinder pumps. Operated in this instance by 300-horsepower motors, this type of pump permits high-speed action at the beginning of operations when required pressures are low. When a predetermined pressure or resistance point is reached, the low-pressure, fast-moving cylinder automatically cuts out, and its high-pressure, slower, but far stronger mate in the second cylinder completes the operation.

"All press operations are handled by remote control. One man directs every move by simply turning a hand-wheel to which all functions respond mechanically."

ANGER When I get good and angry, I insist on being alone. It saves my reputation for being explosive and dangerous, and for years this was my heaviest handicap—temper.—Van Amburgh.

Princesses of To-day More Carefree

Old Order Changed—Daughters of Royalty Less Hampered by Etiquette

Overawed by Court etiquette and the countless ceremonial duties of a royal existence, some may think that Princesses, even nowadays, do not get too much fun out of life, but Europe's princesses seem to find life care-free. First take Infanta Beatriz and the Infanta Maria-Christina, daughters of ex-King Alfonso.

They are still surrounded with the atmosphere of a Court in their villa home in Fontainebleau, but they seem reconciled to the loss of actual royal domain. Perhaps it is because they are now free to choose husbands?

Both the princesses are fair, like their mother, Queen Ena. Beatriz, the elder is 23, a blonde with blue eyes. Maria-Christina is 21, with hair that is almost Titian and darker eyes than those of her sister.

They are very modern young women smartly but simply dressed, and always busy doing something useful. They are expert knitters, the sweaters and sweaters worn by their brother, the Prince of Asturias, being their handiwork. They are also good short-hand typists.

They acquired this accomplishment in order to be useful to their father after the Revolution.

Rumor has been busy with their marriage plans, the names most often mentioned being those of their cousins, Don Alvaro and Don Alonso of Spain, but for the moment the princesses are heart-whole and care-free.

Maria of Italy.

Rumor has also been busy about the tall dark and beautiful Princess Maria, the King of Italy's youngest daughter, who is only 18. Among those who have been reported engaged to her are Prince Sigvard of Sweden (Princess Ingrid's brother), and Prince Otto of Hapsburg. When Prince Cyril of Bulgaria recently visited the Italian Royal Palace, the tongues wagged again.

But although she is of full age, according to Italian law, the Princess is still bent on enjoying life. She is the youngest of five sisters, and resembles her mother, who was a princess of Montenegro before her marriage to King Victor Emmanuel.

Remains Unmarried.

A princess who knows comparative poverty is the Princess Eudoxia of Bulgaria, sister of King Boris, for whom she kept house before his marriage to Princess Giovanna of Italy. The King's Civil List amounted to only the equivalent of £3,000 a year, out of which he had four palaces to maintain. Although there have been rumors of engagements, the princess remains a bachelor girl—from choice, it is understood. She is 34, not remarkable for beauty, but keenly intelligent and with a ready wit.

Princess Eudoxia has paid frequent visits to England and Scotland, but for the most part she prefers to travel in her own country.

Looking for Husband.

There is one princess who must find a husband, the plump little Dutch Princess Juliana, who has a seat in the Dutch Council of State and an income of £14,900 a year. She was Queen of Holland one day, and a Prince Consort must be found for her. The range of choice is limited. For one thing, the family is devoutly Protestant, and for another, the Constitution of Holland forbids marriage with the heir to a foreign throne.

Princess Juliana was brought up very simply and democratically as a girl, but when she became of age—at 18 three years ago—her mother began to prepare her for the exalted station she will one day occupy. She went to the University of Leyden, and the most celebrated tutors and masters were assigned to instruct in the queenly arts. Meanwhile, all talk of betrothal was promptly contradicted by Queen Wilhelmina.

The princess is somewhat shy, but her shyness conceals remarkable talent. She is well versed in history and economics, is a water sportswoman, and an artist in true color painting. She has sacrificed many personal pleasures to fit herself to carry on the traditions of the throne.

Northern Princesses.

There are four Scandinavian princesses awaiting candidates for their favors.

They are all young and attractive, and with one of them at least, rumor has linked a member of the British royal house as a prospective husband.

This is the lovely and versatile Princess Ingrid of Sweden, who is 22. Her engagement to Prince George was officially denied last year after London and Stockholm had been alive with rumors. Rumor had previously linked her name with that of the Prince of Wales, the Crown Prince Frederick of Denmark, the Comte de Paris, and the Count Nils von Rosen, an officer in the Swedish army.

Whoever is the eventual chosen suitor, he will be a lucky man, for the Princess is capable, intelligent, artistic and domesticated as well as being beautiful. She is an expert linguist, a musician, artist, and can cook and sew. She dances gracefully, rides skillfully and enjoys swimming. She is a great favorite with her grand father, the Duke of Connaught.

MUTT AND JEFF— By BUD FISHER



Mutt's Always Right.