DAVID STARR JORDAN

Stanford University P. O.
California

October 15, 1921.

Mr. S. Maus Purple,
1840 Middleton Place,
Los Angeles, Calif.

Dear Mr. Purple:

I am inclined to think that the tusks which are not petrified together with two or three shells, came from Indian camps on the surface.

The collection of shells is very interesting and that of shark's teeth still more so for there are four kinds of these man-eaters—more than ever found at any one station before.

I sent you the list yesterday and will return the fossils very soon. I want first to photograph the shark's teeth.

Very truly yours,
DAVID STARR JORDAN.

Stanford University
California

October 19, 1921.

Mr. S. Maus Purple,
301 Bradbury Building,
Los Angeles, Calif.

Dear Mr. Purple:

I will try to get the shells off tomorrow. I have held the shark's teeth to be photographed. I could not let them get away without this ceremony.

I note that you will take me to the deposits whenever I come to Los Angeles. I have asked Dr. J. Z. Gilbert of the high school to represent me at his convenience.

There are two species of large snail of the genus **Argobuccinum.** Of the one there are four specimens, number 12, which is not the same as number 23, which may be a new species and which our conchologist has taken away in order to compare it with other specimens. It is larger than the four specimens and broken at the top.

I trust that you are not letting any of this valuable stuff be destroyed. Some of the shells, those marked with stars, are unusual and the shark's teeth are unique. Four kinds of man-eaters have never been found in a bunch together before.

Very truly yours,
DAVID STARR JORDAN.

GEO W. GOOCH
Analytical Chemist
Rooms 306-311 Copp Bldg.
218 S. Broadway
Laboratory No. 9144

Los Angeles, Cal.
October 13, 1921.

Torrance Lime & Fertilizer Co.,
Los Angeles, Cal.

I have examined your sample of Quarry Mixture received October 6, 1921. Marked Black, Dark and Light samples to be mixed.

Analysis

Nitrogen, Total	0.17%	
Organic Matter (including the Nitrogen)		6.40%
Phosphoric Acid (P_2O_5)		0.59%
Calcium Oxide (CaO)		2.62%
Sulfur Trioxide (SO_3)		0.22%
Magnesium Oxide (MgO)		1.16%
Total Potassium Oxide (K_2O)	1.44%	
Free Sulfur		0.03%
Carbon Dioxide (CO_2)		2.64%
Alkali Carbonates, Bicarbonates, Chlorides, etc.		None
Synthetic Form of the Above		
Nitrogen, Total	0.17%	
Organic Matter (including the Nitrogen)		6.40%
Calcium Carbonate ($CaCO_3$)		3.15%
Calcium Sulfate ($CaSO_4$)		0.37%
Magnesium Carbonate ($MgCO_3$)		2.42%
Calcium Phosphate ($Ca_3(PO_4)_2$)		1.28%
Free Sulfur		0.03%
Alkalies		None
Total Potash (K_2O)	1.44%	

(Signed) GEO. W. GOOCH,
Analytical Chemist.

(Duplicate)

USE SUPER-LIME OF ORGANIC ORIGIN

"A little cork fell in the path of a whale, who lashed it down with his angry tail. But in spite of his blows it quickly arose and floated serenely before his nose. Said the cork, 'You may flap and sputter and frown, but you never, never can keep me down; for I am made of the stuff that is buoyant enough to float, instead of to drown.'"

THE FATHER'S SURPRISE

Widower (to his little daughter, aged 10). Dora, do you know that Susanne, our housekeeper, is going to be married?

Dora—Oh, I'm so glad we're getting rid of the old pelican. Won't it be jolly? But who is going to marry her.

Father—Well, I am.

Torrance Lime and Fertilizer Co.

S. MAUS PURPLE, General Manager

Los Angeles Office 301 Bradbury Building :: Telephone 13859

Plant Office at Quarry, Lomita, California :: Phone Through Wilmington 180-R-4. :: Permanent Fossil Display Week Days at the Quarry

Organic Super-Lime

Odorless Soluble Economical Available

D M S & B

D M S & B

From Decomposed Marine Shells with Bones and Substance of Prehistoric Animals and Water Mammals of decades ago.

THE IDEAL FERTILIZER

Calcium Oxide, Carbon Dioxide, Sulphur, Potash, Phosphoric Acid. Nature's Own Natural Soil Vitalizer.

A Proven Fact

¶ We believe that D. M. S. & B. Lime Fertilizer will singly and alone render land more productive than any other substance used as a fertilizer. ¶ Without lime there can be no life, either plant, animal or human. D. M. S. & B. Lime Fertilizer that is

SO DIFFERENT FERTILIZER

With the stored up vigor of a million years.

D. M. S. & B. Lime Pep

The Fertilizer that took the Li out of Lime

Accept No Substitute

Apply any Month in the Year. Use D. M. S.—Use it Now

D. M. S.—Easy to Say
D. M. S.—Easy to Use
D. M. S.—Crop Insurance
Neither Caustic or Irritant

"REFERENCE" BULLETIN 921

United States Department of Agriculture

The great majority of the soils of the East, South and portions of the Central West are deficient in lime and will respond in increased yields to applications of lime.

The practice of applying lime to soils for the purpose of increasing crop yields has been more or less common in many parts of this country since its first settlement, and has been followed in many parts of Europe for centuries and dates back more than 3,000 years.

FAITH

Never allow anybody or any misfortune to shake your beliefe in yourself. You may lose your property, your health, your reputation and other people's confidence, but there's always hope for you as long as you keep a firm faith in yourself. If you never lose that, but keep pushing along, the world will sooner or later make room for you.

Use D. M. S. Lime and stimulate your faith!

LIME ANALYSIS OF ORANGE TREES

Fruit, 0.43; leaves, 0.71; trunk and branches, 0.80.

No new plant cells can be produced without lime. Therefore, growth and fruitage are checked when the supply of available lime becomes exhausted.

The use of nitrogen is restricted by lack of lime.

Mottle leaf is recognized as due, among other causes, to a shortage of nitrogen. D. M. S. & B. Lime will correct it by enabling the trees to make use of the nitrogen already present or being supplied.

AT LAST---SCIENTIFIC RESEARCH REWARDED

All Poultry Men Benefit by the Discovery of 4-in-1

D. M. S. & B. For Chickens—Body, Bone, Tissue and Egg Builder

Dr. S. O. Barnes, of Gardena, a national authority on poultry, states:

"It is not necessary for the chickens to digest D. M. S. as it is already available. Some of the lime is absorbed previous to entering the gizzard where it is prepared for further absorption for the intestinal tract. We find within the gizzard the crystals and the lime acting as a grinder of the food for assimilation in the intestinal tract. We also find that the D. M. S. had been entirely absorbed, i. e. (these properties, except the silica) which was still performing its function of disintegrating. In the chickens that are allowed free access to D. M. S. we find no irritation of the mucus membrane. Place D. M. S. before young chickens taken from the incubator and it will prevent bowel trouble.

CHICKENS REQUIRE LIME FOR PROPER GROWTH

Chickens are no different from other animals in respect to their requirement for an adequate supply of lime compounds for growth. Halpin and Hart, of the poultry department of the University of Wisconsin, have made a study of this subject, beginning with chicks having a weight of approximately a quarter of a pound. These chicks failed to grow on any of the grain supplements with protein concentrates unless the concentrates were of such a type as to carry an abundant mineral supply, including calcium salts.

In another study were chickens weighing from one to two pounds. With them it was found that when fed with corn, grain, gluten meal and common salt only, the chicks died early. On the other hand, when corn, common salt, calcium carbonate and casein were fed, they reached a weight of three or four pounds. Incidentally, it may be noted that the best growth was secured when butterfat was added to the diet. This material, it will be remembered, is rich in vitamines, the principle which seems to influence growth. The lot of chickens receiving this ration reached a weight of four and one-half to five pounds, and had normal egg production. Cereals, such as barley, oats and wheat, seem to be so deficient in lime salts that chicks do not grow properly.

These results were summarized in Bulletin 323 of the Wisconsin Station.

D. M. S. LIME FOR POULTRY

Lime is one of the most necessary elements for the growth and health of chicks and chickens. As soon as young chickens are allowed the run of the brooder they should have access at all times to some form of lime.

The poultryman's usual supply of lime has been from broken or ground clam and oyster shells, which form is more or less unsatisfactory, as **the lime content of a shell that is not decomposed is not very soluble.** The young chickens would have hard work to assimilate or secure a sufficient amount of lime from this source, and this at a time when it is vital for the formation of bone and growth. Most other forms of lime would be too caustic, and are not to be considered. They would be disastrous to the bird.

D. M. S. & B. LIME

DECOMPOSED MARINE SHELL AND BONE is a near predigested combination of lime and other health-giving elements that supplies their lime needs in a most satisfactory way. It is a granular and available form of calcium carbonate (lime) with a considerable content of calcium sulphate, calcium photphate and magnesium carbonate, as well as silica. These elements, together with crystals that enable the gizzard to perform its function of grinding the food, form a combination unequaled for the building up of the entire body—bone, tissue and blood.

D. M. S. & B. for poultry is obtained from the Torrance Lime Company quarries near Lomita, famous for the prehistoric animal bones and rare marine shells discovered there.

It is screened to the average size of a grain of corn and smaller, but it is coarse enough to prevent waste.

MAKES HEALTHY CHICKS

Undoubtedly the failure to provide a suitable form of lime that can be readily assimilated causes weakness of the tissues and insufficient growth of the bones. We are sure that these conditions are the indirect, if not the direct, cause of the great fatality among young chicks. This is particularly true when the young bird is passing through the period that is analogous with the teething of the human. The transition from the formative period before the system has become accustomed to the change from the yolk influence to the action of the stronger proteinic and carbohydrates of its food, is an exceedingly critical time in the life of the tender baby chick. It is now that the strengthening, toning, building and sweetening effect of the lime (calcium carbonate) in a digestible form is of greatest value and should at all times be accessible to the chicks.

EASY TO ASSIMILATE

Older chicks, fed with D. M. S. & B., are also to a remarkable extent kept free from disease. This is accomplished, not only by increasing the resistive powers common to a healthy bird, but by the action of the carbon dioxide contained in the lime, which assists in eliminating some of the poisonous matter that may be obtained from faulty food. Keep before them an ample supply of D. M. S. & B.

Laying stock will have a most certain and sufficient egg-shell supply. In fact, the egg-shell itself, a form of lime that is known to be easily digested, is the only real competitor of DECOMPOSED MARINE SHELL AND BONE, so nearly does this material meet the natural needs and requirements.

OF GREAT VALU ETO POULTRYMEN

Judging by the results of long and careful experiments on both young and old fowls, which have been carried on during the past several years by Dr. S. O. Barnes, of Gardena, we are justified in announcing this material as a most essential nad efficient co-worker of the poultryman from the standpoint of growing healthy, profitable flocks.

In summing up the value of DECOMPOSED MARINE SHELL AND BONE to the poultryman, we find that—

1. The lime requirement of the chicken is fully supplied in a form that is easy to digest;
3. Digestion and assimilation of its other foods are greatly assisted;
3. The neutralizing or elimination of poisons from faulty food is accomplished;
4. Egg production and size are increased and a stronger shell formed;
5. Every part of the body—its bone, tissue and blood—is built up and invigorated.

Feed your chickens DECOMPOSED MARINE SHELL AND BONE. Don't buy a substitute. "THE BEST COSTS LESS."

Reprint from the Los Angeles Times Magazine, June 5th, 1921, by Harry Ellington Brook, N. D.

As I wrote recently, the proper, and cheapest, way to fertilize is by means of pulverized rocks. Fertilization with crude animal refuse is one of the leading causes of plant disease. Chemical fertilizers over-stimulate. Where humus is lacking, it can be furnished in the shape of vegetable food.

Also, expressing the opinion of the noted German chemist, Julius Hensel, as presented in his book, "Bread and Stones," wherein he emphatically states that the natural fertilizer is pulverized rocks, and that the use of animal refuse is the main causes of disease in plants and trees, just as human beings get sick when they overeat of flesh food or eat decayed flesh food. D. M. S. & B. Lime Fertilizer is the Super-Lime Rock Fertilizer, containing Calcium Carbonate, Phosphoric Acid and Sulphur.

Reprint from Los Angeles Times, June 28, 1921, by Dr. Francis E. Park, of Stoneham, Mass.:

NEW TREATMENT OF PNEUMONIA

Dr. Park declared that after ten years, experience he had proved that an injection composed of a combination of iron, salicitate of sodium, creosote and calcium was a positive cure for all acute infectious diseases of the lungs if used in the early stages of the infection. He recited instances where the temperature of the patient had been reduced from 105 degrees to normal within three hours.

I Wish I Had Used
Odorless D. M. S.
Lime Fertilizer

I Used
Odorless D. M. S.
Lime Fertilizer

Los Angeles, Cal., July 15, 1921.

MR. W. A. DYER,
Orange, Calif.

Dear Mr. Dyer: Replying to your inquiry concerning the marine shell lime, mentioned in our July issue, Mr. Albert J. Mason is a very highly valued and respected member of our staff, widely known as an authoritative writer on agricultural subjects and especially to be commended for his accuracy.

Mr. Mason's article was written following a tour of inspection through Los Angeles and Orange Counties. He felt that this material was something more than mere lime; that in fact, it was valuable as well for use as a fertilizer.

From my personal inspection of the quarry where this stuff is being taken out and from my experience in using the lime on house plants and garden, I can assure you that it is a very remarkable product.

I am acquainted with Mr. Purple, the general manager of the company which sells it and believe him to be both reliable and well informed.

Trusting that this information is of value to you, I am,

Yours very truly,
JAS. C. KNOLLIN, Editor.

D. M. S. & B. LIME will neutralize active acid. It creates a condition in the soil favorable for the growth of valuable crops. Its presence favors the growth of many of the legumes and promotes the use of the nitrogen of the air by those plants. It improves the type of decay of organic matter in the soil with the formation of humus—it supplies a nutrient in the form of calcium for the use of plants. It improves the sanitary condition of the soil.

—USE IT—
Externally—Internally
Eternally