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THE SYNTHETIC ARCADIAN (AMERICAN) sodium nitrate is produced in the form of cubic crystals with rounded edges, about the size of No.6 bird shot, and is guaranteed to carry 16 percent of nitrogen. It is low in moisture content and is in a good mechanical condition for distribution, but has a tendency to "blow" when broadcast during windy weather.

Sodium nitrate is commonly referred to by southern greenkeepers as "soda." It is readily soluble in water and because of this it may diffuse rapidly in the soil. It is, therefore, immediately available for plant absorption following application and solution, but because of this it is also subject to loss by leaching.

As sodium compounds have the power to deflocculate soil colloids, the continuous application of sodium nitrate in large quantities to some soils, particularly to those that are high in colloidal matter, will result in the production of a poor physical condition.

Sodium nitrate is physiologically basic and it therefore has the power to reduce to some extent, the acidity of the soil. Theoretically, 100 pounds of sodium nitrate has the neutralizing value equivalent to about 60 pounds of ground limestone. It is well to keep in mind that the influence of sodium potassium and calcium nitrates on soil reaction is just the opposite to that produced by the use of ammonium sulphate to the soil results in increased acidity.

Influence of Sodium Nitrate On The Liberation of Potash. There is an idea current among some fertilizer men, that has persisted for a quarter of a century, to the effect that the sodium which is left in the soil after the nitrate ion of sodium nitrate has been absorbed by plants will give rise to a substitution of bases in the soil which will result in making unavailable potash available for plant use. This influence of sodium nitrate is of doubtful value, for the positions of the potassium and sodium in the electromotive series would lead one to believe that the quantity so set free would be small. However, sodium may supplement potassium as a plant nutrient. The application of sodium nitrate to the soil may also aid in conserving calcium and magnesium in the soil.

Visible Influence of Sodium Nitrate On Plant Growth. Nitrogen is the first limiting element of plant growth in many of the soils of the eastern and southern sections of the United States. For this reason the application of any readily available nitrogenous fertilizer often materially increases crop growth. This effect following an application of sodium nitrate is often noted by the layman, with the result that in the past sodium nitrate has been looked upon by many as a stimulant. This is an erroneous conception and should be discredited.

How Sodium Nitrate Should Be Applied.

Because sodium nitrate is readily and entirely soluble in water, and because the nitrate ion is not readily absorbed by the soil colloids, it should be applied for early utilization by the plant following application. It will be found best to apply sodium nitrate, when large amounts are to be used, in two or more applications. Such a practice will minimize the loss of nitrogen by leaching, and at the same time will avoid injuring plant roots by applying excessive quantities of soluble salt at one time. Top-dressings of sodium nitrate often appear to be more effective during cool than during warm seasons.

(to be continued) (Commercial Fertilizer)

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We have gathered bouquets from  
other men's flowers; nothing but  
the thread that binds them is ours.

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#### TEN HINTS FOR GOOD LAWNS

1. Make the lawn area smooth and well graded with 8 inches of fertile top soil before seeding.
2. One week before planting rake into the seedbed ammonium sulphate or ---- other nitrogen fertilizer at the rate of 4 lbs. per 1,000 sq.ft. to establish a strong stand of grass quickly. At the same time apply 15 lbs. of superphosphate (0-25-0) or use 15 lbs. of 4-16-0 which contains the nitrogen and phosphate together. Repeat the application of nitrogen fertilizer to the young grass the latter part of May.
3. Sow a high-quality seed mixture evenly and at the recommended rate of application.
4. Seed the prepared area Sept. 1, or April 1 as a second choice.
5. Adjust the lawn mower to cut the grass  $1\frac{1}{2}$  inches high.
6. Follow a regular fertilizing schedule every year: Apply 4 lbs. of ammonium sulphate, nitrate of soda or other nitrogen fertilizer, April 1st and June 1st; 6 to 8 lbs. of a 10-6-4 or 10 to 20 lbs. of 4-12-4, Sept. 1st; and 1 cubic yard top-dressing of composted soil in November.
7. Control dandelion, plantain and other lawn weeds by spraying with one of the 2,4-D compounds.
8. The lawn area should receive at least several hours of sunlight each day. Lawn grass will starve because of the shade and roots of too many trees.
9. In the fall, remove the lawn leaves and other material that may be thick enough to smother the grass during the winter.
10. Keep off the lawn as much as possible during the winter and early spring.