

# AGGRAND®

## AGGRAND Hay and Pasture

Hay and pasture are integral to the food supply of many classes of livestock. Hay is one of the most versatile of stored forages and provides ready supplemental food for animals that also might graze pastureland.

High-quality hay has more protein that can produce healthier livestock, reducing the need for feed supplements and associated costs.

AGGRAND natural fertilizers are formulated to provide nutrients immediately available to the plant and encourage microbial growth within the soil. These microbes break down nutrients into forms plants can use and improve the soil structure by creating passageways for the movement of water and air. Plants develop stronger and deeper root systems that can result in higher-quality forage.

Since soil conditions vary so much throughout North America, AGGRAND recommends obtaining a soil analysis. A soil sample kit (G1374) can be purchased from AGGRAND at a nominal cost. A properly obtained soil sample and resulting analysis are key steps in understanding the nutrient needs of the hay field or pasture. Once the analysis is complete, AGGRAND provides product, dilution and application method recommendations, along with timing of those applications specific to the geographic region of interest. There are times when fertilizer applications alone are not enough to create a naturally balanced soil. In these instances, AGGRAND also may recommend the incorporation of natural soil amendments such as lime, gypsum, manure and other minerals. General application recommendations are on the back of this page.

Mixed grass/legume production as it relates to permanent cultures on acid clay soils in the eastern U.S. and Pacific Northwest has special fertility requirements. These soils tend to contain high to excessive amounts



**BEAUTIFUL COLORADO** — This hayfield in the Colorado mountains experienced an increase in production from 160 tons to 232 tons in the first year AGGRAND natural fertilizers were applied.

of magnesium (Mg) and low to deficient amounts of calcium (Ca). The percentages of magnesium and calcium must be adjusted to increase soil aeration, allowing higher levels of biological activity to increase and sustain high productivity levels (the biology follows the chemistry).

In general, one ton of gypsum and one ton of high-calcium lime applied per acre during field renovation increase aeration and improve drainage on clay soils for several years. After gypsum is tilled into the soil, irrigate or allow several inches of rain to fall to leach the excess magnesium from the soil before applying lime.

**AGGRAND INCREASES YIELD** — This Indiana hayfield produced 979 extra bales of hay after AGGRAND Natural Fertilizer was applied.

# AGGRAND General Recommendations for Hay and Pasture

## Foliar applications

### Per-acre mix ratio:

Mix 1 gallon AGGRAND Natural Fertilizer, 1 gallon AGGRAND Liquid Bonemeal, 1 quart AGGRAND Kelp and Sulfate of Potash and 75 gallons of water. Apply as a fine mist with enough solution to thoroughly cover leaves. Perform first application in spring when plants are 4 to 6 inches in height. Adjust solution according to soil fertility.

Repeat application when crop begins to regrow (4 to 6 inches in height) and after each cutting or grazing (on rotationally grazed pastures.) Perform 2 to 3 applications per year. If soil testing indicates moderate to high phosphorus levels or low calcium levels, substitute AGGRAND Liquid Line for AGGRAND Liquid Bonemeal.

Rates vary according to soil fertility, cropping history and other inputs that are applied. Lower dilution rates are more effective than higher dilution rates. Two or three lighter applications may be more effective than one or two heavier applications. If other constraints allow only one trip over the field, do not exceed a 3 percent dilution rate (3 gallons AGGRAND to 97 gallons of water.)

To reduce susceptibility to attack of insects and disease-causing organisms, apply a per-acre mixture of 1 to 2 gallons AGGRAND Natural Fertilizer or 1 quart AGGRAND Kelp and Sulfate of Potash and 35 gallons of water when signs of infestation become apparent.

## Pre-plant soil applications

Mix 3 to 6 gallons AGGRAND 4-3-3 with 50 to 100 gallons of water. Apply solution to one acre after seedbed preparation. Drag lightly after application.



**LUSH ALFALFA CROP** — This alfalfa field in Ohio produced five cuttings during a dry season using AGGRAND Natural Fertilizer.

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Contact your AGGRAND Dealer for more information on AGGRAND products or to place an order. You may also order direct by calling AGGRAND at 1-800-956-5695 and providing the referral number listed here. ▼

Referral # \_\_\_\_\_