



## **SOIL PROGRAMS and PRODUCTS**

for

## **SUSTAINABLE AGRICULTURE**

**SUSTAINABLE AGRICULTURE is an agriculture that ...**

- ◆ **Is Productive and Profitable**
- ◆ **Enhances Health and Safety**
- ◆ **Conserves Resources and Protects the Environment**

### **OUR MISSION**

Super Gro of Iowa is dedicated to giving farmers and livestock producers the opportunity to regain, maintain, and increase the enjoyment and profitability of their farming operations. Super Gro of Iowa, Inc. offers practical and easy to use management techniques, quality products for soil and livestock, and excellent service to produce a superior program that addresses the concerns of production, the environment, and profitability so necessary in agriculture today.

Super Gro of Iowa, Inc.

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## **THE NEED FOR A SUSTAINABLE AGRICULTURAL SYSTEM**

Almost everyone is aware of the fact that a crisis situation has been reached in the agricultural production of both plants and livestock within the United States. Some of the various situations facing farmers and livestock producers that point to the need for a SUSTAINABLE AGRICULTURAL SYSTEM are:

### **SOIL EROSION**

Soil Erosion typically follows two patterns—either wind or water erosion. Soil belongs in the field, not in the air, lakes, and ditches. As much as 1 billion tons of soil are deposited in waterways every year. This is typically the most productive soil and, as such, replacing the fertility that is lost also adds to crop production costs. Other costs, such as cleanup and erosion control measures, are costing taxpayers over 3 billion dollars annually.

### **PEST RESISTANCE TO FARM CHEMICALS**

Chemical agriculture is losing its war against pests. In the past 30 years, pesticide use in the United States has increased 12 times and yet crop losses to those pests have nearly doubled. More than 440 insect and mite species, as well as, more than 70 fungus species are now known to be resistant to some pesticides. Resistance to herbicides has been developed by over 54 different crop weeds. Over the last 20 years, producer costs for chemicals have increased by over 3 billion dollars in an effort to gain control in this war. A war on pests that has been long and expensive for the producer, as well as, counter-productive.

### **WATER CONTAMINATION**

Normal agricultural use, not spills, have been indicated by the EPA for the bulk of agricultural pesticides found in water. Over 75 pesticides have been detected in the groundwater of 39 states. Nitrate levels exceed federal water standards in over 25% of farmstead wells tested. Rainwater has now been found to contain over a half dozen different pesticides in the Midwest. Clean-up and control costs to the taxpayer are running upwards of 10 billion dollars annually.

### **FARMER SAFETY**

Farming has the highest rate of work-related acute illnesses of any industry. The poisoning rate is almost 5 times the national average. Work done in the late 1980's, by the National Cancer Institute, found that certain farm workers exposed to herbicides for over 20 days per year were 6 times higher in risk of developing certain forms of cancer than non-farm workers.

### **EXPENSIVE TECHNOLOGICAL PROGRAMS FOR PRODUCERS**

Farmer expenditures, during the petrochemical production era of 1940-1990's were increased for intermediate energy inputs (pesticides and fertilizers) by 3 times; capital expenditures increased 4 times as interest payments sky-rocketed by 7 times. During the same period, while crop production was increasing, crop quality declined, adding substantially to the cost of livestock production as producers were forced to replace the vitamins, minerals, and protein that were no longer in or lessor amounts in most of the crops grown. Thus, even though gross farm income was doubling, farmers were losing 10% of their net farm income. Because of this, farmers were forced out of the industry, as the income from farming became unevenly distributed with 2/3's of net farm income currently going to 4% of farmers.

## **FOOD SAFETY PERCEPTIONS**

Pesticide residues rank as the greatest consumer food safety concern today. Antibiotics and hormones used in livestock productions are also perceived as unsafe. While these concerns may only be perceptions, they are of importance for crop and livestock producers as consumers often make their purchases based on their perceptions of products. **And NOW, enter the genetically-altered crops.**

Indeed, the need for a sustainable system for agriculture is very apparent. Apparent, as well should be the realization that, THE CAUSE OF THE PROBLEMS CANNOT ALSO BE THE CURE! More of the same N.P.K. fertilizers will not increase soil fertility, more pesticides will not make our crops safe from weeds and insects, more drugs will not make healthier animals and finally, more uncontrolled genetic manipulation may result in as many problems as 'miracles'.

SUSTAINABLE AGRICULTURE involves more than just a change from some of our past practices. To address many of the problems associated with 'chemical agriculture', SUPER GRO OF IOWA, INC. has developed a PROGRAM OF SUSTAINABLE AGRICULTURE that has successfully been used by growers for OVER A DECADE.

### **THE SUPER GRO OF IOWA PROGRAM FOR A SUSTAINABLE AGRICULTURE**

The SUPER GRO OF IOWA PROGRAM FOR A SUSTAINABLE AGRICULTURE involves following certain management practices, as well as, using various fertilizer products that fit within our understanding of the cause of some of the problems farmers and livestock producers are facing. Crops can produce well in both quantity and quality if we will but change and start working with many of NATURE'S LAWS and PRINCIPLES as they apply to soil fertility and crop production. The basic law of minimums still holds true today, reminding us that the yield and quality of a crop is controlled and in direct proportion to the lowest growing factor. However, here within, the balance of these factors is critical. These factors include not only the major and secondary elements, but also, trace elements as well, as the activity and kind of microbial life in the soil. Soil structure, cropping practices, moisture, temperature, soil tilth, and tillage practices are also contributing factors. These same factors are also thought to be contributing factors regarding possible weed and pest problems.

#### **POINT #1: COMMITMENT AND MANAGEMENT**

- a. Develop a positive attitude toward change, commit yourself to it
- b. Learn and/or know you own management skills
- c. Use soil-testing to help make cropping, fertilizer, chemical reduction and/or usage decisions
- d. Learn how tillage practices, seeding or planting time, and soil temperatures affect potential weed and pest problems, as well as, yields
- e. Use a rotary hoe and/or a harrow for early weed control and mechanical cultivation later on row crops

#### **POINT #2: CROP ROTATIONS**

- a. Rotate crops to help control weed and insect problems
- b. Rotate in legumes to 'grow' some nitrogen
- c. Rotate crops to help control soil erosion and water pollution

**POINT #3: USE CONSERVATION TILLAGE PRACTICES**

- a. Use tillage practices that help control erosion
- b. Use tillage practices that help increase soil organic matter
  - i. Keep organic matter in top 4-6" of soil
  - ii. Increase soil oxygen content and aerobic soil life

**POINT #4: USE CORRECT MATERIALS**

- a. Utilize animal manures if available or green manures if not.
- b. If calcium/magnesium/pH adjustments are necessary, be sure to use correct products to achieve the right balances.

**POINT #5: USE CORRECT FERTILIZER MATERIALS**

- a. Use materials that will assist in crop yield and quality goals
- b. Use materials that are soil life acceptable
- c. Learn correct N usage, if and when necessary, amounts and kinds
- d. Learn importance of secondary and minor elements and how they affect production, plan and soil life, as well as, pest problems
- e. Understand the differences between fertilizer materials in response to plant availability, production, and pest problems
- f. Use the SUPER GRO OF IOWA FERTILIZER BLENDS, specifically developed for sustainable agricultural needs.

This program can be developed in full for most farming and livestock operations with the help of your local dealer. While not considered to be an 'expert', dealers are constantly being updated on product usage and management practices that may be necessary to establish a program of sustainable agriculture for most operations (i.e., methods and practices that can assist in the reduction of pesticide usage, soil testing, new products, etc.). Your local dealer is also your source for the Super Gro of Iowa fertilizer blends and materials that fall within the category of correct fertilizer materials as noted. The Super Gro of Iowa fertilizer blends are typically composed of dry, granular, cold-blended fertilizer materials. As with all agriculture fertilizers, they have specific guarantees on N, P & K, however, they also have guarantee on sulfur and a natural broad spectrum trace and secondary mineral base. Custom blends for special soil conditions and/or problems are also available. The fertilizer blends are available in bags, bulk bags, and/or bulk. They can be spread with a regular fertilizer spreader, put down with the seeder, or used in the planter. Finally, our local dealer is your ongoing source of information regarding sustainable agriculture.

**For further information and recommendations, Contact:**

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