

# GUIDELINES FOR CONSIDERING SOIL AMENDMENTS FOR REGISTRATION AND PROOF OF EFFICACY

K.A.R. 4-19-1

## **(THESE GUIDELINES MUST BE FOLLOWED EXACTLY)**

- I. Submit research data only (no testimonials) from such groups as land-grant universities, USDA and other reputable research organizations.
- II. Research must be conducted on at least **three** soil types common to Kansas and **two** years of data for each location. At least one location should be in Kansas.
- III. Active ingredients of a product must be listed in the Chemical Abstracts of latest edition of Mercks Index. (Coined chemical names not acceptable.)
- IV. Research data submitted must be for crops commonly grown in Kansas.
- V. Submit Analytical Standards for active ingredients.
- VI. Research must be presented in the following format:
  - A. Title page should include:
    1. The product tested and the crop with plant or nutrient response being measured.
    2. Dates and locations of trails.
    3. The financial link, if any, between the investigating agency and the product company.
    4. Investigators, including their credentials.
  - B. Introduction
    1. Identify each product claim (use the exact wording that appears on the product label).
    2. Include a brief statement about the nature and use of this product.
  - C. Materials and Methods (or Experimental Procedure)
    1. A minimum characterization of the experimental sites should include soil texture, soil classification, soil reaction (ph), soil organic matter and previous crop.
    2. Description of the pertinent details of the research procedure (i.e. planting date and rate, variety/hybrid, weed control method, tillage operations, fertilizer rate, method of application and source, etc).
    3. The layout and design of the experiment should be given in enough

detail for the reviewer to ascertain that treatment border effects were eliminated and plots were of sufficient size to assure unbiased samples. An experimental design procedure source such as "Agricultural Experimental Design and Analysis" by Little and Hill, published by John Wiley & Sons, New York should be consulted.

4. Treatments should include:
  - a. A control of untreated area without any fertilizer or product application.
  - b. The product at the rate and method of application specified on the label.
  - c. The product at the rate and method of application specified on the label with fertilizer recommended if different than treatment b.
  - d. The fertilizer alone recommended in treatment c.
  - e. Other treatments as needed to verify claims.
5. The treatments should be randomly assigned to individual plots and at least three replications should be used.

#### D. Results and Discussion

1. Data should be presented in Standard English units in tables or figures with appropriate statistical analysis. A significance level of 10% or less should be used.
2. Discussion of the data should be in lay terms whenever possible.

#### E. Conclusions

1. Results should be summarized and discussed as to their proof of product effectiveness claims

#### F. Literature Cited

1. List references in the manner suggested in a Handbook and Style Manual for scientific publications.

## SOIL AMENDMENT ACT

### Outline of Guidelines and Procedures

1. Kansas Statutes 2-2801 et. seq.
2. Purpose

The Kansas Soil Amendment Act requires the registration and proof of efficacy on any substance which is intended to improve the physical, chemical or other characteristics of the soil or improve crop production, except the following: Commercial fertilizers, agricultural liming materials including ground and slaked lime, unmanipulated animal manures, vegetable compost and pesticides.

3. Evaluation

The Secretary shall allow an active ingredient to be listed or guaranteed on the label or labeling if satisfactory supportive data is provided the Secretary to substantiate the value and usefulness of the active ingredient. The Secretary may rely on out-side sources such as the agricultural experiment stations established by K.S.A. 76-465 for assistance in evaluation of the data submitted. When an active ingredient is permitted to be listed or guaranteed it must be determinable by laboratory methods and is subjected to inspection and analysis. The Secretary may prescribe methods and procedures of inspection and analysis of the active ingredient.

4. Application

Each soil amendment product shall be registered with the Secretary **before** it is distributed in this state. Application for registration shall be submitted to the secretary, on a form prepared for that purpose, showing the information required on the label, as provided in K.S.A. 1981 Supp. 2-2804, except net weight of product.

5. Registration Fee

The registration fee shall be fixed by rules and regulations adopted by the Kansas Department of Agriculture for each product, except that such fee shall not exceed \$100 for each product. All registrations shall expire on December 31 of the year in which such soil amendment product is

registered. The applicant shall submit with the application for registration a copy of the label and a copy of all advertisements, brochures, posters and television and radio announcements to be used in promoting the sale of the soil amendment.

## 6. Proof of Efficacy Data

- I. Data should be presented in the following format:
  - A. Introduction of data should contain brief comments on product claims and suggested mode of action, to be found on the product labeling.
  - B. Material and Methods (or Experimental Procedure)-should describe the pertinent details of the research procedure. Soil type, experimental design, treatments used and other information on plot work carried out should be the minimum information reported.
  - C. Results and Discussions-appropriate data and discussion of what the data means in lay terms wherever possible. Prefer data not be expressed in metric units.
  - D. Conclusions-summary of the interpretation of research results. Use layman terms as much as possible.
  - E. Literature Cited-list references in the manner suggested in the Handbook and Style Manual for scientific publications.
- II. Active ingredients of a product must be listed in the Chemical Abstracts or latest edition of Merks Index (coined chemical names not acceptable).
- III. Data submitted must be for crops commonly grown in Kansas.
- IV. Research to have been conducted on at least **three** soil types (different areas) and **two** years of data for each location.
- V. Product tested and evaluated by a recognized and land grant institution or USDA.

## 7. Cooperative Agreement

Upon receipt of a registration request with accompanying data and other required information, the State Dept of Agriculture will forward a complete

set of the information to Kansas State University, College of Agriculture, Agronomy Department, Director, for review and evaluation. The Director of the Agronomy Department, shall at his discretion, make appropriate assignments either by department, committee assignment, research, or as necessary to allow the Director to make appropriate recommendations to the Kansas Dept of Agriculture regarding the proof of efficacy on each soil amendment product.

It shall be the responsibility of the Kansas Dept of Agriculture to accept or reject an application based on the Kansas Soil Amendment Act, the regulation, professional judgment, and the recommendations of Kansas State University.

#### 8. Appeals and/or Hearings

In the event the registrant is not in agreement with the action taken, he or she may request a hearing for the product in question.

Representatives of the Kansas Dept of Agriculture and the registrant shall be invited to participate in the informal hearing. Other participants may be invited at the discretion of the Secretary of Agriculture as needed to render a scientific, professional or legal decision. The failure to reach an understanding will not prevent either party from seeking legal recourse.