RECCOMENDATIONS FOR COTTONSEED MEAL USE BY LEADING AGRICULTURAL UNIVERSITIES

References to Cottonseed Meal Selected from Online Publications

Texas A&M University Horticulture Update - January-February 2001

Vegetable Gardens

Cottonseed meal is an excellent means of providing both the organic matter and the nutrients vegetables need. It is an organic, slow-release, premium fertilizer containing nitrogen, phosphorus, and potassium, as well as numerous minor elements. When incorporated into the garden soil, **cottonseed meal** decomposes over a period of time, slowly releasing its nutrients and forming soil-improving humus.
http://aggie-horticulture.tamu.edu/extension/newsletters/hortupdate/jan01/art8jan.html

Soil Test Fertilizer Recommendations for Alabama Crops, Auburn University

Nutrient Recommendations for Organic Vegetable Garden

5 - To supply N for nonlegumes use materials high in N but low in P such as **cottonseed meal** (6-3-1), fish meal (10-6-1), or blood meal (13-2-1). Legume cover crops can also provide some N to subsequent crops.
http://www.ag.auburn.edu/agrn/croprecs/CropRecs/cc59.html

The Center for Agroecology and Sustainable Food Systems, Univ. of CA, Santa Cruz

Building Fertile Soil

Phosphorous (P) sources: Plants need phosphorous to grow, flower, and develop healthy root systems. Rock and soft phosphates, bone meal, and **cottonseed meal** all provide high percentages of P. Unlike nitrogen, phosphorous lasts a long time once added to the soil.

Nitrogen (N) sources: Plants need nitrogen to develop healthy leaves and stems; nitrogen-deficient plants will look yellow and grow slowly. Blood and bone meals, fish meal and emulsion, hoof and horn meal, soybean, **cottonseed**, and kelp **meals** all contain significant percentages of nitrogen.

Potassium (K) sources: Plants need potassium to strengthen plant tissue, make vegetation more disease-resistant, and develop chlorophyll. Sources include wood ashes, **cottonseed meal**, granite dust, and greensand. Wood ashes will also "sweeten" your soil by raising the pH, making it less acidic. Avoid contact between freshly spread ashes and germinating seeds or new plant roots, as the ash may burn plant tissue. Potassium, like nitrogen, turns over quickly in the soil system and must be replenished.
http://zzyx.ucsc.edu/casfs/gardenideas/soilfert.html

Mississippi State University Extension Service, MSUcares

Establishment and Maintenance of Blueberries

Management-
Fertilization

The USDA Small Fruits Laboratory in Poplarville, Mississippi has developed two blueberry fertilizers that have shown good results:
1. An acid-forming fertilizer, 14-8-8, with a nitrogen source of ammonium sulfate and diammonium phosphate. Use this formulation on soils with a pH above 5.2.
2. Non-acid-forming formulation, 18-10-10, with the nitrogen source being urea. Use this formulation on soils with a pH below 5.0.

The filler material in both formulations is **cottonseed meal**. Contact your county Extension agent or state Extension specialist for sources.
http://msucares.com/pubs/publications/p1758.htm

Auburn University Publication ANR-1078, New Oct 1997

Home Gardening - Rabbiteye Blueberries

Fertilizing

You do not need to apply fertilizer at planting; in fact, it's important not to overfertilize blueberries at any time. A slow release form of fertilizer that has sulfur-coated urea, such as 12-4-1, or an azalea/camellia formulated fertilizer, works well. Follow product label directions or use about 1 ounce of 12-4-1 per plant per year of age (not to exceed 6 ounces in the spring, or 5 ounces on post harvest applications). An organic fertilizer such as **cottonseed meal** (6-3-2) could be used.

Apply fertilizer twice a year, when spring growth begins, and again after harvest. When spring growth begins, apply a special formulated fertilizer for azaleas/camellias (12-4-1) or **cottonseed meal** in two applications--when growth begins (March/April) and again in June (2 ounces per plant per application). (Do not use nitrate forms of fertilizer for blueberries)
http://www.aces.edu/pubs/docs/A/ANR-1078/

Alabama Cooperative Extension System

The Culture of Camellias: The State Flower of Alabama

FERTILIZING. Camellias are not generally fertilized the first year after planting, especially if the soil is high in organic matter. After the first year, apply fertilizer in the spring after blooming but before new growth starts. With many fertilizers, small amounts at frequent intervals are better than heavy applications. Special camellia fertilizers as well as 8-8-8, 10-6-4, **cottonseed meal**, or cow manure are available at your local seed store. Some fertilizers have up to 70 percent of the nitrogen in a slow-release form, which is

less likely to burn the roots. One application in early spring after blooming should be followed by a second application in mid June to early July. A soil test is the best way to determine the nutrient status of the soil. In the absence of a soil test, a rule of thumb is to apply 1/2 to 1 pound of a 10-6-4 or similar analysis fertilizer per 100 square feet of plant bed area. Scatter the fertilizer evenly on top of the mulch and away from the main stem of the plant. For small plants (12 inches or smaller), 1 teaspoon per plant is adequate. Water the fertilizer into the soil. Do not fertilize after July, so the plants will have a longer time to harden off and avoid freeze damage.
http://www.aces.edu/pubs/docs/A/ANR-0202

Mississippi State University Extension Service

Home Lawn: Fertilization

Slow-Release Fertilizers

Many lawn fertilizers are formulated from slow-release fertilizer materials. These fertilizers contain primarily nitrogen fertilizers not immediately available to the grass. Some of these are only quick-release forms of nitrogen coated to prevent water from dissolving them. These include sulfur-coated urea and various plastic- and resin-coated urea products. Other slow-release fertilizers combine urea with formaldehyde in the manufacturing process. Still others are chemically different from the quick-release fertilizers. The main thing you need to know is that the slow-release nitrogen sources do not have to be applied as often as do the quick-release sources and that the potential of damaging your grass from overfertilization is greatly reduced.

The oldest slow-release products are the natural fertilizers such as compost, **cottonseed meal**, sewage sludge, and manures. These natural products require the microorganism in the soil to break them down before grass can use the nutrients contained in them. There are several organic source products (biofertilizers) being marketed today reported to enhance nutrient, moisture, and oxygen absorption and/or enhance root growth. While these products may be beneficial, they are generally not necessary for maintaining quality home lawns.
http://msucares.com/lawn/lawn/fertilization/index.html

The North Carolina Arboretum, The University of North Carolina

Passion Flower

Selecting a planting site

A perennial hardy to Zone 6, passionflower prefers a well-drained or sandy soil in full or partial sun. It can grow in relatively poor, sandy, acidic soils but Tim Blakley, Medicinal Herbs in the Garden, Field, & Marketplace, reports that it does best with a slow release fertilizer, like **cottonseed meal**, at time of planting.
http://www.ncarboretum.org/Superb_Herbs/passion_flower.html

TAMU Extension Horticulture Information Resource

Fertilizing Woody Ornamentals

Fertilizing Evergreens in Alkaline Soils

Sometimes organic fertilizers are preferred for use around broad-leaved evergreens. Nutrients in these materials are released to the plant slowly and do not produce excessive growth. There is less danger of damage from overfertilization. Apply fertilizers such as **cottonseed** or soybean **meal** at 5 to 6 pounds per 100 square feet of planted area.
http://aggie-horticulture.tamu.edu/extension/fertilizing/fertilizing.html

VA Cooperative Extension Service, Publication Number 426-313, posted June 2000

Soil Preparation

Other nutritional amendments that can be purchased for garden use include **cottonseed meal**, kelp meal, leather meal, and worm castings, as well as an array of synthetic fertilizers. The organic amendments are particularly useful where a trace element deficiency exists, while synthetic fertilizers are generally more available, less expensive, and have quicker results.
http://www.ext.vt.edu/pubs/envirohort/426-313/426-313.html

University of California Vegetable Research and Information Center

Organic Gardening-Think Mulch

Organic gardening is the production of crops without the use of inorganic chemical fertilizers or pesticides. This means that only organic fertilizers such as manure, sewage sludge, **cottonseed meal**, bone meal, or dried blood are used….

…Some of the best organic materials to use as mulch in the garden are leaves, lawn clippings, fresh sawdust, fine wood shavings, pine needles, chopped straw, ground corn cobs, shredded tobacco or cane stems, peanut hulls, or **cottonseed hulls**. They will not add important amounts of nutrients, or have a significant effect on the pH of the soil.
http://vric.ucdavis.edu/veginfo/topics/organic/ThinkMulch.pdf

Texas Organic Research Center (Private)

Acceptable Soil Amendments and Fertilizer Products

…
cottonseed meal
…
http://www.dirtdoctor.com/view_question.php?id=422

Southern Regional Aquaculture Center, SRAC Publication No. 469, April 1998

Fertilization of Fish Fry Ponds

Fertilizer types

Fertilizers are divided into two main types, inorganic (e.g., 11-37-0, N-P-K) and organic (e.g., **cottonseed meal**)….

Organic fertilizers

Organic fertilizers are manures, plant meals, and other natural products. They provide relatively low levels of plant nutrients as compared to inorganics, but serve as a substrate for the growth of bacteria, protozoans and zooplankters. The important contribution of organic materials is that, while decomposing, they are a rapid and sometimes direct source of food for zooplankton. Organic meals such as rice bran and **cottonseed meal** are consumed directly by some zooplankton. Organic fertilizers are broken down by bacteria, which in turn are food for many types of zooplankton. In addition, the bacteria release nutrients that the phytoplankton use. The progressive decomposition of organic fertilizers also lengthens the time that nutrients are available in a pond and helps prevent too rapid a bloom development…

… Plant meals, such as **cottonseed meal** and rice bran, are more consistent products and can be readily applied from a feed wagon.

http://srac.tamu.edu/index.cfm?catid=25 SRAC 469 Fertilization of Fish Fry Ponds

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