

Lagoons for the home

The lagoon system is an effective method of home sewage treatment and is well suited for large-lot areas having very slow soil percolation rates. This system generally discharges home sewage directly into the lagoon. Properly designed and sized lagoons use evaporation for dewatering. Both aerobic and anaerobic decomposition occur in lagoon treatment of home sewage. Anaerobic treatment generally occurs at and near the bottom of the lagoon where settled solids and sludges accumulate. This treatment is similar to the anaerobic treatment that occurs in septic tanks. Aerobic treatment occurs in the presence of oxygen and usually occurs near the lagoon surface. Aerobic treatment aids in reducing the odors released during anaerobic treatment and

also provides additional treatment of home sewage. Wind movement aids in mixing oxygen into the lagoon surface and helps to increase evaporation.

Proper lagoon sizing and construction is essential for holding and treating home sewage. The surface area of a lagoon must be at least 900 square feet. When more than five people live in a house, an additional 175 square feet of lagoon surface area is required for each person. Lagoon length should not exceed three times its width and the liquid depth is about three feet. For ease of mowing, the lagoon should have side slopes of three units horizontal to one unit vertical. It may also be necessary to place a diversion terrace around part of the lagoon to keep surface water

from entering into it.

Lagoons must be at least 50 feet from any property line and 200 feet from neighboring residences. Therefore, the minimum size lot area for lagoon construction is three acres. Lagoons must be enclosed with a four foot high fence having a locking gate, and signs stating: NO TRESPASSING—WASTE LAGOON.

In areas where the soil is not conducive to compaction, additional materials such as soda ash, bentonite or plastic liners may be required to completely retain seepage of effluent. Open water during the summer months provides a nesting ground for mosquitos, which requires mowing of the lagoon banks to reduce possible mosquito breeding area. (DJ)

Fertilizing trees and shrubs

Shade and ornamental trees and shrubs often benefit from added fertilizer. Fertilization can result in more rapid growth; faster recovery from injury, pruning or pest problems; improved health and better foliage color. Trees growing in modified soil usually will benefit more than those growing in good, natural soils, so if you have or plant trees in a "developed area," a fertilizer program for your trees probably will pay big dividends.

Fertilizers are best applied during the dormant season (usually November through April). A second-best time is during the spring and early summer months (May through July). Do not fertilize between July and November.

Newly planted trees are not routinely fertilized in their first growing season. The use of a low-analysis starter solution is an exception. After the first year, fertilizer can be applied easily in granular form via holes distributed throughout the root zone. A soil auger, punch bar, soil probe, or large drill bit can be used to make the holes. A hole 1 1/2 - 2 1/2 inches in diameter is ideal.

The first row of holes should be made at the drip line. The holes should be about 10-12 inches deep, slanted slightly toward the tree trunk and about two feet apart. Additional rows should continue the two foot row spacing. No holes should be dug closer than 18-24 inches from the trunk. If a root is struck during digging, remove the bit and dig to one side or the other.

Fertilizer rates are based on the diameter of the tree measured 4 1/2 feet above ground. (Diameter equals circumference divided by 3.14). Use the following formulas to determine the correct amount of fertilizer:

For a tree six inches in trunk diameter or less (measured 4 1/2 feet above ground): apply 1-2 pounds of 10-6-4, 10-20-0, 12-12-12, 6-10-4 or a similar low-analysis fertilizer per inch of trunk diameter. (For example, a 4-inch-diameter tree will require 4-8 pounds of 10-6-4 fertilizer.) Any complete fertilizer containing 6-12 percent available nitrogen is acceptable. High amounts of phosphorus and potassium are not necessary.

For a tree over six inches in diameter, apply three pounds of 10-6-4 or a similar low-analysis fertilizer per inch of trunk diameter. (Example: an eight inch diameter tree will require 24 pounds.)

Distribute the required amount of fertilizer evenly among the holes, placing no more than 1/4-1/2 cup of fertilizer in each hole. If you have fertilizer left over, drill more holes. Water until the holes stand full of water. The holes can then be filled with soil or a mix of soil, sand and peat moss.

Pine, redcedar, spruce and fir trees should rarely be fertilized. These trees grow quite well in a wide variety of soils — unless they are too wet. Even in very poor sites, adapted pine varieties and redcedar can be expected to do well without soil amendments. However, if evergreen trees are fertilized, do not exceed half of the recommended rate for deciduous shade and ornamental trees.

Seldom do flowering or evergreen shrubs require chemi-

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New plants to consider

Coleus, winter squash and gooseberries are three garden items to consider for the coming year.

According to Don Steinegger, Ph.D., horticulturist, NU/IANR, "Plant breeders have been doing exciting things with coleus the past few years. Leaves have been stretched and reshaped, adding saber-like and heart-shaped leaves and ruffles and frills. Colors have been brightened and given new combinations. Leaves have been adapted to hanging baskets, pots and tubs. New compact growth habits and varied tolerance to sun make coleus more useful."

Coleus will be available in packs, various size pots, tubs or hanging baskets, ready to plant wherever a touch of color or an added texture is needed.

Winter squash is well adapted to Nebraska weather and soil conditions. Most winter

squash have vine or a semi-bush habits, although some newer varieties are bush. Vine types need a larger area than the bush varieties. Plan on 12 square feet for each vine plant. Small fruited winter squash can be trained on a four foot trellis. The trellis should be placed toward the rear of the garden so that the vines do not shade other vegetables. It takes 80 to 130 days to produce mature winter squash.

Winter squash is an excellent source of vitamin A and Beta-Carotene, which has been found to reduce the risk of certain cancers. Winter squash is high in potassium and other minerals.

Squash does best in well-drained and aerated soil. If the soil site is heavy clay soil, till to improve drainage and add additional organic matter. Squash prefers soils that have a near neutral pH.

Germination time can be hastened by presoaking seeds to soften their hard coat. Soak in tepid water for no more than 24 hours. Dry the seed carefully before planting. Wet seeds are more susceptible to decay causing organisms. Delay sowing seeds until after the danger of frost is past and soil temperatures have warmed up to a minimum of 70 degrees F.

Gardeners may wonder why some squash flowers don't set fruit. Separate male and female flowers are produced on the same plant or vine, but only the female flowers bear fruit. Female flowers grow on short stalks and have a bulge, the miniature squash, below the petals. These serve as the primary means of pollinating female flowers.

Winter squash can be

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Acreage Insights



Tractor safety tips (part 4)

Tractors are one of the most important pieces of equipment on a farm, yet they are also among the most dangerous. More deaths are caused by tractors than by any other type of farm accident. It is, therefore, imperative that tractor owners routinely check their tractors and keep in mind the following safety guidelines:


A rear rollover generally happens too fast for the operator to react; it takes only 3/4 of a second to reach the point of no return. Most rear rollovers are the result of changing the tractor's center of gravity. Normally, a tractor's center of gravity is located about two feet in front of and 10 inches above the rear axle. Hitching above the drawbar, or in a location not designated by the manufacturer, increases the risk of a rear turnover.

Excessive throttle use or applying too much power to a restrained rear axle can cause the front end of the tractor to lift off the ground. As the front end lifts it gains momentum and the tractor flips over. Without a ROPS and a seat belt the operator will likely be crushed.

If a load must be pulled up a hill, keep the operation of the clutch and throttle smooth. Do not stop or shift gears while driving up a hill. (DJ)

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