How much N, P and K?

Because of the author's experiences, recommendations are based on using ureaform nitrogen in a single application at planting time, or once a year or less often under maintenance conditions.

Other slow-release N sources are suitable for long-term effects, and should be considered over fast-release fertilizers for these infrequent applications. For the purpose of clarification, “luxury turf” is defined as that composed of improved varieties of turfgrass cultivars mowed and maintained for aesthetic appearance near buildings and along urban parkways.

**Seedbeds, luxury turf**
400 lbs. ureaform, 38-0-0, (152 lbs. N) + 400 lbs. 6-24-24 (or other high P-K fertilizer) per acre, applied separately or blended.

**Seedbeds, low-maintenance grasses and groundcovers**
200-lbs. ureaform, 38-0-0, (76 lbs. N) + 200 lbs. 6-24-24 (or other high P-K fertilizer) per acre, applied separately or blended.

(* In seedbeds, phosphorus and potassium will be more efficiently utilized over a longer period if incorporated in the top three-to-four inches of the soil prior to seeding. The nitrogen fertilizer should be surface-applied for best results. Mulching or slight incorporation will help prevent rainfall from moving particles away from the site of application.)

**Under sod**
115 lbs. ureaform, 38-0-0, (44 lbs. N) + 200 lbs. 6-24-24 (or other high P-K fertilizer) per acre. Equivalent to 1 lb. N per 1000 sq. ft. Slightly incorporate into the soil surface prior to laying the sod.

**Established luxury turf**
400 lbs. ureaform, 38-0-0, (152 lbs. N) + 200 lbs. potassium sulfate, 0-0-50, (or 150 lbs. potassium chloride, 0-0-60) per acre. Apply in spring or early fall.

**Established low-maintenance grasses and groundcovers**
200 lbs. ureaform (76 lbs. N) + 100 lbs. potassium sulfate, 0-0-50, (or 75 lbs. potassium chloride, 0-0-60) per acre. Apply separately or blended, spring or early fall.

**Tree establishment (bare root or ball and burlap)**
1/2 lb. ureaform, 38-0-0 + 1/2 lb. single super-phosphate, 0-20-0, per 1-inch trunk diameter.
Mix fertilizer with backfill to be replaced in the planting hole. Application technique tip.....Mark out the planting hole locations with pre-measured amounts of fertilizer. Power-auger directly through the pile, automatically blending the fertilizer with the back-fill as the hole is dug.

A soil test may indicate that levels of phosphorus and/or potassium are adequate to sustain growth. If so, apply ureaform only. If potassium is required, it is best to apply it on the surface in order to dilute the salt concentration in the vicinity of the newly planted roots.

**Seeding trees and shrubs**
2 ozs. ureaform, 38-0-0, + 2 ozs. of a high P-K fertilizer, surface broadcast around each planting. In an area of many closely spaced plantings, surface broadcast 400 lbs. ureaform, 38-0-0, + 400 lbs. of 6-24-24 (or other high P-K fertilizer) per acre. Apply separately or blended.

**Established trees and shrubs**
Surface apply 1/2 lb. ureaform, 38-0-0, per inch of trunk diameter uniformly beneath the canopy.

Trees and shrubs almost always will exhibit a response to nitrogen fertilization. Trees showing an unusually pale leaf color may be suffering from iron chlorosis. This is mostly a problem in alkaline soils. It can be corrected with iron chelate.

—C. Robert Staib.