**Plant Characteristics:** Pyramidal in youth, open, spreading, often shrubby and flat-topped at maturity.

**Size:** Height: 35'-50'

   Width: variable

**Foliage:** In pairs, persisting 2-4 years, olive green, stiff, curved or slightly twisted, 3/4 to 2” long. Young leaves light green to dull dark green: yellow-green in winter

**Flower:** Monecious, no ornamental value.

**Fruit:** Yellowish brown cone that is 2” long and 1–2 1/2 inches long.

**Soil:** Dry, sandy and acid soils. Prefers dry, loose, sandy soil with low pH. Does not do well in limestone.

**Tolerances:** Extremely cold tolerant

**USDA Hardiness Zone:** Zone 2–6

**Light Range:** Full sun.

**pH Range:** 6.8 or less.

**Other:**
- Grows in soil too poor for most plants
- Susceptible to salt damage
- Attracts songbirds upland game birds mammals
- Used for groves and windbreaks and mass plantings in sand
- Easily transplanted if root pruned.