

**Cation exchange capacity.** CEC is closely correlated with acidity. Organic amendments in comparison with a typical loam soil have a relatively low nutrient retention capacity. In comparison with sand the nutrient retention capacity is fairly substantial.

### Livestock or Cattle Feed

The prices of the two basic protein supplements for cattle food (soybean meal and fish meal) have more than doubled recently. The hunt for suitable substitutes is worldwide.

A search of the literature will produce many articles and abstracts dealing with the feeding of hammermilled, steamed, or otherwise prepared wood chips as feed for livestock. Most references deal with wood pulp or delignified wood; the goals are roughage and/or a digestible energy source. In a general way wood, as such, is considered to be almost indigestible by animals. On delignification (expensive to accomplish) the wood pulp is highly digestible.

### Fuel

Scarcity of energy is relative rather than absolute. Its high cost (scarcity) can devour our potential for economic progress. Wood is a proven low-cost, clean, plentiful, renewable, acceptable fuel. The critical problem is to provide enough chips on a continuing basis.

Fossil fuel at \$1.50/million B.T.U. is equivalent to wood chips at \$10.50/ton; \$26.00/cord. A cord (green wood) weighs about 5,000 pounds. Chips at \$10-\$17/ton can compete with coal. Conversion rates: Two and one-half pounds of chips are needed to produce 1 KW of electricity.

Seven and one-half tons of chips per year are required for a 1 KW plant. Green chips (35% moisture) contain 8.1 million B.T.U. per ton. Air-dried chips (20% moisture) contain 13 million B.T.U. per ton or about one-half the heat value of coal. Three B.T.U.'s of wood produces 1 B.T.U. of electricity.

All moisture in wood must be converted to steam before the wood will burn. 1,100 B.T.U.'s are required to convert 1 pound of moisture to steam. It requires 44,000 B.T.U.'s to burn 1 air-dried ton (20% moisture) of wood.

### Bark

A meeting October 2-5, 1975 in Key Biscayne, Florida will feature leaders in the bark industry discussing their specialties: merchandising and packaging, marketing of bark products, and bark packaging techniques. It is sponsored by National Bark Producers Association, 1750 Old Meadow Road, McLean, Virginia.

F.S. Trocino of Bohemia, Inc. (Eugene, Oregon) has in operation (5 months) a \$4.25 million plant to extract two products from Douglas fir bark: a vegetable wax used in carbon paper, polishes, cosmetics, and plastics and a powder used to extend plywood adhesives. Within a year, they expect to also be extracting and marketing cork and a phenolic compound useful in adhesives. Also in the works is a slow-release nitrogen fertilizer. To Trocino, bark is much like crude oil in the richness of its chemical nature.

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## ABSTRACT

Smith, Elton M. 1975. **Mice are choosy—like euonymus best!** Nursery Notes, 8(4): 5-6. Cooperative Extension Service, Ohio State University, Columbus.

Producers of container-grown nursery stock have long known that unless they take precautions to control field mice, considerable plant losses can be expected during the over-wintering season. Since low structures are used, what plants can be stored in these units with the knowledge that mice are not as likely to feed on them? To evaluate the susceptibility of a number of woody ornamentals to damage from mice was one of the objectives of a 1974-75 over-wintering study at OSU. The results indicate that mouse damage occurred in all houses and was most severe on *Euonymus sarcocoe* and *vegetus*, Japanese holly, Spring Glory forsythia, Royal Beauty cotoneaster, and slender Deutzia.