



# Longleaf Leaflet

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North Carolina Forest Service

## A LOW COST PINE STRAW BOX BALER

Longleaf pine straw is a popular landscape mulch and offers a great income opportunity to increase your financial return on longleaf pine stands. Unlike most businesses or part-time jobs, pine straw raking does not involve a lot of capital to get started. This leaflet describes the benefits of hand baling and includes a diagram of a simple baler that you can construct from wood and metal.

**Box Baler:** "Boxing" is the simplest, but most labor intensive of all pine straw baling methods. Pine needles are placed in a small crate and compressed by a large lever and platen. The bale is completed when loose straw can no longer be compressed in the box. At that time, the lever is held in place by a latch and the bale is hand tied with twine.

Prior to loading the box with straw, a loop of precut and knotted string is placed in the box. Typically, a nail or hook holds the string in place during the leading process. Once knotted, the lever and box front are unlatched and the bale is removed and stacked for later transport. The box baler can easily be transported to raked straw piles or to single trees, where straw can be loaded from the ground into the baler.

With a box baler, physical labor replaces machinery common to other hay baling systems. "Boxing" has a specific niche in the pine straw industry in dense or remote woods where conditions preclude the use of mechanized equipment. Also the money saved by using a hand box-baler can pay for the equipment (chainsaws, brush axes, or herbicide) needed to prepare the stand for raking.

While box baling might not be a perfect match for everyone, it can be profitable where:

- inexpensive labor or piece workers are available,
- equipment can't operate (dense stands), and
- few pine trees exist or they are scattered.

### Benefits

Low-cost  
Simple to operate  
Access to brushy and remote areas  
Ideal for small-scale/start-up  
Protective of rare plants and ground vegetation

### Drawbacks

Cumbersome  
Labor-intensive  
Inefficient  
Limited production capability

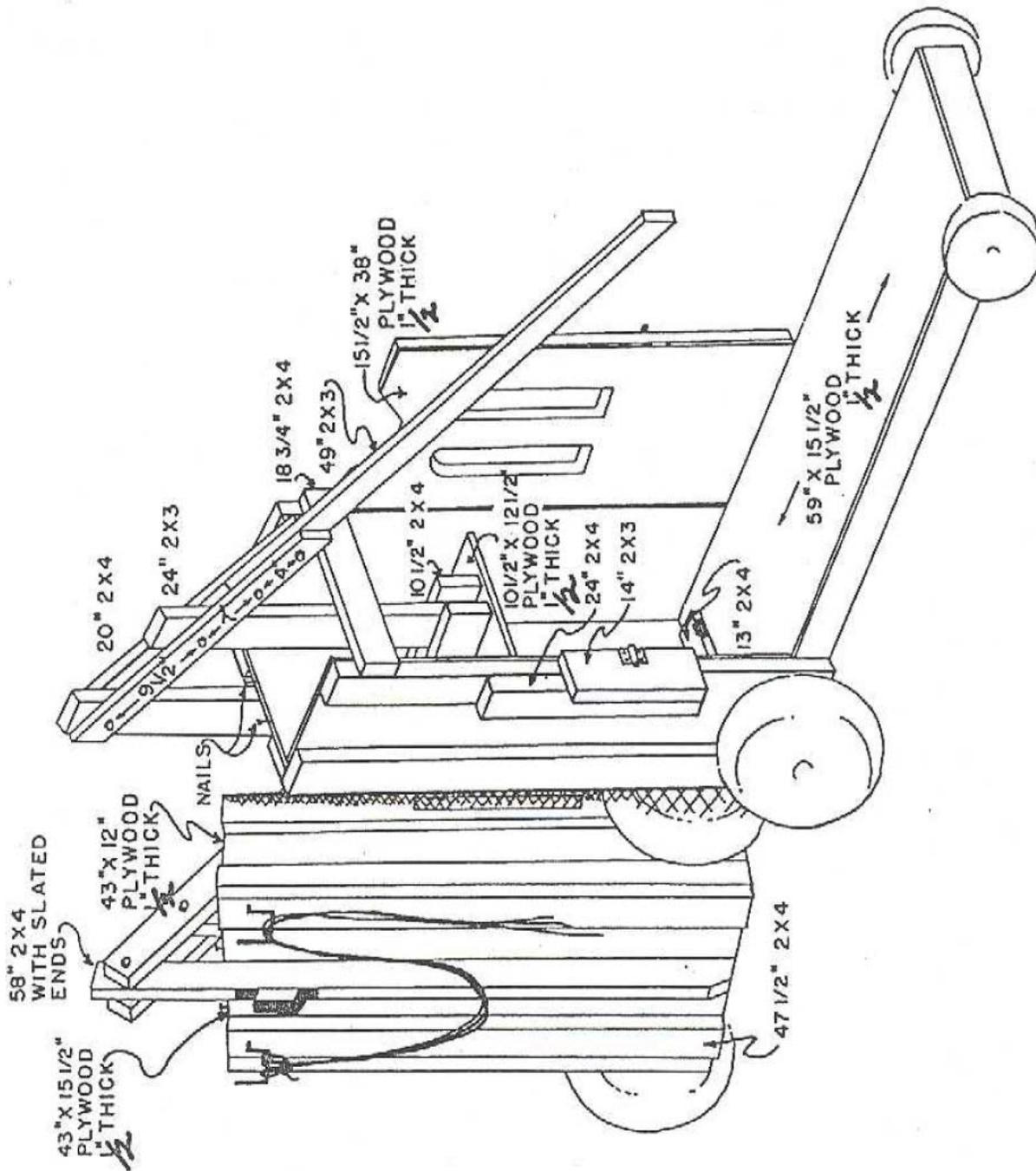


**Building Your Box-Baler:** Constructing a box baler is as simple as building and securing a crate upon a wheeled platform. Whether you build the baler from new or used parts, you'll need larger tires on the rear to be able to maneuver over logs and brush. The front wheels are optional and most balers use fixed feet which provide a stable base for compacting the straw into a tight bale.

The diagram below offers the measurements for constructing a baler that produces 12" X 16" X 36" or greater bales. The materials that you'll need include ½" sheet of exterior plywood, 2" X 4" variable lengths, wheels,

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screws, nails and bolts and latches. In addition, industrial strength glues or waterproof adhesives may add additional strength and life to your baler. Other modifications include the substitution of metal for the lever assembly. More detailed instruction on building your own baler can be found at the following website: <http://texaspinestraw.tamu.edu/baling.html>.





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