



MECHANICAL TRUNK OF PINE WOOD FOR CATTLE

TRONCO MECÂNICO EM MADEIRA DE PINUS PARA BOVINOS

ANTONIO ORLANDO DA LUZ FREIRE NETO¹, CARLOS FREDERICO DE CARVALHO RODRIGUES², JOÃO ELZEÁRIO CASTELO BRANCO IAPICHINI², JOSÉ ANTÔNIO FREITAS¹, JOÃO LUCAS TRIVELATO³, CLÁUDIO HENRIQUE BARBOSA MONTEIRO¹, ANANIAS ALMEIDA SARAIVA PONTINHA⁴, JOÃO HENRIQUE LARA¹

¹Estação Experimental de Itapetininga, Instituto Florestal, SMA de São Paulo.

²Unidade de Pesquisa e Desenvolvimento de Itapetininga (UPD – Itapetininga), Polo Regional de Desenvolvimento Tecnológico do Sudoeste Paulista (PRDTA – Sudoeste Paulista), Caixa postal 169, CEP 18200-000, Itapetininga, SP, Brasil. E-mail: frediz@apta.sp.gov.br

³Empresa de Balanças e Tronco Trivelato

⁴Estação Experimental de Itapeva, Instituto Florestal, SMA de São Paulo.

The timber reforestation, mainly by *Eucalyptus* and *Pinus* sp., has low power processing, strength, good natural durability and, most importantly, provide reduce pressure on native forests. The concern with native forests and the high price of some of these woods force the market to replace those species by other, more abundant and available at most competitive prices. Anything that involves the handling of animals in its various phases has a direct dependency of husbandry facilities, pastures and actions of the people involved (best practices). With the segment of the production and export of meat increasingly competitive and globalized world, the adoption of best practices and animal welfare criteria are striking and decision makers for the acceptance of Brazilian beef in the world market, especially the European market. The use of appropriate animal husbandry facilities is critical to the proper rational management ("action with knowledge") of animals and increased productivity. The trunk restraint carries important role in the implementation and conduct of good animal welfare as having desirable features strength, durability, ability to contain cattle of various sizes, as well as easy to manipulate when the animal inside. Available on the market in the form of different models and costs, is an installation manufactured in wood and iron or galvanized, and may or may not be coupled with an analytical balance or digital, still and mechanical and other systems or electronics. The concern in this installation is perceived improvement in the number of patents filed and recorded and the constant evolution of their functions, with various companies operating in this segment. However, the development and validation of containment trunks with alternative materials, reflecting mainly the reduction of the final cost are poorly studied. In this first phase of the project will be considered the construction of trunk restraint coupled with analytical balance, with exclusive use of wood derived from reforestation of *Pinus elliottii* 45 years of age, Experiment Station Itapetininga / IF-SMA, where through a partnership with the company "Scales and Trunks Trivelato", and how strategic methodology, this facility will be built as zootechnical technological standard and quality control adopted by the company, which is pioneer in this segment. The raw material studied showed characteristics suitable for structural use (ABNT), good workability, and there is no need to adjust or replace other metal components (screws, nails, gears, hinges, mechanical set of scales, etc..) For its construction who received conventional lacquer finish. Besides adding aesthetic value, the use of pine wood has reduced by 25% the weight of the final product, which consumed 1.4 m³ for its production, a decrease of 40% for the purchase of raw material wood. Of great practical impact on the preservation of natural resources, supported by various public policies, with the primary target audience ranchers familiar with the low investment capacity in traditional husbandry facilities, social and technological innovation that will enable farmers to better adherence to official programs of good practices and animal welfare, increasing levels of public health.

Key-words: containing bovine, good practice in cattle, pinewood.