

Using of Alcohol-Based and Biomass Pellet on Tobacco Leaves Curing Process

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Abstract:

There are many factors limiting the fuel used in the flue-cured tobacco, such as the low precision of temperature and humidity control and high curing loss. In order to solve this problem and explore a new clean energy to achieve the purpose of improving the quality and efficiency and reducing the cost. The differences of temperature and humidity control, curing cost, quality loss of tobacco leaves and economic traits were compared between alcohol-based fuel and biomass pellets. The results showed that: alcohol-based fuel control of curing barn temperature and humidity more accurate, the actual temperature and humidity close to the curing process requirements. Compared with the biomass pellets, the curing weight loss and curing cost of the middle and upper leaves used alcohol-based fuel respectively lower 8.93% and 11.71%, 34.50% and 19.79%, the average price increase 3.20 yuan/kg and 1.06 yuan/kg, ratio of mid-high grade increase 9.45 and 2.54 percentage points, ratio of low grade decrease 3.39 and 2.53 percentage point, ratio of abandoned tobacco leaves decrease 6.03 percentage point. Tobacco leaves used alcohol-based fuel was strong chroma and rich in oil, chemical composition except the difference of two sugar and starch slightly higher, the other content was within the range of high-quality tobacco. In summary, alcohol-based fuels reduced the loss and cost of curing and improved the quality of tobacco, can be considered as a new energy on curing barn.

Keywords: Flue-cured tobacco, curing; fuel, alcohol-based fuel, biomass pellets