

ABSTRACT FORM

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NOTE: The abstract must contain a meaningful summary of the material to be presented. It must include the objectives of the research effort, the methods used, and the results obtained. The Editorial Committee reviews and accepts papers based on the abstract. Very short or vague abstracts will not be accepted.

EFFECTS OF PROCESSING ON THE STRUCTURE AND PHYSICAL PROPERTIES OF TOBACCO
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Changes in the dimensions and density of tobacco during curing and processing have important implications in terms of filling capacity. These changes have been measured for field-grown tobacco before and after flue-curing, after redrying, after packing and after cutting. Leaves from the bottom, middle and top of the stalk were processed and measured separately. In addition, lamina thicknesses and particle densities of 31 commercial Canadian flue-cured grades have been measured, 5 of which were also examined after DIET processing. The mean volumetric shrinkage of lamina and stem during flue-curing were respectively 83 and 86%. Most of the lamina shrinkage during curing occurs in thickness; a mean value of 72% was recorded for lamina thickness reduction. Neither redrying nor packing had any effects, but cutting reduced cured lamina thickness by 25%. The DIET process approximately doubled the thickness of mid-stalk lamina, restoring it to about half of its thickness prior to flue-curing. For the experimental leaf samples the tips were thickest at all stages of processing. Surprisingly, leaves from the bottom of the stalk were thicker than those from the middle at most processing stages. Measurements of the 31 commercial grades of lamina strips showed the expected trend for leaves from higher up the stalk to be thicker, but there were many individual exceptions. The thicker leaves tended to have higher particle densities.

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5. Projection requirements: only 2" x 2" slides will be accommodated.
6. Maximum talk time of 15 minutes, with 5 minutes for discussion.

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