

The curing of tobacco by the 'flue curing system' comprises several phases. The temperature is gradually increased in each succeeding phase, until the desired colour is obtained, and the stems and the ribs are completely shrunk.

The first phase is the 'yellowing' or 'wilting.' It is done at a comparatively low temperature—about 90 or 95 Fahr.—and takes from 24 to 36 hours according to the degree of maturity of tobacco and the outside atmospheric conditions. The temperature should not be increased too rapidly, or the result would be green tobacco which could never regain the light yellow colour desired.

It is rather difficult to tell when the operation is over, for in most cases the leaves do not show a straight yellow colour. As a matter of fact, the leaves of the lower tier are greenish yellow, and the tips of some are even slightly brown.

During the whole curing process, the tobacco should be kept elastic. A leaf, on handling, should give the same sensation as a warm and damp rubber leaf.

The next phase is called 'fixing the colour.'

The temperature is put up gradually to 100 degrees and, slowly, to 120.

During this phase, the leaves dry gradually, while retaining the yellow colour they showed at the moment the temperature was being increased. The operation should go on slowly, so that it may proceed gradually from the edge of the leaves to the mid stem; the time necessary is about from 18 to 30 hours (24 hours as an average).

This is the delicate phase of the operation. Should the temperature be increased too quickly or too slowly, or should the humidity be too high or too low inside the curing barn, injuries are to be feared which greatly damage the colour and the texture of the products. Chief among these are 'sponging' and 'blotching.' Sponging is caused by too high a proportion of humidity in the curing shed resulting in a condensation of moisture over the surface of the leaves. Blotching seems to be due to too high a temperature, and too dry an atmosphere, which causes the exterior part of the tissues to harden, and stops the circulation of water in the leaf, making the latter swell.

An expert curer is able to detect the first signs of these injuries, and he at once checks their spread by regulating the fires and ventilation in such a manner as to maintain the proper conditions of temperature and humidity.

Some expert curers distinguish two phases in this part of the curing. The first, from 90 to 100 or 105 degrees, is called 'fixing the colour.' This is comparatively short. The other, from 100 to 120 degrees, is called 'curing the leaf.' The curing of the leaf tissue takes place during the latter phase.

The third phase is the 'curing of the stem.' When the leaf is completely dry, and the desired colour is fixed, the temperature may be increased rather rapidly without much danger.

The stem is then dried, and for this the temperature is gradually increased from 120 degrees to 140 degrees. This operation requires from 6 to 13 hours.

The fourth phase of the process is the 'curing of the stalk.' This is done by increasing the temperature gradually, but rather quickly, to 140-175 degrees, some-