tobacco stems. It would further be desirable if the expansion method could be carried out using conventional apparatus, therefore reducing the cost impact to implement such a method.

According to the invention there is provided a method of producing expanded tobacco stems for tobacco cut filler, the method comprising the steps of:

rolling tobacco stems to a rolled thickness of 0.1 mm to 0.5 mm, such that the cellular structure of the stems is at least partially broken down;

conditioning the rolled stems;

cutting the conditioned tobacco stems;

impregnating the cut tobacco stems with liquid carbon dioxide;

heating the impregnated stems to bring about expansion; and

re-conditioning the stems after heating.

Also disclosed is a method of producing expanded tobacco stems for tobacco cut filler, the method comprising the steps of:

providing rolled tobacco stems having a rolled thickness of 0.1 to 0.5 mm;

conditioning the rolled stems to increase the moisture content;

cutting the conditioned tobacco stems;

impregnating the cut tobacco stems with liquid carbon dioxide;

heating the impregnated stems to bring about expansion; and

re-conditioning the stems after heating to increase the moisture content.

Methods according to the invention may be carried out on any type of tobacco stems, including, but not limited to, the stems from Burley tobacco, Virginia tobacco, Oriental tobacco or combinations thereof.

The term 'thickness' refers to the distance between an upper surface that has been contacted with a rolling apparatus (as described in more detail below) and a lower surface that has been contacted with a rolling apparatus. The thickness therefore corresponds to the dimension of the tobacco stems that is reduced in size during the rolling process, which is typically substantially transverse to the direction of movement of the tobacco stems through the rolling apparatus. The rolled thickness of an individual tobacco stem particle can be measured using a conventional measuring device under a microscope. The rolled thickness of an individual stem particle is taken at the point along the direction of cutting that yields the largest cross-sectional area.

It has surprisingly been found that subjecting tobacco stems to the treatment steps of the method of the present invention has a significant, positive effect on both the taste characteristics of the stems and the filling power. As a result of the rolling and expansion of the stems using liquid carbon dioxide, the tobacco stems have improved taste characteristics and after-taste and develop a more appealing taste and aroma. The expansion of the stems reduces the density of the stem material so that the burning characteristics of the cut filler incorporating the stem are optimised. The positive effects of the method of the present invention are particularly apparent for Burley tobacco stems.

As a result of these positive effects on the tobacco stems from the expansion method of the present invention, the tobacco stems can be used as an acceptable component of cut filler. The expanded tobacco stems can also be added to cut filler in significantly greater proportions than previously possible, thereby improving the exploitation of the tobacco material. The use of the