Patent claims

1. A method for shaping and sizing cellulosic plant material~~,~~ wherein a non-tobacco material or a material consisting to a substantial extent of a non-tobacco material, that comprises, particularly consists of small parts smaller than 1 mm, is fed to an extrusion process, wherein the ~~plant material is treated in at least one~~ extrusion process ~~which~~ includes compressing by means of an increase in pressure and temperature to bind the small parts to larger parts of a cellulosic plant material fed to the extrusion process, and mechanically processing the material at ~~an~~ a shearing gap outlet of an extruder (1).

2. The method according to claim 1, wherein instantaneous-decompression drying is performed at the outlet of the extruder (1).

3. The method according to claim 1 or 2, wherein additional and/or external binders are not added to the plant material in order to bind small parts of plant material to each other or to larger parts.

4. The method according to any one of claims 1 to 3, wherein the extrusion process is embodied substantially in one stage.

5. The method according to any one of claims 1 to 4, wherein the extrusion process is performed in the absence of oxygen.

6. The method according to any one of claims 1 to 5, wherein the extrusion process is embodied to be sterilising and is in particular performed on the plant material at sterilising temperatures at at least one processing point.

7. The method according to any one of claims 1 to 6, wherein the material is restructured by specialised extrusions with integrated conditioning, wherein the material is in particular set to a predetermined moisture.

8. The method according to any one of claims 1 to 7, wherein formulas of texturising and flavourant plant materials are processed.

9. The method according to any one of claims 1 to 8, wherein one or more of the following materials is/are processed:

- texturising materials such as fractions of cereals, in particular wheat, maize, oat and soya bran; wheat fibre meal, pea fibre meal; oat flakes, barley flakes and fractions of natural stimulant plants such as tea stem particles which exhibit a high fibrous content (cellulose);
- flavourant materials such as food starches or leaf fractions;
- herb and/or spice fractions such as clove waste and hops.

10. The method according to any one of claims 1 to 9, wherein the cellulosic plant material ~~is a non-tobacco material or~~ consists of a non-tobacco material to ~~a substantial extent, in particular~~ more than 10%, specifically more than 30%, in particular more than 50%.

11. The method according to any one of claims 1 to 10, wherein the cellulosic plant material primarily comprises a coarse material which in particular exhibits a particle size of more than 2 mm.

12. The method according to any one of claims 1 to 11, which is performed without adding structuring materials.

13. The method according to any one of claims 1 to 12, wherein the plant material to be processed is exposed to an increase in temperature which results from supplying external heat and/or generating mechanical pressure.

14. The method according to any one of claims 1 to 13, wherein the material to be processed is a pre-conditioned material.

15. The method according to any one of claims 1 to 14, wherein the product which is created by processing the plant material to be processed is an irregularly shaped material, in particular a fibrous material.

16. The use of an extrusion process which includes compressing by means of an increase in pressure and temperature and mechanically processing the material at ~~an~~a shearing gap outlet of an extruder (1), for treating cellulosic plant material in order to shape and size the plant material~~,~~, wherein a non-tobacco material or a material consisting to a substantial extent of a non-tobacco material, that comprises, particularly consists of small parts smaller than 1 mm, is fed to the extrusion process, so as to bind the small parts to larger parts of a cellulosic plant material fed to the extrusion process.

17. The use in accordance with claim 16, comprising the method features which are cited in claims 2 to 15.

18. The use of a filling screw extruder (1) comprising a shearing gap outlet for treating cellulosic plant material in order to shape and size the plant material, wherein a non-tobacco material or a material consisting to a substantial extent of a non-tobacco material, that comprises, particularly consists of small parts smaller than 1 mm, is fed to the extruder, so as to bind the small parts to larger parts of a cellulosic plant material fed to the extrusion process.