Histological study of relationship between tissue pattern and root-shape in *Panax ginseng* C.A. Meyer

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The 5 years old roots of Korean ginseng was examined with a light microscopy in relation to tissue pattern and root-shape. Although the root-shape has long been used in ginseng markets as a very important quality criterion, the relationship between tissue composition and shape was not investigated at all. The transverse and longitudinal sections of tap root show that the composition of tissue is mainly different in number and size of cells in pith and cortex region depending upon their weight or diameter of roots. However, those of periderm and vascular cambium are closely similar in all of roots. We also found that diaminobezidine and iodine was positively stained in a large number of starch grains of cortex and pith. Since these cells contain more nutrient granules than the other cells of periderm and vascular cambium, it suggest that total cell number and size of pith is more influenced in diameter and weight of ginseng root.

Keywords : *Panax ginseng,* Histology, Root-shape, Tissue pattern, Cortex, Pith