

## **Maize aleurone; a model for development and a breeding target for biofortification**

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### **[Introduction]**

Maize endosperm is one of the major agricultural product in the world used for food, feed, fuels, and industrial materials. Manipulating endosperm composition has a great interest which could improve nutritional values or industrial utilities. Aleurone is the outer layer of the endosperm and has clear differences with starchy endosperm for its developmental processes, biological functions, and nutrition composition. The majority component of aleurone is protein instead of starch in starchy endosperm. It contains most of the vitamins and minerals of the whole kernel.

### **[Materials and Methods]**

We collected Korean landraces from National Agrobiodiversity Center, Republic of Korea and observed those aleurone layer numbers. We also quantified the amount of minerals in whole kernels to detect relationships between the aleurone layer number and the mineral amount which is known to be mostly accumulated in aleurone.

### **[Results and Discussions]**

The purpose of this study is to investigate various aleurone phenotypes of maize landraces in Korea and to inspect whether the aleurone could be a target tissue for improving nutritional values of maize. Such improvement would be beneficial for various purposes of maize consumption.

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