

Optimum Harvesting Time on Dark Purple Skin Peanut “Heuksaeng”

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[Introduction]

Peanut is grown worldwide from the tropics to temperate zones primarily as an oilseed crop (38-54%) and protein source (25-30%). Recently, functional compounds of peanut get more interests. We have firstly developed the dark purple skin peanut cultivar “Heuksaeng” with the anthocyanin. Anthocyanin pigments and associated flavonoids have demonstrated an ability to protect against a myriad of human diseases. But we still need to control the weak points by cultivation method, such as skin discoloration and viviparous sprouting etc.

[Materials and Methods]

Peanut cultivar “Heuksaeng” was used in this experiment. We have harvested the peanut 5 times by every 10 days from 70 days after flower beginning (DAF) to 110 DAF. Seed quality is analyzed according to observational skin color; best quality(BQ) with full color, middle quality(MQ) with discoloring and low quality(LQ) with immature or discolored noneconomic seed. The cultural method and growth characteristics were followed to the standard method of Rural Development Administration.

[Results and Discussions]

This experiment was conducted to evaluate the optimum harvesting time of cultivar “Heuksaeng” with anthocyanin contained purple skin. The best quality(BQ.) skin rate have decreased according to increasing DAF. The ratio of BQ showed 94.7 % in 70 DAF, 89.6 % in 80 DAF, 76.5 % in 90 DAF, 48.5% in 100 DAF and 15.3% in DAF. The health grains until 80 DAF kept full dark purple color and the grains from 90 DAF began to discolor. This means the peanut skin is fastly deteriorated in late harvesting period. Economically, grain yield that are included BQ and MQ had 275 kg/10a in 70 DAF, 353 kg in 80 DAF, 350 kg in 90 DAF, 292 kg in 100 DAF and 191.8 kg in 110 DAF. The yield from 85 DAF showed the highest which was estimated from the regression. Pod viviparous sprout, another deteriorating fact of peanut quality, also increased as 1.4 pod/plant in 90 DAF, 3.5 pod in 100 DAF and 6.9 pod in 110 DAF. Considering the skin color, viviparous sprout, and grain yield, we resulted in 85 DAF as the optimum time to harvest the high quality of cultivar “Heuksaeng”.

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