Energy storage substances in peanut seeds

Do storage lipids accumulate in peanut seed?
Storage lipids are known to accumulatein peanut seed. Our present study shows that various types of lipids already exist at the early stage of seed development,and lipid content changes with time,indicating that the lipid network map has been established at the early stage of development.

Why are amino acids stored in peanut seed?
This corresponds to the natural development and addition of seed storage proteins,which are the primary format in which amino acids are stored in the peanut seed as a nutritional store for the growing embryo upon germination,and the structures of these proteins are discussed in detail later.

Do peanut seeds reach maximum physiological quality?
In fields cultivated for seed production,the use of the most seeds harvested is beneficial. However,the acquisition pattern of physiological quality in peanut seeds has not yet been fully investigated. Therefore,it is not clearwhich specific maturity class seeds reach maximum physiological quality.

Why is lipid metabolism important in peanut seeds?
Therefore,understanding lipid metabolism in peanut seeds is crucial for human health and nutritional value. Lipids are a vast group of naturally occurring molecules that are insoluble in water but soluble in nonpolar solvents. They store energy,act as structural components of cell membranes,and signal biological processes.

Why is seed quality important in peanut production?
Seed is one of the most expensive costs in peanut (Arachis hypogaea L.) production,and the use of high-quality seed is important to provide the greatest yield potential. Physiological seed quality,represented by a combination of germination,vigor,desiccation tolerance,and longevity,is progressively acquired during seed formation.

Which lipid molecule is most abundant in peanut seeds?
Our results showed that TAGwas the most abundant lipid molecule in peanut seeds and therefore played a crucial role in germination and growth. Here,a novel type of TAG,HO-TAG,consisting of 19 subtypes,was found in peanut seeds.

Seed Treatment: Consider whether the seeds have been treated with fungicides or other treatments. Treated seeds help protect the young plants from soilborne diseases and pests. However, if you prefer organic ...

Peanuts, Arachis hypogaea, are one of the most widely consumed legume globally due to its nutrition, taste and affordability. Peanuts are protein and energy-rich and have been utilized worldwide...

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Pod-filling is an important stage of peanut (Arachis hypogaea) seed development. It is partially controlled by genetic factors, as cultivars considerably vary in pod-filling potential. Here, a ...

Peanut (Arachis hypogaea L.) is one of the most important oil crops in the world due to its lipid-rich seeds. Lipid accumulation and degradation play crucial roles in peanut seed maturation ...

Protein can provide energy if necessary, but starch and lipid are more efficient energy storage molecules. Storing seeds. ... In extreme situations, such as that maintained at the National Seed Storage Laboratory in Fort ...

kGy) and storage (in sealed in 40µ pp bags) period upto 6 months on peanut (GG-20) seed and its oil quality. Physico-chemical and sensory attributes of the selected oilseeds were evaluated ...

The objectives of this study were (1) to identify the acquisition pattern for the physiological components of seed quality and determine the timing in which maximum physiological quality is achieved during peanut seed ...

Therefore, there is an urgent need for an up-to-date review on the rational design and fabrication of biomass-based functional carbon materials (BFCs) with multi-dimension ...

Thus, the present chapter focuses on the peanut seed storage proteins composi-tion, nutritional value, bioactive components, functional properties, its usage and methods to reduce allergenicity.

They not only provide heat energy and essential fatty acids for human beings but also endow food with a ... No olefin substances were detected in peanut oil. Acidic substances were not ...

Seed germination and vigor index. To determine the optimal cultivation conditions for peanut (Arachis hypogaea L.), 50 seeds of almost equal size (2.35 × 0.95 × 0.75 cm) were ...

In order to reduce the peanut seed deterioration and improve seed quality during storage a laboratory experiments were conducted. Seeds were subjected to different storage ...

Physical damage can be caused by dark discoloration and a decrease in peanut hardness during storage. Increased rates of respiration, off-flavor, and rancidity are chemical changes that cause a...

TAG is a significant energy storage molecule in plant biosynthesis, which is essential for seed development and germination. Our results showed that TAG was the most abundant lipid ...

The peanut seeds treated by Viscozyme L. at a solid-to-liquid ratio of 1:4 (g/mL) and enzyme concentration of 1.35% at a hydrolysis temperature of 52 °C (90 min), resulted in ...

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