

HIGH OLEIC SOY FEED INGREDIENTS

Variation in Color and Particle Size

The below samples illustrate the differences in color among high oleic soybeans.



Roasting temperature, °F: 283
Roasting duration, min: 1.5
Steeping duration, min: 20



Roasting temperature, °F: 290
Roasting duration, min: 1.5
Steeping duration, min: 17.5



Roasting temperature, °F: 280
Roasting duration, min: Unknown
Steeping duration, min: 2-3

A separate sample set, than from above, illustrates the differences in particle size among high oleic soybeans.



Particle size, μm : 453
SD particle size, μm : 2.22



Particle size, μm : 1,619
SD particle size, μm : 2.27



Particle size, μm : 3,502
SD particle size, μm : 1.45

Ten Considerations When Incorporating High Oleic Soy into Dairy Cow Diets

1. Update ration formulation programs with lab analysis data for the high oleic soybeans in the diet. Today, there are not standard high oleic soybean numbers, whether raw or roasted, in CNCPS for DM, CP, or the total fatty acid profile.
2. Ideal feeding rate of roasted high oleic soybeans depends on a variety of factors, but a common range is 3 to 7 lbs as-fed in Holstein high-producing cow diets.
3. If soybeans are fed raw or undercooked, the benefits of a high quality bypass protein are missed.
4. Overheating and burning the soybeans damages the protein and reduces digestibility.
5. There is currently insufficient evidence to validate the available methods (PDI, ADIN, Ross MSPE) for estimating RUP in high-oleic soybeans. Determination of RUP may be more accurate when based on assays that provide degradation (kd) rates combined with estimated passage (kp) rate.
6. Because nutrient composition can vary with environmental conditions, maturity, and storage, nutritionists should routinely analyze high-oleic soybeans for DM, CP, total fatty acids and oleic acid composition. One of the protein indexes (16-h in vitro digestibility, Ross MSPE) may be used to monitor trends rather than as an absolute value.
7. If the soybean particle size is too fine, then the expanded surface area can reduce RUP due to higher ruminal digestion, thus reducing the RUP value gained through heating.
8. Feeding high oleic soybeans can replace some commercial fat supplements and might improve Income Over Feed Costs (IOFC).
9. If a dairy cow ration includes a moderate amount of fat, Energy Corrected Milk (ECM) can be improved with high oleic soybeans.
10. Continue to look for new research and share key learnings.



Roasted High Oleic Soy Essentials, All in One Spot

Scan to access news, resources and the latest research on high oleic soy in dairy cow diets.

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