

## Technical Service Bulletin

**Date:** 4/14/11

**Product Description:** AGGRAND Natural Fertilizers

**Subject:** Fertilizer Shelf Life and Proper Storage

### OBJECTIVE:

Provide AGGRAND Dealers and customers with information regarding the shelf life and proper storage and handling of AGGRAND natural fertilizers.

### ISSUES:

Several factors can influence the shelf life of AGGRAND natural fertilizers.

### RECOMMENDATIONS:

For best results, AGGRAND recommends the following:

1. Store AGGRAND natural fertilizers in a cool, clean and dry indoor area out of direct sunlight.
2. The ideal storage temperature is between 50°F and 80°F.
3. When storing drums or totes for extended periods of time, always keep them sealed tightly to prevent foreign material and moisture from entering. To avoid contamination from improper handling, be sure to wipe off tops and edges of containers before opening.
4. Extreme heat (above 100°F) or extreme cold (below 32°F) can affect liquid fertilizer stability and lead to product separation. Rapidly fluctuating temperatures can lead to water condensation and contamination within the container. Water contamination can promote microbial growth in the products.
5. Periodic agitation of product in storage is recommended to maintain best suspension and pour-ability at time of use.
6. Contact with the airspace in the head of containers can cause drying and caking of product. To minimize this issue, always keep containers sealed tightly when not in use.

Common signs of improper storage, contamination or shelf life concern may include the following:

1. Dried particulates within the fluid
2. Separation of the liquids and solids within the package
3. Bloating or swelling of the packaging

If the fluid and solid portions have separated and cannot be agitated back into a smooth pourable suspension, the shelf life of the product may have been exceeded. If the product has become unusable, it is advised to dispose of it properly.

### ESTIMATED AGGRAND PRODUCT SHELF LIFE:

Generally, under the ideal storage conditions listed above, AGGRAND product shelf life can be quite long. The following time frames are offered as a general guideline:

**Natural Liquid Fertilizer (NOF):** 2 years from date of purchase

**Natural Kelp and Sulfate of Potash (NKP):** 2 years from date of purchase

**Natural Liquid Bonemeal (NBM):** 2 years from date of purchase

**Natural Liquid Lime (NLL):** 1 year from date of purchase

This information is intended to be used as a general guideline and is not a binding performance measurement or contract for AGGRAND products.

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**Distribution:** Internal \_\_\_\_\_

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