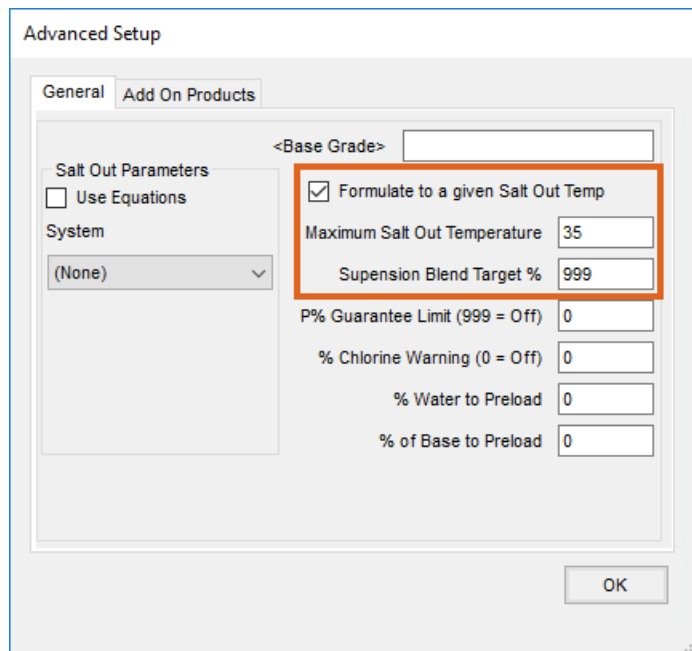


Suspension-Type Blends

Last Modified on 06/27/2024 3:24 pm CDT

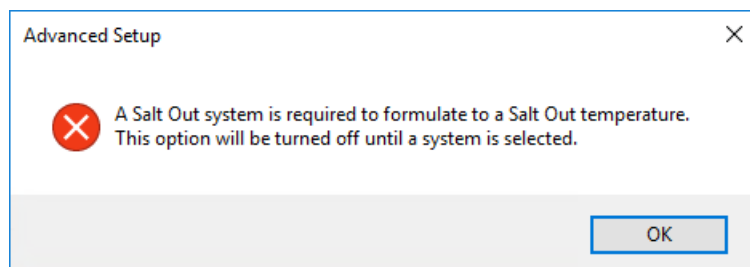
Method 1

When the *Formulate to a given Salt Out Temp* checkbox is selected when editing a Product Set at *Blending / Setup / Product Sets* under the **Advanced** button, the program will add water (if needed) to the blend to attain the salt out temperature manually entered. When using this option, the *Suspension Blend Target %* field should be set to 999 so the program does not try to fulfill both the salt out temperature and the suspension percentage, which could be mutually exclusive result sets.



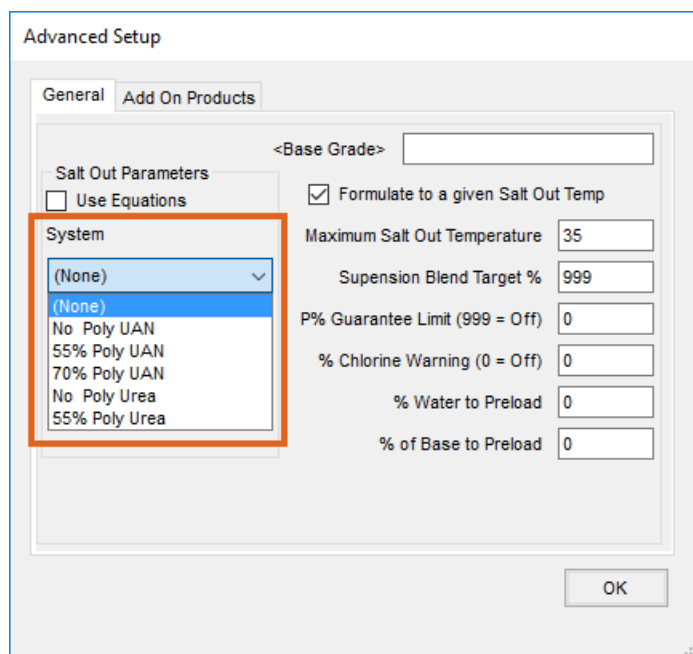
The screenshot shows the 'Advanced Setup' dialog box with the 'Add On Products' tab selected. The 'Salt Out Parameters' section is expanded, and the 'Formulate to a given Salt Out Temp' checkbox is checked. The 'Maximum Salt Out Temperature' is set to 35, and the 'Suspension Blend Target %' is set to 999. Other fields include 'P% Guarantee Limit (999 = Off)' set to 0, '% Chlorine Warning (0 = Off)' set to 0, '% Water to Preload' set to 0, and '% of Base to Preload' set to 0. The 'System' dropdown is set to '(None)'. An 'OK' button is visible at the bottom right.

After selecting **OK** with the setting described above, the message below appears.



The screenshot shows an error message dialog box titled 'Advanced Setup'. The message reads: 'A Salt Out system is required to formulate to a Salt Out temperature. This option will be turned off until a system is selected.' There is a red 'X' icon next to the message. An 'OK' button is located at the bottom right of the dialog.

This is referring to the *System* setting shown.



These systems use different calculation models for the various combinations of ingredients. It is important to select the system that best matches the operation.

- **No Poly UAN** – For solutions that contain Urea Ammonium Nitrate (UAN) solution and no ammonium polyphosphate solution.
- **55% Poly UAN** – For solutions that use standard quality polyphosphate solution and UAN solution as their primary ingredients.
- **70% Poly UAN** – For solutions that use higher quality polyphosphate solution with UAN solution as their primary ingredients.
- **No Poly Urea** – For solutions that use Urea solutions and no ammonium polyphosphate solution.
- **55% Poly Urea** – For solutions that use standard quality polyphosphate and Urea solution as their primary ingredients.
- **Base Grade** – This is a Product that can be pre-loaded. This inventory item must be listed in the Product Set and have the percentage filled out in order to preload. In order for this to show up on the Field Plan, there must be a *% of Base to Preload* figure other than zero. This Product will be listed at the top of the Blend Ticket (just under water if water is also preloaded) regardless of its Blend Order status in the list of Products.

Method 2

Set a *Suspension Blend Target %* and uncheck the option to *Formulate to a given Salt Out Temp*. This method attempts to formulate the N-P-K elements so the sum of the Product Analysis equals the percent entered.

Advanced Setup

General Add On Products

<Base Grade>

Salt Out Parameters

Use Equations

System

(None) ▾

Formulate to a given Salt Out Temp

Maximum Salt Out Temperature

Suspension Blend Target %

P% Guarantee Limit (999 = Off)

% Chlorine Warning (0 = Off)

% Water to Preload

% of Base to Preload

OK

ACID

Our data model uses information from the *Advanced Setup* window, the guaranteed analysis, and the fact that the Blend set is a Suspension-Type Blend to return the salt out temperature. When the blend is formulated so that the mix will not salt out under any normal conditions that would be encountered in an agricultural application environment, the program returns a salt out temp of *ACID*.

Factors Affecting the Calculated Salt Out Temperature

1. Increasing the quantity of water in the Product Set and decreasing the quantity of the fertilizer Products will usually decrease the salt out temperature and can even cause the salt out temperature to become negative.
2. Adding different Products in different quantities to the Product Set can change the salt out temperature. It may be helpful to experiment with the Product Sets to see how different changes to the Product Set can affect the salt out temperature.