
Users Guide to

Agvance Blending

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Intro to Agvance Blending

Overview

The Agvance Blending module is a full-featured formulation program that creates Dry or Liquid Fertilizer, Chemical, Suspension, and Feed blends. The documents produced from the Blending program display the correct scale units for the type of Blend being produced. Products from inventory are combined into Product Sets to be used when formulating a specific blend. Blends may be generated to fill a requested analysis, such as nutrient recommendations created in the Planning module; by directly requesting an amount of product at a specified rate per acre; or by specifying a total amount needed for a mini-bulk. The Planning and Blending modules formulate with set constraints on the maximum and minimum amounts of each nutrient on every product in the Product Set.

The Blending program can import Field Plans and Nutrient Recommendations saved to a grower's field file from the Agvance Planning module. Products, rates, and prices are available to be viewed and changed on the Blend Ticket screens for maximum flexibility. Blender capacity, number of batches per ticket, and the acres per batch can also be viewed and edited. A Blend Ticket showing scale stops for the blend operator and a Custom Application Sheet for the applicator may be printed when a blend ticket is created.

Blend Tickets import into invoices in Agvance Accounting without any re-entry of data. Blend Ticket information may also be saved to the field file, which contains a history of the products applied.

Installation

The complete suite of Agvance modules are installed via the web. When licensing an additional module, SSI will assist in activating the computers that are using the Blending module.

For details on installation, see the Instructions in the Hub manual.

Generating a Blend Ticket

Overview of the Blending Process

Agvance Blending offers quick setup for all kinds of blends, critical information, and the ability to easily edit blends on screen. Field Plans and Nutrient Recommendations created in the Agvance Planning module directly import to speed up the blending process. Landlord/Tenant split information from the Field file, acres, and field legal descriptions default from the preset field data. Products, rates, prices and batch information may be edited from the Blend Ticket screens.

Note: Careful preparation in setting up products, blend ratios, prices, discounts, Product Sets, and field splits are critical steps in generating correct blends. Please review each of these areas before attempting to process a blend.

For information on discounts, see *Hub / Setup / Payment Terms* in the Hub manual. For more on field splits, see *Field Data / Field – Bill Splits*, also in the Hub manual.

For more information on this, see “[Product Sets](#)” on page 50.

Setup for Formulation and Pricing

Setup for the Agvance Blending and Planning programs is relatively the same. Inventory departments must indicate if the products contained within them are nutrient contributors and have the correct scale settings. Each product to be used in Planning and Blending must be set up in the Product file from the Hub or Accounting, with complete information on the *Blend Setup* and *Pricing* tabs. These products are then grouped into logical Product Sets for the program to choose or formulate from when creating a blend.

Inventory Items

Products used to fulfill a requested analysis or nutrient recommendation must be in an inventory department flagged as a *Nutrient Contributor*. Completion of the products’ *Blend Setup* tab is also required, which includes the rate/acre and blend units, nutrient value, % water (if you rely on this information), % clay, blend ratios and other important factors.

The program uses a Least Cost Method of formulating the products to be used and quantities of each to satisfy the requested analysis. The user decides which cost (average, last, replacement cost, list price or any of the pricing levels) the “least cost” decisions are based upon. It is imperative that the cost, list, or pricing level chosen at

the Blend Ticket *General* tab is accurately set for all the fertilizer products involved in formulation.

For more details on products, blend ratios, and pricing, see “Inventory Products” in the Hub section of the manual.

Creating Product Sets

Note: *Chemicals and services should not be included in the product grid of the Product Set. That product grid is for fertilizer items only.*

Creating Product Sets is an important part of the Blending setup process. This involves grouping fertilizer or other products (i.e. water, clay, or dry filler) typically used when filling a requested analysis or nutrient recommendation. For example, when creating a fertilizer blend, two or three dry Product Sets may exist where the nitrogen source is different because of customer preference or product prices. There might also be one Product Set with a pre-mixed micronutrient product and others with the micronutrient products listed individually.

Product Sets are location specific, therefore they can be setup to pull inventory from different locations. The location where the Product Set will be used must be specified in the setup. When creating a Blend Ticket, only Product Sets for the default location are available for selection. Also if a user is restricted from a location’s products, product sets assigned to the restricted locations are not available.

Within each Product Set, the products to use are selected when creating a blend by marking the product as *Active*. Each nutrient in the formulation may be flagged to indicate if it is allowed to run over the requested amount in order to achieve a specific analysis. The products in the Product Set may also have constraints placed on them as to the amount of a given nutrient they are allowed to contribute to the blend. This can also be used to set a minimum and/or maximum amount of a nutrient a product will supply.

Important information about the user’s blending system is entered here and can be different for each Product Set.

The BO, or Blending Order, determines the order in which the products appear on the Blend Ticket. This reflects the order the products are to be loaded.

Advanced settings related to suspension blends may also be set at the Product Set level. For more information on this, see “[Product Sets](#)” on page 50.

Location Preferences

Several preference screens in Blending allow different aspects of the program to be customized. These preference settings may be edited in either the Blending module or Planning module.

Important information about the blending system is entered here. Scale settings, which determine the accuracy of product weights and how the Blend Ticket handles the department settings, are defined here.

The cost basis for quotes, unhidden blend fee departments, and the product discount level to apply may be selected. The blend ticket numbering may also be set to number from a company or location level, and the starting ticket number is designated here.

For more detail on these preferences see “[Location Preferences](#)” on page 56.

Generating Blend Tickets

Generating the Blend Ticket is done on-screen by filling in the required information. Some types of information like nutrient recommendations and Field Plans may be imported from other Agvance modules. This is helpful, but not required, for the Blending program to work. Information about the field may be entered manually or imported from the field file. The method of application, crop type, and any comments specific to the blend are optional. There are indicators to be marked if the material for this job is “Loaded” and if the material is in ‘mini-bulk’ or will be ‘custom applied.’ The term “Loaded” means the ticket has relieved inventory.

The *Formulate By (Lbs of Plant Food or Guaranteed Analysis)*, *Product Set*, *Optimize By*, and *Price By* default in from the previous ticket created but may be overridden. The *Product Set* used for the formulation may also be viewed or edited.

Additional products may be added to the blend and rates adjusted to the desired quantity. The amount of material to be blended, dollars per acre, and total dollars are available to be viewed.

Blend Tickets may print showing scale stops or settings for the blend operator to follow when actually making the blend. All batch information is summarized and printed on a Consolidated Blend Ticket for record keeping. Similarly, a Custom Application Sheet may be printed for the operator completing the application.

The Import Blend feature allows starting with existing blends. It may be helpful to set up templates for common blends or chemical programs. These templates can be imported, saving time for repetitive orders.

Least Cost Formulation

Least cost formulation uses a search algorithm to examine all available combinations of products in the selected Product Set to find the least expensive mix that meets all the specific and implied restrictions. Least cost formulation finds product combinations that ‘over-formulate’ individual nutrients in order to take advantage of less expensive ingredients. Therefore, the *Allow Nutrient To Run-Over* settings at the Product Set are very important.

Agvance requires consistent costing and pricing information to effectively use least cost formulation. Least cost search is based on any cost or price level, but every product used in a blend set must be accurately priced at the selected cost or list level. A missing cost or price makes a product overly attractive to the search algorithm and leads to non-optimal results.

If requested nutrient components are not represented in the chosen Product Set, a warning appears stating the request could not be filled. Least cost always searches for an exact match of the requested nutrients, subject to the restrictions in place at the time. If no exact match is possible, the program formulates a blend as close to the request as possible with the least number of nutrients running over or under that request. For this reason, it is important that Product Sets be as complete as possible.

Formulate to Analysis

Formulating to analysis is the quickest way to generate a blend. The analysis requested is entered in such as ‘160-70-70-5S.’ The Blending program formulates products to meet the nutrient goal based on the selected Product Set.

The analysis requested might be a specific request from the customer or the user’s preference based on known field conditions. Nutrient recommendations generated in

Planning and saved to the field file or those downloaded from a soil lab and saved may also be used to formulate an analysis.

The analysis can be entered in one of two ways:

Lbs of Plant Food: This is ‘pounds of nutrient per acre.’ For a liquid blend, the % *Water*, *Water Rate/Acre*, or *Minimum Gal/Acre* entered at the Product Set determines the amount of water used. A suspension type Product Set gives a warning if the requested analysis will exceed the suspension blend target %. When the blend is set to a given salt out temperature, the warning asks if water is to be added to lower the sum of the guaranteed analysis to be less than this suspension target %.

Guaranteed Analysis: This is ‘pounds of nutrient per 100 Lbs of requested blend’ of product. When using guaranteed analysis, the program automatically adds water or dry filler to reach the desired analysis. If formulating by Tons, the Lbs of Analysis defaults to 2000 Lbs/Ton. If a filler product is not used, the requested analysis may not be met.

Utilizing a Field Plan

Preseason Field Plans created in Agvance Planning may be imported directly into Blending. Agvance Planning is very similar to Blending, except it does not generate Blend Tickets. Plans are specific as to customers, fields, products, rates, and prices and already represent formulated products when imported.

The ability to import detailed Field Plans created in the off-season can speed up the blending process in the busy season. Field Plans may be imported, viewed, edited if necessary, and used to quickly generate a Blend Ticket.

Direct Request

Sometimes products are directly requested when a blend operator or customer wants to target a certain amount of product per acre for application or customer ‘load out.’ To make a direct request, bypass the formulation step and enter individual products directly on the *Products* tab. Remember to make sure the acres and an appropriate Product Set are filled out on the *General* tab. This method is also used to create Blend Tickets for chemicals and water. The typical entry order for items is fertilizer, chemicals, and then services. The only restriction on entry order is an Analysis item must be the first item on the list for fertilizer mixes. Analysis and non-analysis items may be in any order after the first line.

Rate/Acre

At the *Products* tab, a specific product rate per acre or rate per ton may be requested for the product. This method assumes the exact product and rate desired for the blend is known. After entering the Rate/Acre, to calculate the total amount of product needed, click the **ReCalc using Rate/Acre** button. Optionally, enter the total or blended amount of a product and have this ‘back figure’ the rate per acre of the product by clicking the **Recalc using Blended** button.

Chemical Load Out

Direct product requests might also be made when ‘loading out’ a customer for delivery of one particular product or chemical mix with water rather than formulating a blend. This is often the case when a customer picks up bulk chemicals or fertilizer. To process a customer pickup in Blending, add a field called ‘1Pickup’ or ‘All’. This field can be defaulted to one acre. Because the blend is set up as being

for one acre, the total amount of product to be loaded is entered in the Rating units, Total Product, or Total Blended units.

Edit to Actual Product Loaded

While the Blend Ticket represents the amount of product ‘planned’ for a batch or load, the ‘actual’ result is usually over or under the ticket amount. This difference can affect the accuracy of inventory, the customer invoice, and profit reports. *Edit to Actual Scale* is used when trucks are reweighed after the product is blended, ensuring maximum inventory accuracy.

Edit to Actual compares the actual total weight to the original Blend Ticket weight and adjusts the analysis items’ inventory quantities accordingly. The program prorates product quantities up or down depending on their percentage by weight of participation in the formulated product.

Note: Only those products marked as being analysis contributors by their scale setting are affected by this change along with blend fee items. Chemicals and other add-ons are not affected.

For more information on this function, see “[Edit to Actual Scale](#)” on page 31.

Splitting Out Existing Blend Tickets

Combining and/or splitting out of existing Blend Tickets allows splitting out one or more Blend Tickets to associate the correct quantity with each field.

For example, the original blend document is used to load a truck to get the product to the fields. Once the applicator is finished and determines the correct acres to bill for each field, a split out of the original Blend Tickets can be performed to prorate material to individual fields for the same customer or even different customers. The products on the Blend Ticket are used at the rate shown on the original ticket and multiplied by the new acres to get the new total product. It is recommended this be done after the ticket is loaded.

For more information about the procedure, see “[Combine and Split Out Blend Ticket](#)” on page 38.

Related Blending Topics

Interfacing with Automated Blending Equipment

Agvance Blending interfaces with Kahler, Junge™, Murray, Ranco, and Yargus™ automated blend systems. The level of interface available depends on the age and series of the particular blender.

With newer Kahler, Junge, and Yargus systems and the Windows® version of Murray, a Blend Ticket is sent to the blender and once finished an ‘actual’ ticket is returned to Agvance for billing without re-entry of data.

For Ranco systems, the Blend program prints the ‘control settings’ on the Blend Ticket for the blend operator.

For the Digital Ranco system, the program generates the Blend Ticket and operates the Ranco blender. When the blend is finished an ‘actual’ ticket is returned to Agvance for billing without re-entry of data.

Please contact SSI to discuss interfacing Agvance Blending with an automated blend system.

For technical details on interfacing with one of these systems, see “[Automated Blender Interfaces](#)” on page 86.

Chemical Compliance Interface

The Blending module can utilize an optional chemical agent database to print required HAZMAT, WPS or SDS documents as needed. For more information, call SSI.

Interfacing to Agvance Accounting

Loaded Blend Tickets containing customer, field, landlord/tenant splits, products, rates, and prices can be imported directly into the Agvance Accounting module without re-entry of data. Multiple Blend Tickets may be combined into one invoice. The integration of the Agvance Blending and Accounting modules streamlines the billing process and inventory tracking and reduces errors from re-entry of data.

Interfacing with Kwik Tag®

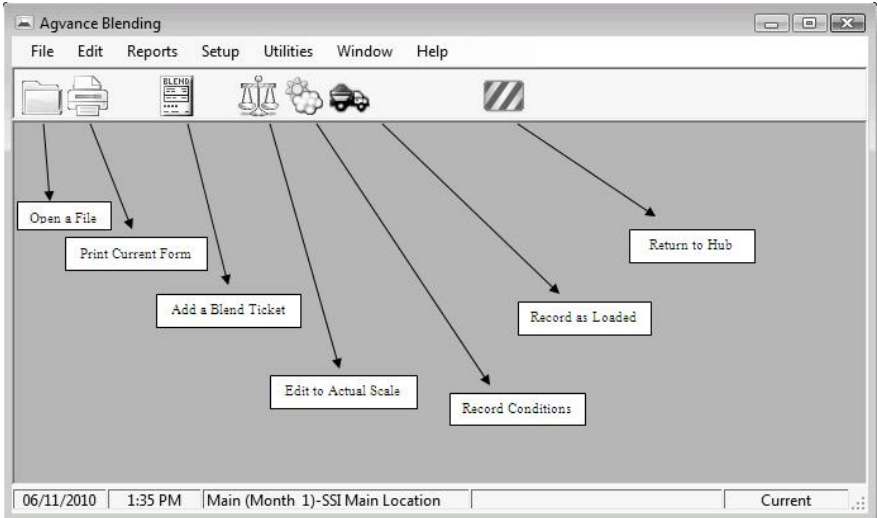
Companies with the Kwik Tag add-on can manage a variety of documents associated with Blend Tickets. For example, signed Custom Application sheets may be scanned into Kwik Tag, and “tagged” to the appropriate Blend Ticket. For more information about this add-on, contact SSI.

Menu Selections

Overview of Menu Options

The Agvance Blending opening screen allows choosing from menu selections across the top or ‘Shortcut’ buttons located below the menu. Shortcuts are available for the most common blending functions. Hovering the mouse pointer over each button displays the shortcut’s function.

Individual Menu Options are explained in detail in the following pages.



File / Open / Blend Ticket

Blend Tickets are generated for a customer’s field. A field must exist for the customer before a Blend Ticket may be created. Fields can be added one at a time at the *Hub / File / Open / Fields* or a generic field can be added for each customer at the *Hub / Utilities / Add Fields* menu selection.



There are many actions initiated from this screen. Each of the functions are described below. Some of the options have corresponding shortcut buttons which are shown in the margins.

Only customers who have existing fields setup are displayed in the *Select a Blend Ticket* window. Existing tickets for a field are shown in the grid. The grid displays

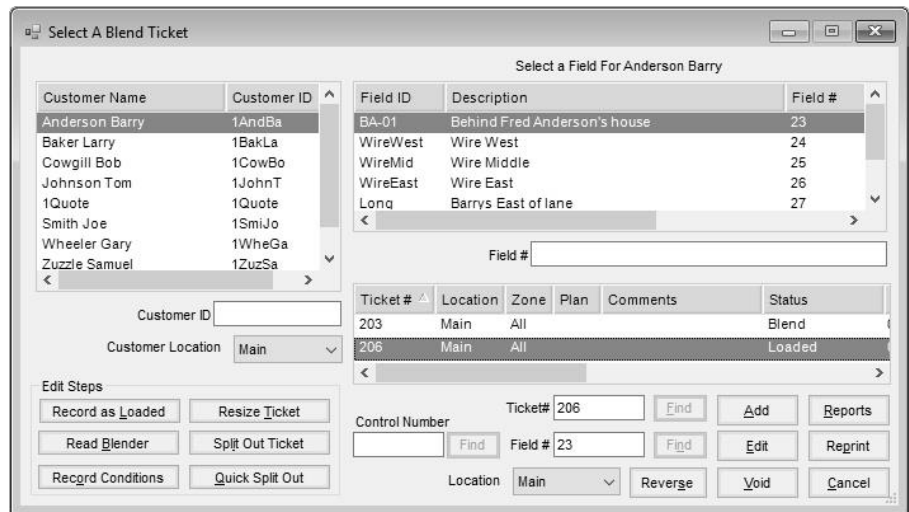
relevant information about those tickets, including Ticket number, Location, Dates, Status, Added by User, Last Edited by User, etc.

Add Button



*Add a Blend Ticket
Shortcut button*

Using the **Add a Blend Ticket** shortcut, at the *Select a Field* window, select the field for the Blend Ticket being added. Alternately, tickets may be added from *File / Open / Blend Ticket*. The *Select a Blend Ticket* window appears where the field is selected, and then click the **Add** button.



After selecting the field, the split arrangement displays for the selected field. The field list for the customer also displays with the selected field. A checkmark indicates the field will be included on the ticket. The field list may be sorted by clicking on a column heading. Select other fields to include on the Blend Ticket by checking the box for the field. The total acres for the Blend Ticket are the sum of the acres of the selected fields. The field's acres default from the field profile.

Select a Field

<By Field> BA-01 Behind Fred Anderson's house

	<Customer Name>	S-1	S-2	S-3	Bill To	Pest Exp.
1	▶ Barry Anderson	50.0000	60.0000	100.0000	Barry Anderso...	12/30/2017
2	Bob Cowgill	50.0000	40.0000	0.0000		

	Field ID	Field #/	Description	Acres
1	▶ <input checked="" type="checkbox"/> BA-01	23	Behind Fred Anderson's house	97.980
2	<input type="checkbox"/> East	28	Barrys East of Waterway	81.010
3	<input type="checkbox"/> Long	27	Barrys East of lane	33.710
4	<input type="checkbox"/> WireEast	26	Wire East	60.570
5	<input type="checkbox"/> WireMid	25	Wire Middle	100.690
6	<input type="checkbox"/> WireWest	24	Wire West	65.590

Select Location OK Cancel

Blend Ticket – General

This screen holds the variables necessary to formulate product using one of the pre-defined inventory Product Sets.

Add Blend Ticket # 214

General Products Prices Blend

Customer ID 1AndBa ? View Maps Zone All Crop Corn Ordered Date 07/15/2015

Field ID BA-01 ? Plan Placement Broadcast Loaded Date / /

Crop Chemistry

<Billing Notes>

<Quantity> 97.980 Acres Product Set Basic Dry ?

Apply New Acres Optimize By Average Cost Loaded Custom Applied

Import Blend Price By Products Respray Repacked

Registration # VRT Mini Bulk

<N> 9.00 <P> 23.00 <K> 30.00 <S> 0.000 xx <Ca> <Mg> <Zn> <Fe> <Mn> <Cu> B

Formulate By

Lbs of Plant Food Start With Products

Guaranteed Analysis Load Nut Recs ?

Lbs of Analysis 100

Gal of Analysis

Formulate

View Analysis Show Splits Additional Info... Edit to Actual Capture Blender Save Cancel

Print on Save

Customer ID/Field ID – defaults from the field selection screen. Clicking the Question Mark buttons provides additional details about the customer or field shown. To view file attachments added to the field in the Hub, access the *View Field Information* window by clicking the Question Mark button by the Field ID and click the **Attachments** button.

View Maps – allows viewing, customizing the view and printing full page maps created from the Agvance Mapping module.

Zone – defaults to ‘All.’ If the field is set up with management zones in the Agvance Planning module, a Blend Ticket for a particular zone may be generated.

Plan – if a Field Plan has been created in Agvance Planning, it may be imported into the ticket only while in the add mode of the ticket by selecting the appropriate plan letter from the drop-down. If a plan exists for the field, the drop-down box displays in red to alert that a plan exists. To assist in the selection of a plan, specific information is provided in the drop-down including Plan letter, creation date of the Plan, location, and billing notes. Plans may also be imported by clicking the **Import Blend** button.

Crop Chemistry – if applicable, select a crop chemistry for this Blend Ticket.

Crop – select from the list or manually enter the crop. The list of available crops is maintained at *Hub / Setup / Crop Maintenance* or in the Planning module at *Planning / Setup / Crop Maintenance*. The selected crop will be associated with each product on the final Blend Ticket and displays on a fertilizer tag crop warning if one is required for the state. If a crop is selected from the drop-down list on the *General* tab after the products are entered on the *Products* tab, the crop code is changed on each product line to the newly selected crop. If the crop is manually entered in this area, the crop code on each product line is not automatically updated, but may be manually changed.

Placement – the method in which the product is applied (broadcast, sprayed, knifed, etc.). The list of placements is maintained at *Setup / Placement* in Planning and Blending.

Ordered Date – defaults to the system date, but may be edited.

Loaded Date – enter the date the ticket was loaded. If a ticket is marked *Loaded* and the loaded date is blank, the date is set to the system date. When a ticket is imported into Accounting, the import date is controlled by the *Import from Tickets Date* preference set in *Accounting / Setup / Location Preferences*.

Time – defaults to the system time when the ticket is added, but may be edited.

Billing Notes – these comments print on the Consolidated Blend Ticket and follow through to the Invoice in Agvance Accounting. To add comments to the list in the drop-down list for future use, double-click on *<Billing Notes>* and press the **Add** button. One time comments for the Blend Ticket may be manually entered as well. Comments may be up to 80 characters.

Quantity – indicate the number of acres, tons, hectares, tonnes, or 1000 SqFt for the blend formulation. The quantity defaults from the field file. Double-clicking on the *Quantity* label allows selecting information by Crop Zone.

Apply New Acres – if the number of acres are edited, this button must be used to apply the new acres to the Blend Ticket.

Import Blend – provides access to existing Agvance Blends and Plans. When using the Junge® Blender System which is setup in the current

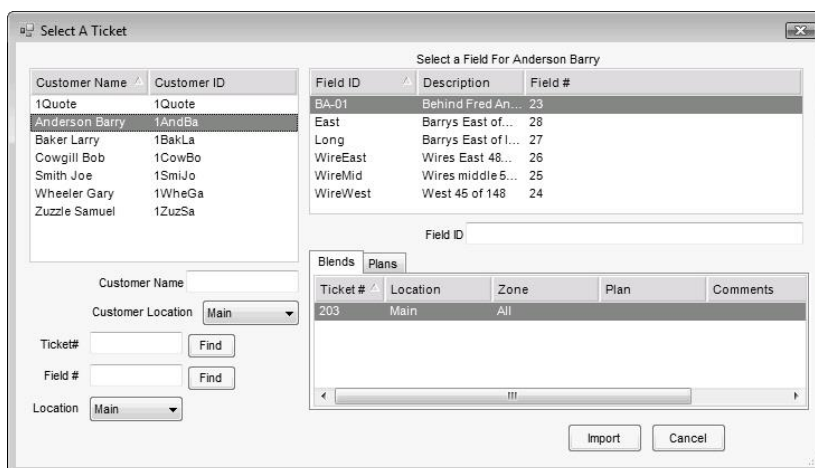
Note: *The ability to filter for a crop on reports is limited to only those crops that are setup, not the ones that are typed in.*

Product Set, those blends are also available at this window. The *Import Blend* window displays those transactions available to be imported into this Blend Ticket as a starting point. The original document remains unchanged and may be imported repeatedly. This makes it possible to store the most common blend scenarios as “templates.”

Important: Pricing from the imported transaction is not retained. If pricing from the imported plan is needed, select the Plan from the drop-down list box on the General tab.

When importing a blend, the *Select a Ticket* screen defaults to the field of the current Blend Ticket but a Blend or Plan from another grower/field may optionally be imported. Right-clicking on the existing Blend or Plan displays the transaction details. Products, rate/acre, requested analysis, *Crop*, *Placement*, *Billing notes*, *Product Set*, *Optimize By*, and *Price By* settings are brought in from the imported Plan or Blend. Pricing and acres are not.

New pricing is calculated just as it would be if the products were formulated or selected without the import function.



Note: A Product Set must be defined, even if the blend is a direct request. This is how the program knows the type of blend (dry, liquid, suspension, or feed). Depending on the type, some printout changes and warnings take place.

Product Set – indicate which of the pre-defined sets of inventory products to use to formulate the blend. Product Sets are defined at *Blend / Setup / Product Sets*. Only Product Sets for the default location are available. If a product set is selected that includes active products with limits set, a red background appears for the *Product Set* label. The Question Mark button associated with the Product Set on the *General* tab allows viewing and editing the selected set of inventory. For more on this, see “[Product Sets](#)” on page 50.

Optimize By – this is the pricing level the formulation uses to find the most economical blend for the company for the current formulation request. This option defaults from the user’s last saved Blend Ticket.

Price By – used for billing, this indicates how to invoice the products. It also determines how the information is printed on the Consolidated and Custom Application documents. This option defaults from the user’s last saved Blend Ticket. There are four choices:

Products – displays and prices by individual inventory item on the Invoice. If a manufactured formula is used, only the finished product amount and price is displayed on the Invoice. The raw materials may optionally be displayed on the Blend Ticket if *Split Out when Printing* is indicated in the product file under the **Manufactured Formula** button.

Blended Analysis – displays only the pounds/acre analysis, not the individual products on the invoice. The prices of the products are combined into a single line item.

Guaranteed Analysis – displays only the percentage analysis per 100 pounds on the invoice and combines the products used to formulate the blend.

Elements – invoicing by element requires each element (N, P, K, and S) to be set up as an inventory item with individual prices and identified in the *Hub / Setup / Location Preferences* tab. Both liquid and dry elemental-pricing products may optionally be set up. The Product Set determines which of these pricing items are used. When the invoice is generated, the guaranteed analysis is displayed along with the correct price per unit of the entire analysis. The individual prices set up for the elemental products are combined to calculate the analysis unit price.

Loaded – a loaded ticket affects inventory on the save of the blend. Formulating the same ticket without this option checked has no effect on inventory. Change the status of the ticket to ‘Loaded’ later by using the [Record as Loaded](#), [Edit to Actual Scale](#) or one of the Edit to Blender Scale options. The ticket may also be edited, mark the *Loaded* checkbox, and **Save**. Editing a “Loaded” Blend Ticket adjusts inventory accordingly. It also leaves an inventory trail to indicate the ticket was edited after it was loaded.

Mini Bulk– indicates if this is a mini bulk load.

Custom Applied – indicates if this load was custom applied. This status defaults from the last used setting. Checking the box negates all federal and state checking for restricted use products, and prints ‘Custom Applied’ on the Blend Ticket, Custom Application Sheet, and Consolidated Blend Sheet.

Repacked – indicates if the load is repackaged from another source. A Repackaged Report is available in *Accounting / Reports / Inventory / Inventory Status*.

Respray – indicates if the load is a respray of a field.

VRT – indicates if the ticket is to be variable rate applied. This flags certain blender interface files as VRT so the blend equipment knows the products are not to be blended but loaded into separate bins/tanks. When a VRT blend ticket is printed, one page prints for each product that has weight as calculated from the Unit Weight of the Product. Exceptions to this printing style are blends from Feed product sets and blends printed from the “Resize” form. Products setup as a Manufactured Formula that are set to split out on the blend all print on the same batch ticket which allows creating the finished good used in VRT.

Nutrient Requests – when formulating the blend to a requested analysis, type in the goal for each nutrient. N, P, and K. These are rounded with accuracy of two decimals. The User Defined nutrient is rounded to four decimals and the remaining nutrients are rounded to three decimals.

Note: Analysis items in the Product Set must have their chemical composition defined before the Set Nutrient Constraints function will work. The chemical composition of a product is set using the **Details** button found at Hub / File / Open / Products / Blend Setup tab.

Note: If the user selects either Tons or Tonnes for the Quantity Label, then the Formulate By will be locked into Guaranteed Analysis and the Lbs of Analysis will set to 2000 for Ton units and 2205 if Tonne units.

Note: Nutrient information may be edited for any of the selected products, but edited information is used only if the **Save Product Info** button is clicked before the **Done** button.

Set Nutrient Constraints – this formulation tool allows defining what percent of a particular nutrient is satisfied by a particular type of product. This advanced feature is found by double-clicking on any of the nutrient headings (<N>) except the User Defined heading.

For example, if requesting a 150-0-0 blend and no more than 75 pounds of N is to come from a Nitrate source of N, the Nitrate N should be set to ≤ 50 (75 is 50% of 150).

Formulate By – this controls how the program interprets the nutrient requests entered. This option defaults from the user's last saved Blend Ticket.

Lbs of Plant Food – this is pounds of nutrient per acre. Additional water will be added to suspension blends if the Maximum Salt Out Temperature has been exceeded, or if the total of the Guaranteed Analysis of all nutrients exceeds the Suspension Blend Target % defined in the Product Set, or if the Maximum P% on the Guaranteed Analysis has been exceeded.

Guaranteed Analysis – this is pounds of nutrient requested per 100 lbs. of product. When an analysis is entered, it is multiplied by the rate per acre then divided by 100 to arrive at the pounds of plant food required for the blend. Once the blend is formulated, either water or dry filler will be added, depending on the Product Set, to meet the correct rate per acre (or hectare, ton, tonne, 1000 sq ft) requested. This is what locks in the guaranteed analysis. This is also why the analysis entered may need to be adjusted to meet a requested rate/acre when not using filler in a dry Product Set.

Start With Products – this function allows starting with specified products, locks in the rate per acre or total amount in the blend in English units or in Kilograms, and has the program formulate the remaining nutrient values needed from other products used in the Product Set. For this reason, the products selected at this screen should not be in the Product Set (or at least need to be marked as inactive).

When selecting a product in the lower grid, information about the product displays in the top portion of the screen. Optionally, information may be changed related to the product's nutrient value or to its setup. In order for this edited information to be used when formulating, the **Save Product Info** button must be clicked before the **Done** button is clicked.

To input the total units of nitrogen needed from a product containing nitrogen, right-click in the *Rate/Acre* or *Total Quantity* column in the row where that product is located in the lower grid. This brings up a screen requesting the Nitrogen Amount in Pounds. Click the **OK** button to calculate back to the Rate/Acre or Total Quantity.

The following is an example of the *Start With Product* screen.

Start-With Product Information for Location Main

Product Information
Reclaim Product (6-10-0) Amount on Hand 0

Consistency Dry Rate/Acre Units Lbs

Inventory Units Lbs Blending Units Lbs

Product Density % Solid Material

Unit Weight Unit Weight % Water

Rate to Blending Ratio % Clay

Blend to Inventory Ratio

N	P	K	S	xx	Ca	Mg	Zn	Fe	Mn	Cu	B
6	10	0									

Use <Product Name> Quantity Unit

	Use	<Product Name>	Quantity	Unit
1	<input checked="" type="checkbox"/>	Reclaim Product (6-10-0)		Lbs

The grid to the left shows all of your START WITH products. To use one or more of them on this blend ticket click on the check box and type in a total quantity or rate/acre amount. Click on a row to edit/view that products information. Double click on a row to replace that start with product with a different product from your inventory.

Enter Quantity In
 Total Quantity
 Rate/Ton
 Quantity In Kilograms


Tip: Once a recommendation is loaded, it can be cleared by using the **Clear Nut Recs** button.

Load Nut Recs Button – if a nutrient recommendation was generated for this field (and zone), clicking the **Load Nut Recs** button brings in the nutrients requested in pounds of plant food. If the Planning module is used, clicking on the Question Mark (?) button displays the scenario used in generating these recommendations. Below this load button is a window displaying the type of recommendations pulled in (field average or zone average). If the recommendations were generated on a sample-by-sample basis, and Load Nut Recs is used, the recommendations used are based on the field average.

Formulate Button – using the Product Set, requested analysis, and other settings on the *General* tab, the program calculates which products and what rate is needed for this acreage. The system uses a Least Cost method of calculating which products and at what rate they are needed. When the formulating is complete, the *Products* tab displays.

If all the nutrient requests cannot be met, a message box displays listing those requirements not filled. It is possible a different Product Set would work better for the request, or the *Allow Nutrient to Run Over* checkmarks or *Set Limits* option on products at the Product Set level have constraints that cause the formulated products to fall short of the analysis requested.

Add Blend Ticket # 205

 Agvance Blending was unable to fill all of the nutrient request requirements. As such, some requests remain unfilled. The following is a list of those requirements that were not met.

	Requested	Returned
Phosphorus	30.00	0

You will need to relax one or more constraint(s) or limit(s) in order to complete this blend as requested.

Buttons

View Analysis – displays the Ordered analysis, the Blended analysis in Lbs/Acre, and the Guaranteed analysis. Everything is displayed

at the maximum decimal accuracy stored in the database. The settings in Blending or Planning at *Setup / Location Preferences* on the *Print Prefs* tab control the Guaranteed Analysis Decimal Accuracy on the printout. The different forms of Nitrogen used may be viewed by clicking on the <N> in the heading. This information is only valid if the Chemical Composition area of all Nitrogen contributing products has been filled out, which can be found at *Hub / File / Open / Products* and on the *Blend Setup* tab, by clicking the **Details** button.

Show Splits – displays the customers on the ticket, along with the billing splits, *Bill To* information and *Pesticide Expiration* date. The grid at the bottom of the window displays a list of the customer’s fields and acres. Fields involved in this blend are indicated by a checkmark.

Additional Info – user can optionally add information on this window which may later be used for tracking and reporting.

	<Applicator ID>	<Vehicle ID>	Acres
1			97.98
2			

	Permit #	Total Applicator Acres	Total Vehicle Acres
1		0	0
2			

Ship Via – enter method of shipment. The methods are defined at the *Hub / Setup / Ship Via*. If a Ship Via is selected and the Blend Ticket is imported into an Invoice in the Agvance Accounting module, the information displays on the invoice’s *Additional Info* tab.

Control Number – optional number that can be used to reference an internal control number (such as hand ticket numbers) associated with the sale.

Ship To – select from the customer's 'Ship To' addresses. This address prints along with a 'Bill To' address on the Consolidated Blend ticket.

Salesperson ID – defaults from the 'Ship To' address. If there is no *Ship To* address, the Salesperson ID defaults from the customer's setup. If there is more than one customer on the ticket, it defaults to the settings for the first customer listed. A salesperson may

optionally be selected from the drop-down list, which is maintained at *Hub / Setup / Sales Staff*.

Authorized Agent – person associated with the customer who is authorized to make decisions. Agents are set up in the customer file under **Contacts**.

County – defaults from the ‘Ship To’ address. If none is set up there, it defaults from the field, and then from the customer's setup. If there is more than one customer on the ticket, it defaults to the settings for the first person listed. Optionally, double-click to select the county from a list of all counties in the state.

Territory – defaults from the customer setup. Optional information to be used as needed.

Customer PO # – optional information that may be entered if the customer provides a PO number for the order.

Invoiced Units – if filled out, this is the number of units (generally acres) that prints in the upper right portion of the Invoice document. It defaults to the selected field's number of acres and cannot be edited on the *Additional Info* window.

Crop – displays the crop selected on the *General* tab. This cannot be edited from the *Additional Info* window.

Federal Permit – the non-expired federal permits of all customers associated with this Blend Ticket are available in the drop-down box. If only one customer has only one non-expired federal permit, it defaults into this box. When a Ship To address is selected, the default federal permit from that Ship To is selected if it has a valid date.

Custom Applied – defaults from the *General* tab. This checkmark cannot be edited from the *Additional Info* window.

Additional Comments – optionally enter more notes which will transfer to the invoice if the ticket is imported. The comments do not print on any blend documents, but do print on the invoice.

Applicator/Vehicle/Acre Grid

Applicator ID – optionally double-click to select applicators from those entered at *Hub / Setup / Applicators*. This also imports into the Invoice if using the Agvance Accounting module. The Vehicle/Applicator report, found either in *Blending / Reports / Blend Ticket Reports* or in *Accounting / Reports / Accounts Receivable / Sales*, summarizes acres by applicator or vehicle.

Vehicle ID – optionally double-click and select a vehicle from those entered at *Hub / Setup / Vehicles*. These also import into the Invoice if using the Agvance Accounting module.

Acres – enter the number of acres for each applicator involved. The acres on the *General* tab of the Blend Ticket default into the first row of the grid but may be edited.

Permit # – used for states where every sale of restricted use product must have a state/local permit associated with it. This permit prints in addition to the federal permit on the Invoice. If the products are setup as federal or state restricted, the

Note: *The applicator's number only prints if it is custom applied.*

program checks and either warns or disallows the sale if the appropriate valid (unexpired) federal and/or state/local permits do not exist. The degree to which this state/local permit is checked (Warn Only, Disallow, or Don't Check) is set at the *Hub / Setup / Company Preferences* on the *Customer* tab.

Record Field Conditions – right-clicking on the **Additional Info** button brings up the *Record Conditions* window where field and weather conditions at the time of application may be recorded. For more information, see “[Record Conditions](#)” on page 34.

Edit to Actual – this button opens the *Edit to Actual Scale* window. The details are explained fully in “[Edit to Actual Scale](#)” on page 31. When using Agvance Agronomy Scale Interface with Blend Ticket (VRT) type scale tickets to import into this Blend Ticket, right-click on the **Edit to Actual** button to open the *Import Scale Interface Records* window.

Actual Scale Weights are in Kilograms

Enter actual scale weights

Load	Gross	Tare	Net
1			
2			
3			
4			
5			
			Total

Blend Ticket: 214
 Total Analysis: 9800
 Total Lbs: 9800
 Total Acres: 97.98
 Grower ID: 1AndBa
 Field ID: BA-01

At the completion of this process, inventory levels will be adjusted and this ticket will be elevated to a 'Loaded' status for billing.

	Product	Old Weight	New Weight	U/Wght	Analy	Fee	Scale	Prorate
1	Dap (18-46-00)	4900.000		1	Yes	No	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2	Potash (0-0-60)	4900.000		1	Yes	No	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Scale Tickets for each product may be imported here. Click the select bar to the right of *UOM* to open the *Select Scale Tickets* window for the product in that row. Select each ticket that applies to the product in that row and click **Apply**. The sum of the net weights of the selected tickets populate the *Done* column for that product line item.

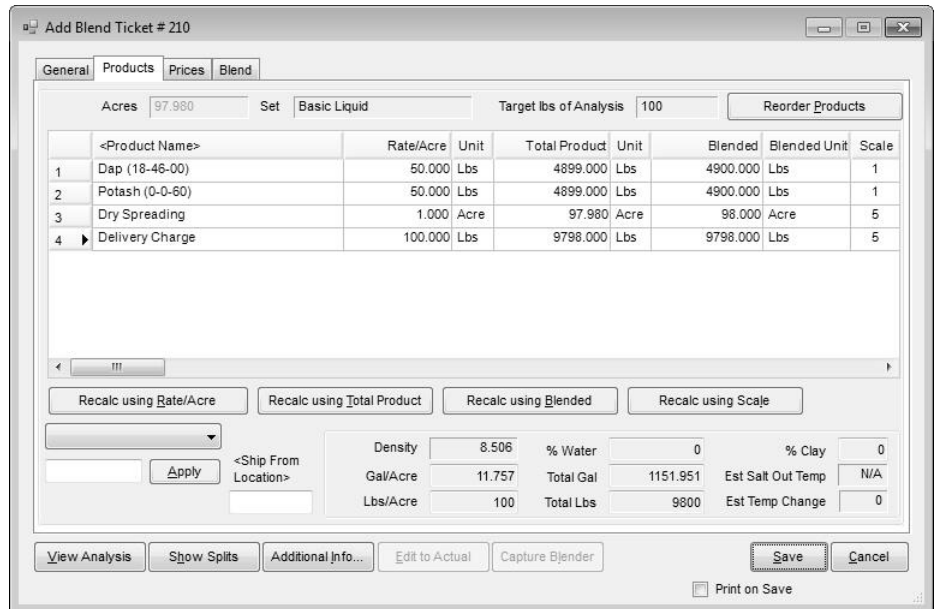
Capture Blender – this button opens the *Edit to Blender Records* window. It displays the products and the *Original* and *Done* weights for tickets of product sets that use the automated blender interface. For more on this, see “[Read Blender](#)” on page 33.

Print on Save – when this is option selected, saving the Blend Ticket displays the *Print Blend Documents* window. It defaults to the settings used on the previous ticket.

Blend Ticket – Products

This screen automatically displays the formulated product after clicking the **Formulate** button on the *General* tab. If requesting Lbs of product per acre directly, click on the *Products* tab. A blank screen appears where products may be added.

When making a direct product request, be sure to first select the acres and a valid Product Set on the *General* tab.



Note: To get to the Order column, click in the product grid, then use the arrow keys on the keyboard to move to the right.

Acres, Set and Target Lbs of Analysis – this information is displays information from the *General* tab.

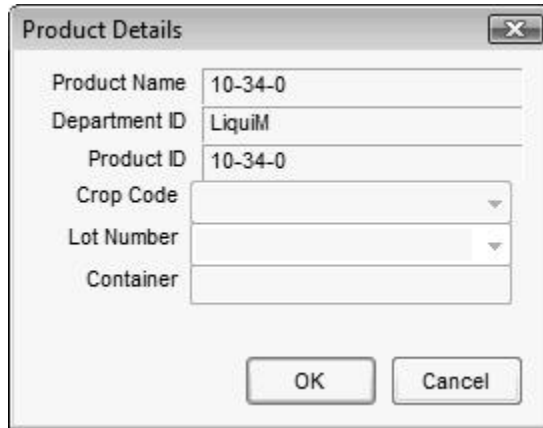
Reorder Products – used in conjunction with the *Order* column in the grid. In the *Order* column, enter the new row number for each product and then click the **Reorder Products** button.

If products with mixed inventory and billing units are used for analysis blends, the analysis displays in the unit of measure of the first analysis product.

Product Grid – add to existing products or select all the products for the blend in this grid.

<Product Name> – double-click on this column header to display the *Select Products* window. Select the inventory department, and the product from the department.

Product Details – for additional information on a product that’s been added, right-click on the product’s name in the grid to display the *Product Details* window. The Crop Code, Lot Number, and Container may be edited as needed.



The image shows a 'Product Details' dialog box with the following fields:

Product Name	10-34-0
Department ID	LiquiM
Product ID	10-34-0
Crop Code	[Dropdown]
Lot Number	[Dropdown]
Container	[Text Field]

At the bottom of the dialog box are two buttons: 'OK' and 'Cancel'.

Rate/Acre – enter the quantity to use in rating units. Right-click in this column to display a *Rate/Acre Calculator*. All products and rates should be filled out in the product grid before using this function. In the *UseMe* column of the grid, check only the boxes on the products to be used in the calculation. Some specialty products are to be added at a rate of 2 quarts per ton of DAP, for example. This could also be used for certain seed treatment products where the application rate is Ozs per 100 lbs, etc.

In the image below, the surfactant is set at 32 Ozs per 100 Gallons of mixture. The available units display in the drop-down for selection of Ozs, Pts, Qts, Gal, Lbs, or Tons. In the Per Units drop-down box select Gallons, Pounds, Nutrient Pounds, or Count. The calculator displays the rate and rating units calculated in the lower left corner of the window.

The *Reset back to original total rate* checkbox defaults as checked when using the Rate/Acre Calculator for chemical mixes. Agvance assumes that the total rate per acre for the mix is set with water and chemical prior to adding the rate of surfactant. For example, once the chemical's and water's totals are calculated, the surfactant is ready to be calculated using the Rate/Acre Calculator. When surfactant is added with the default of the 'Reset back to original total rate,' the water product is reduced by the amount of the surfactant that will be added to the mix. Click **Done** when finished or click **Cancel** to exit.

Enter the amount, and units, of the product needed per the indicated quantity of total product and click the Done button. This will cause the program to calculate the correct rate per acre for the product selected, and place that rate in the grid. Please ensure that all products have been entered prior to this step. You can optionally select which products contribute to the total and if you want to reset the blend back to the original total product quantity.

	UseMe	Product Name
1	<input checked="" type="checkbox"/>	Water for Post Application
2	<input checked="" type="checkbox"/>	First Rate
3	<input checked="" type="checkbox"/>	Surfactant

Untag All

32 Ozs Per 100 Gallons

Rate Rating Unit
4.801 Ozs Reset back to original total rate Done Cancel

Note: When numbers are entered directly into the *Blended* column and the **Recalc using Blended** button is used, the *Blended* number will not be rounded to scale.

Total Product – extends the rating units based on the number of acres (hectares, tons, tonnes or 1000 SqFt). If the ticket is being used as a product pickup or delivery document, enter the total amount picked up or delivered in the *Total Product* column and the Rate/Acre is calculated after clicking the **Recalc Using Total Product** button.

Blended – the product total is converted to blending units and rounded to scale accuracy. Like the *Total Product*, quantities can be entered into the *Blended* column as well.

Scale – the scale setting assigned to the Inventory Department where this product resides. This number relates to the scale option number in *Setup / Location Preferences* on the *Blend Setup* tab.

In the Add mode of a Blend Ticket, the following three choices may be viewed by right-clicking on the product name in the product window. This displays a window where information may be edited that transfers to the invoice if **Import Tickets** is used at invoicing.

Lot Number – optionally enter a lot number.

Crop Code – defaults to the crop selected on the General tab, but may be changed for individual product lines as needed.

Container – enter the type of container for the product. It is a user defined text box that stays with the product throughout invoicing.

<Container ID> – double-click and select the product’s container ID if the refillable container management area is used.

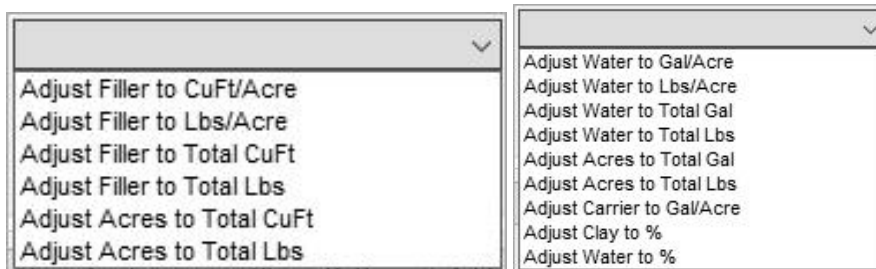
<Ship From Location> – this option, when enabled, allows Ship From locations to be selected on the line items of Blend Tickets. If a different Ship From location is specified on any line item of the ticket, an inter-company transfer (ICT) is created automatically at the save of the ticket to move the inventory from that specified location to the location of the selected products on the ticket. This *Create ICT Based on Ship from Locations* preference is found at *Accounting / Setup / Preferences* on the *Inventory Delivery Ticket* tab.

Mix Group – if the VRT indicator is unchecked, this defaults to 1 and blends the products together. If the VRT indicator is checked, then then it numbers each line. The numbers may be edited to indicate the products that should be blended at the same time. The Blend Ticket prints per *Mix Group*.

Carrier – selecting this box indicates the product is a carrier. This is typically used when chemical blends use fertilizer products or water as carrier of the chemicals. By selecting the carriers, and using the ‘Adjust Carrier to Gal/Acre’ adjustment option, the rate per acre remains accurate. A product with a zero unit weight may not be marked as a carrier.

Recalc Buttons – located below the product grid, the buttons affect all products in the grid if no lines are highlighted. If specific products need recalculated, highlight the line(s) by clicking on the row number (hold the shift key down to select several adjacent products or the Ctrl key to multi-select products), then click the appropriate recalculate button.

Adjustment Options – this adjusts filler, water, or products marked as carriers to the ratio or total manually entered. The choices available in the drop-down list, located below the **Recalc Using Rate/Acre** button, vary based the blend type – dry/feed or liquid/suspension. Click the **Apply** button to affect the change.



Dry/Feed Options

Liquid/Suspension Options

Ship from Location- this option, when enabled, allows Ship From locations to be set for all line items on the Blend Tickets. If the selected Ship From location is different than previously specified on any line item of the ticket, an Inter-Company Transfer (ICT) is created automatically at the save of the ticket to move the inventory from that specified location to the location of the selected products on the ticket. This *Create ICT Based on Ship from Locations* preference is found at *Accounting / Setup / Preferences* on the *Inventory Delivery Ticket* tab.

Note: *The Estimated Salt Out Temp is affected by settings found at the **Advanced** button on the Product Set associated with this blend.*

Ratios and Calculations Displayed at the Bottom – based on the current formulation, there are several non-editable figures displayed at the bottom of the screen. Some may be zero if the current blend does not relate to them (% Water will be zero when working with a dry blend). The figures recalculate each time any of the Recalc buttons are clicked or if the blend is re-formulated.

For more information on Estimated Salt Out Temperature, see [“Calculating Salt Out”](#) on page 83.

For more information on Estimated Temperature Change, see [“Calculating Net Temperature Change”](#) on page 84.

Blend Ticket – Prices

Prices may be viewed and edited at this screen. The prices default in using the following hierarchy: first the program searches for Quoted prices (if the blend originated from a Field Plan and was imported through the drop-down list instead of the **Import Blends** button). If no quoted prices exist, the price defaults from the Customer Price Level set at the customer's *Profile* screen. If there is no price level set on the customer file, the List Price defaults. No prepay dollars or Bookings are considered at this point.

	Product Name	Quantity	I Unit	Unit \$	B Unit	Total \$	Split	%	Your Share
1	Dap (18-46-00)	4900.000	Lbs	905.000	Tons	2217.25	1	50.0000	1108.63
2	Potash (0-0-60)	4900.000	Lbs	847.000	Tons	2075.15	1	50.0000	1037.58
3	Dry Spreading	98.000	Acre	4.500	Acre	441.00	3	100.0000	441.00
4	Blend Fee	9798.000	Lbs	5.000	Tons	24.50	1	50.0000	12.25

Quoting Options – three pricing options are available.

Not Quoted – this option defaults to the customer level pricing or the list price, whichever one is in effect.

Quoted – this option locks in the line item prices on the Blend Ticket and retains them when the ticket is imported into invoicing.

Analysis Quoted – this option locks in the price of the analysis on the Blend Ticket and retains it when the ticket is imported into invoicing.

Apply Prices to All – after selecting the desired option, click this button if all of the customers on the Blend Ticket should have the same pricing arrangement.

<Terms> – double-click in the Terms box to display the *Select a Discount* screen. This is optional input. Terms or discounts may also be set and/or overridden at the invoicing stage. Terms default first from the Field Plan imported into the Blend, next from the grower on the Blend Ticket, and last from the location preferences setting for default term.

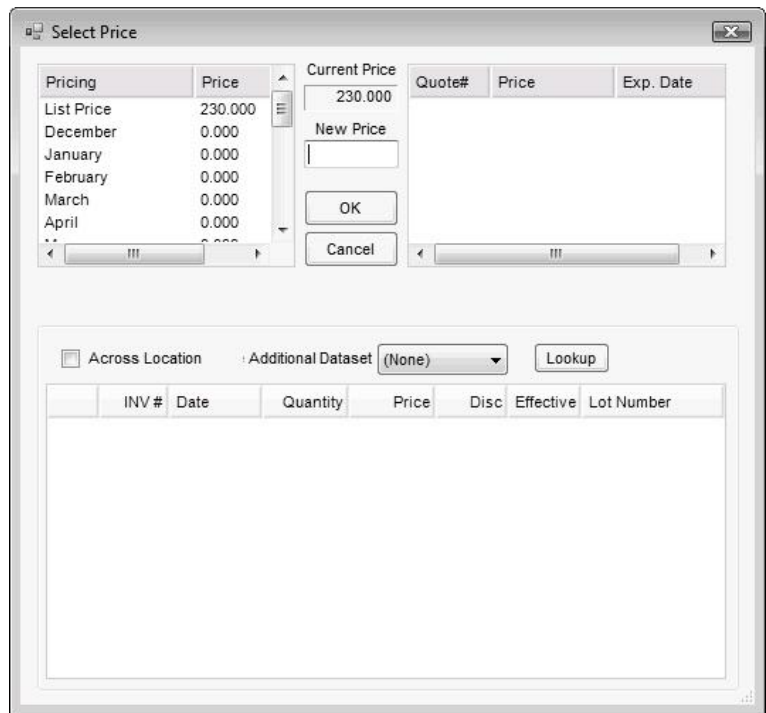
Cust ID – displays the customer ID. When a blend involves a split billing, select any of the customers from the drop-down to view their portion of the blend. To lock in a price for a customer where the price is different than the defaulted price level, use the Quote Status drop-down.

The Pricing Grid – only the *Unit \$* and the *%* columns may be edited in this grid. To edit, double-click in the cell and the options display in a pop-up window. Optionally, double-click on the *Unit \$* heading to

display pricing levels. Selecting a new price level here changes every product in the pricing grid to the pricing level specified.



To only change an individual product's unit price, type directly in that *Unit \$* cell in the grid or double-click in that cell to open the *Select Price* window. Any pricing previously set on the product may be selected at that screen. The price lookup feature may be used to find what the customer was previously charged.



Recalc using Unit Price – click this button after editing any price to recalculate the extensions of all products.

Recalculate – the price of the analysis may be edited by changing the price that defaulted in, then clicking the **Recalculate** button. Each analysis product line item is adjusted to reflect the new analysis price. A message displays reminding the user to set the Quote Status to an Analysis Option to retain the changes.



Pricing Options – allows viewing and manipulating the profitability of a blend. The customer displayed on the *Prices* tab also displays in the

Pricing Options window. When quoted and approved Field Plans are imported into a Blend Ticket, additional cost and margin comparisons are available on this window. For more information on the *Show Original Cost on Pricing Options when available* option, see “[Blend Setup](#)” on page 57.

	Product Name	Pricing Unit	Price	Cost	Profit/Unit	Margin%	Mark Up%
1	Dap (18-46-00)	Tons	905.0000	705.0000	200.0000	22.0994	28.3688
2	Potash (0-0-60)	Tons	847.0000	699.0000	148.0000	17.4734	21.1731
			876.000	702.000	174.000	19.8630	24.7863

Selling Price – adjust the selling price to either target dollars per selling unit or a target Markup % or Margin %. Click the **Apply** button to affect the change.

Cost Type – this is the cost figure used as a basis if the Selling Price is adjusted by Markup % or Margin %. This option defaults to the Quoting Basis on the *Setup / Location Preferences* on the *Blend Setup* tab.

Products – load either all the products from the *Products* tab or just the fertilizer products (with or without Hidden Blend Fees) into the Pricing Options grid. The totals include only the products shown in the grid at that time. Changes made at this screen affect the product prices on the *Prices* tab, except Hidden Fees.

Display Profit – this controls how the numbers in the product grid are displayed as the selling price is manipulated. Options include: Per Total Dollars, Per Billing Unit, Per Ton, Per Tonne, Per Acre (or Hect or 1000 SqFt depending on the Quantity Label set at the *General* tab).



Note: This quote function should not be confused with quoted prices set in either *Planning* or *Blending*.

Product Quotes Button – saved quotes for the customer may be viewed for reference. Product prices do not default based on these customer quotes. However, if a quote exists for one of the selected products on the ticket, the button displays red. By clicking on the Quote button, all quoted prices display. Optionally, double-click the row under the *Unit \$* column in the grid to select a quoted price, if available.

Quotes may be added, edited, and saved by clicking the “notepad” shortcut button at the Blend Ticket *Prices* tab, the Field Plan *Prices* tab, the Sales Order, Invoice, Delivery Ticket, Booking screens, or at *File / Open / Customers*.

Product Name	Quote Price	Quote Date	Quote #
Dap (18-46-0)	775.000	06/01/2013	1

Date: 06/01/2013
 Expire Date: 07/01/2013
 Company Wide:
 <Product>: Dap (18-46-0)
 <Price>: 775.000
 Type: Verbal
 Terms:
 <Salesperson>: CroJam
 Comment: Must pay on delivery

Blend Ticket – Blend

This screen holds the batch breakdown based on blender capacities as well as optional notes and instructions about the job.

<Application Comments>
 <Blend Comments>
 <Target Pests>

Batch Breakdown:
 Equal
 Partial
 Lbs
 CuFt
 KGs
 Capacity: 16000
 # of batches: 1

Batch	Weight	Acres
1	9800	97.98
Total		9800

Dispatch Info:
 Date Requested: / / Scheduled: / / Priority: Unknown Job ID:
 Time Requested: Scheduled: <Comment>: Status: Ready

<Application>/<Blend Comments> – optional notes that may be added before or after the job is completed. By double-clicking in the white boxes below the words <Application Comments> and/or <Blend Comments> add comments or select them from a list of saved comments. The Application Comments print on the Custom Application Sheet. The Blend Comments print on the Blend Ticket.

<Target Pests> – a list of Target Pests may be set up at *Hub / Setup / Target Pests*. Double-clicking in the white box below the words <Target Pest> displays the previously entered pests to be selected, or

the information may be manually entered. The Target Pests print on the Custom Application Sheet.

Batch Breakdown

Equal or Partial – indicate if the batches are to be calculated in equally sized loads or all full loads except the last one, which might be smaller. This setting defaults from the Product Set.

Lbs, Gals or CuFt, KGs – indicates the blender capacity unit – it does not change the blending units in which the materials are mixed. It only applies to the capacity of the blender and determines the number of batches needed to mix the job. This defaults from the Product Set used to make the blend. If gallons are chosen, the batch breakdown is done in gallons. Likewise, if the capacity is entered in pounds or kilograms, the batch breakdown is in pounds or kilograms respectively.

Capacity – this number defaults from the blender capacity entered at *Setup / Product Sets*. It has a direct effect on the ‘# of batches’ calculated. Either of these numbers may be changed and the other recalculated by clicking the appropriate button. The effect displays in the batch breakdown box to the right.

of batches – this number is calculated by dividing the total product on this ticket by the blender capacity. Either of these numbers may be changed and the other recalculated by clicking on the appropriate button. The effect is displayed in the batch breakdown box to the right.

Only those items with a unit weight greater than zero affect the batching of tickets.

File Names – this is used in conjunction with the Dispatch module and allows the blending operator to associate VRT spread files from the network to a Blend Ticket.

Dispatch Info – this area allows entering information to be used in the Dispatch module in Agvance. This includes *Date Requested*, *Time Requested*, *Date Scheduled*, *Time Scheduled*, *Priority*, *Comments*, and *Status*.

Blend Ticket – Save

When everything is completed on the Blend Ticket, clicking **Save** records the ticket and if the *Print on Save* option is selected, opens the *Print Blend Documents* window.

Edit Button

The **Edit** button allows editing an existing Blend Ticket by line item editing, editing to actual, recording as *Loaded*, updating additional information, capturing blender files, and other changes.

Many aspects of an existing Blend Ticket may be edited provided it has not been invoiced or transferred to field history. If the ticket has been “Loaded” (has affected inventory) or invoiced, a warning displays. If a ‘Loaded’ ticket is edited, inventory is adjusted accordingly.

Tickets may be replicated by using the **Import Blend** button, found on the *General* tab of the *Add Blend Ticket* screen.



File Shortcut displays the Select a Blend Ticket Screen.

Reverse

The **Reverse** button reverses the selected Blend Ticket. It creates a copy of the Blend Ticket with a new Blend Ticket number and negative product quantities. It reinstates any product quantities and dollars previously relieved by the original ticket. Both tickets are given billing comments to indicate that they are reversed and reference the affected Blend Ticket number. Both tickets are blocked from nearly all additional editing after the reversal.

Void

Select the desired unloaded Blend Ticket and click the **Void** button. This opens the Blend Ticket and displays a **Void** button to use to complete the void. If the Blend Ticket was created by importing a Scale Ticket, the Scale Ticket reopens when Blend Ticket is voided so it may be imported again. Loaded Blend Tickets that have been invoiced cannot be voided until the invoice is handled first. Any Field History from a voided, loaded Blend Ticket must be corrected manually. Voided Blend Tickets do not carry into the new business year after a fiscal year is ended. Voided Blend Tickets may still be viewed in the previous year's dataset.

Reprint

Select the desired Blend Ticket and click the **Reprint** button. This opens the *Print Blend Documents* window to select the print options.

Edit to Actual Scale



Edit to Actual Scale
shortcut button

Load	Gross	Tare	Net
1	27000		27000
2			
3			
4			
5			

Product	Old Weight	New Weight	U/Wght	Analy	Fee	Scale	Prorate
32-0-0	11753.000		1	Yes	No	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
10-34-0	11682.000		1	Yes	No	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
12-0-0...	3055.000		1	Yes	No	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Liquid...	0.000		0	No	No	<input checked="" type="checkbox"/>	<input type="checkbox"/>

The Edit to Actual Scale function is designed for the companies who re-weigh trucks after loading a job. This function can be accessed by editing the Blend Ticket, then clicking the **Edit to Actual** button at the bottom of the screen, or from the Edit to Actual Scale shortcut button.

Enter actual scale weight – fill in the actual weight of each batch in the upper grid (or the total weight of all batches). Click the **Apply** button.

The Total Net Weight (Actual) is compared to the total pounds on the original ticket, which is adjusted.

Note: If the original ticket was blended to Tons (or Tonnes), the Quantity (target tons) at the *General* tab is adjusted based on the new weight. This should keep the pounds/unit close to the original request.

Product Grid – the difference between the total old weight and the total new weight is prorated across the products if the *Prorate* box is checked. Analysis products default with the *Prorate* box checked. If the *Prorate* box is unchecked, the guaranteed analysis is recalculated.

The *Scale* checkbox indicates if the weight of the item should be considered. This would be used if fertilizer was loaded into the truck, weighed, then chemicals were added to the mix. If this were the case, the user would uncheck the scale for the chemical and press the **Apply** button.

Note: An example of using the scale checkbox would be when fertilizer is impregnated with chemicals by adding the chemicals after weighing the truckload of fertilizer.

Note: Services such as spreading and blend fee items should have a unit weight of zero.

Posting Notes: Edit to Actual sums the weight of all the products to get the ‘total weight’ of the load. Subtracting the weights of the non-analysis items (chemicals, seed, etc.) leaves a subtotal of all the products involved in the formulated analysis. The program prorates the quantities of all products with a checkmark in the *Prorate* column based on their percentage of the subtotal.

Unchecking the non-analysis products in the *Scale* column of the grid allows the weight to include only the fertilizer items. Blend Fee items not rated by the acre are adjusted to meet the total of the blend divided by the number of acres as their rate per acre.

Example:

The original ticket printed as:

Product	Lbs of Product	Subtotals
Dap	2250	
Potash	4500	Analysis 6750#
Dual	315	Total Load = 7065#

For this example, if the actual weight of the load after reweigh is 7215 Lbs, an extra 150 Lbs must be prorated over the products involved in the analysis.

The new subtotal of the products in the analysis is 6900 Lbs and is calculated as: 7215 – 315 (original chemical weight) = 6900.

The new weight of each fertilizer product is calculated as: Old weight + (Old weight/Old Analysis sub-total *(amount of the change)). The original chemical weight is unaltered as well as any item that does not contribute to the analysis of the blend. The blend fee items are adjusted to match the total of the analysis products. In this case, it would be adjusted from 6750 to 6900 pounds.

Product	Calculation of New Prorated Weight
Dap	$2250 + ((2250/6750) \times 150) = 2250 + 50 = 2300$ Lbs
Potash	$4500 + ((4500/6750) \times 150) = 4500 + 100 = 4600$ Lbs

In addition to prorating the new weight to the appropriate products, the Edit to Actual function also marks the blend ticket as 'Loaded' and affects the Amount on Hand of each product by the quantity of the edited ticket.

Record as Loaded

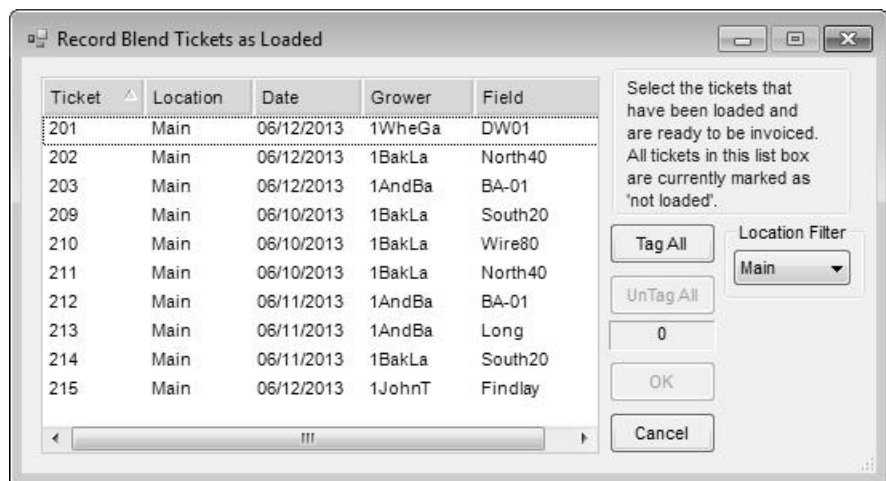


Record as Loaded shortcut

Note: *In order for the inventory to remain unaffected, be sure to skip any templates that have been entered.*

This function is used to mark Blend Tickets as 'Loaded,' therefore affecting inventory. The **Record as Loaded** button is found at the *File / Open / Blend Ticket* window. A shortcut button is also available. The *Record Blend Tickets as Loaded* screen displays all tickets that are 'Not Loaded.' The *Location Filter* allows displaying only those tickets created at a specific location. Select the tickets to be marked as 'Loaded.' After clicking **OK**, the status of the selected Blend Tickets is changed and the inventory is affected accordingly.

This is most useful when not using an automated blender, when not re-weighing the trucks after loading, and the original ticket was not marked as 'Loaded.'



Read Blender

This feature automates the editing of a ticket to actual product loaded when interfaced to an automated blender (such as Junge, Kahler, Murray, or Yargus). If the blender returns a file with actual loaded quantities for each item, those quantities display in the *Done* column of the grid. Saving this screen edits the Blend Ticket product quantities to the numbers in the *Done* column. Make sure all line items contain a quantity. Application and prepackaged products should also be included in these line items.

The *Archive Blender File* checkbox controls whether the blender file may be reused or not. If this box is not checked, the blender file will be available to use again. If the file was created from the Junge® Blender System, this option is not visible. In this case, the "Done File" found on the Read/Capture of the Blender File is only available for a single use.

This function marks the ticket 'Loaded' and affects inventory.

	Name	Original	Done
1	32-0-0	11753.000	11753.000
2	10-34-0	11682.000	11682.000
3	12-0-0-26	3055.000	3055.000
4	Liquid Spraying	66.200	66.200

Edit to Blender Records is found by clicking on the **Read Blender** button on the *Select a Blend Ticket* window or by editing a ticket and clicking the **Capture Blender** button.



*Record Field
Conditions shortcut*

Record Conditions

This function is used to record weather and field conditions noted at the time of application. The *Record Field Conditions* function is found at the *File / Open / Blend Ticket* window or by clicking the **Record Conditions** shortcut button. The *Record Conditions* window may also be accessed by editing a Blend Ticket, then right-clicking on the **Additional Info** button. The information prints on the Custom Application Sheet associated with the ticket. A preference may be set to automatically prompt to complete the field conditions when saving a Blend Ticket. This *Record Conditions on Save of Blend Ticket* preference is found at *Setup / Location Preferences*, on the *Print Prefs* tab.

There is also a preference to *Suppress Soil Conditions* at *Setup / Location Preferences* on the *Print Prefs* tab for the Custom Application Sheet. The soil conditions are also imported into the field history during the *Transfer to Field History* function and can be viewed at the *History* tab of the field in the Hub. The wind direction may contain six characters so directions may be entered as a degree number rather than a compass reading.

Note: The drop-down lists (for *Wind Direction*, *Application Direction*, *Field Condition*, *Soil Moisture*, *Soil Texture*, and *Meter Brand*) allow selecting from the options listed or manually entering information. Information manually entered in these fields is available for selection in the drop-down lists after saving the record.

Record conditions For Ticket 206 and Field BA-01

Date Applied: 03/23/2015

Start: 7:00 AM, End: 10:00 AM

Temperature: 63, 65

Wind Speed: 5, 8

Wind Direction: W, NW

Wind Meter: Yes

Meter Brand: Acme

Field Condition: Mellow

Soil Moisture: Normal

Soil Texture: Medium

Humidity:

Grower Notified: True, Date: 03/20/2015, Time: 2:30 PM

Grower Contacted:

Product Supplied By: Main warehouse

Previous Chem / Job: fertilizer only

Previous Grower: Larry Baker

Product Remaining: False

Product Remaining Reason:

Crop Rotation Restrictions Exist: True

Actual Applied Comment: no apparent problems

Application Speed: 13

Application Direction: N-S

Nozzle: TJ8020

Nozzle Spacing: 20

Nozzle P.S.I: 28

OK Cancel

Resize Ticket

The function gives the ability to resize the Blend Ticket. It is used when a Blend Ticket is not completed and some or all of the remaining batches need to be resized to utilize available equipment. The blend operator can input different possibilities at this screen to decide how to best handle the remainder of the job.

Available options include printing one batch sheet for the remainder of the job or printing batch sheets for individual loads.

Print Full Blend Remaining

Enter the acres blended in the job so far, enter the capacity for the remaining batches, and then click **Calc This**. The batches are resized and Blend Tickets printed for those batches.

Resize a Blend Ticket (209)

Print Full Blend Remaining | Print Truckload Batch Only

Batch Breakdown

Please Input Acres Blended so far: 100, Acres Left: 400.000

Total Lbs: 33690, Total Lbs Left: 26952.000

Batch Breakdown

Equal (selected), Lbs (selected), Partial, Gals

Capacity: 16000

of batches: 2

Batch	Weight	Acres
1	13476	200
2	13476	200

Calc This

Print Cancel

Acres blended so far – enter the number of acres already completed.

Acres Left – recalculates automatically (*Total Acres minus Acres Blended so far*).

Total Lbs – the total pounds from the original ticket.

Total Lbs Left – automatically calculates (*Total Lbs minus Lbs already blended*).

Capacity – enter the capacity of the load planned for use on the next batch.

Equal or Partial – indicate how the remaining loads are split, either in equal loads or all full loads with one partial to complete the job. When resizing a ticket, *Partial* is often the most practical to make the best use of the vehicle being loaded.

Lbs, Cu. Ft., or Gals – indicate whether the blender capacity is entered in pounds, cubic feet, or gallons.

of batches – displays the number of loads it will take to complete the Blend Ticket at the capacity entered. This number calculates automatically when **Calc This** is clicked and is not editable.

Calc This – click to calculate how many additional loads there will be at the given capacity.

Note: Many customers use this information to decide whether it is practical to wait for a larger load.

Print Truckload Batch Only

This is used to create a batch sheet for individual tender loads. Enter the truck information, optionally select the *Tender*, and enter the Acres, Weight, or CuFt needed for this tender. The **Print** button prints the batch sheet. This load is saved with the computer system date and time stamp, and in addition, the amount of the printed batch is deducted from the total amount of the blend.

Tender	Acres	Weight	Volume	Date Stamp	Time Stamp
1	Spreader1	148.386	10000.000	169.160	04/20/2010 11:37:45 AM

Batch	Weight	Acres
1	11845	175.807
2	11845	175.807

Blend Ticket Information – gives the total amount on the original ticket and the amount left.

Tender Load Grid – stores each load completed for this ticket. Information includes a *Time* and *Date Stamp*, *Acres*, *Weight* and *Volume*, to assist in tracking tender loads.

Batch Breakdown – holds the preferences for *Equal* or *Partial* loads as well as *Lbs* or *CuFt* for dry blends and *Lbs* or *Gallons* for liquid blends. The capacity may be changed anytime and clicking **Calc This** recalculates the batches.

Enter the Truck Information – optionally select the *Tender* from the drop-down list. This list is maintained at *Hub / Setup / Vehicles*. The *Acres*, *Weight*, *CuFt* or *Gallons* may be changed to create the batch size.

The batch information may be deleted at a later time by highlighting the row for the batch and using the delete key. Also, the saved batch information may be printed at a later time by clicking **Reprint Truckload Batch**. The *Reprint Truckload Batch* window appears. Select the batch to reprint from the drop-down list, click the **Calc This** button and click **Print**.

Batch	Weight	Acres
1	10000	148.386

Split Out Ticket

This button is a quick link to the Combine and Split Out Blend Tickets utility. For more information on this option, see “[Combine and Split Out Blend Ticket](#)” on page 38.

Quick Split Out

For multi-field Blend Tickets, this function quickly splits out the field ticket by acres. The acres are already filled out, and the Ship To and Salesperson may be selected.

Edit

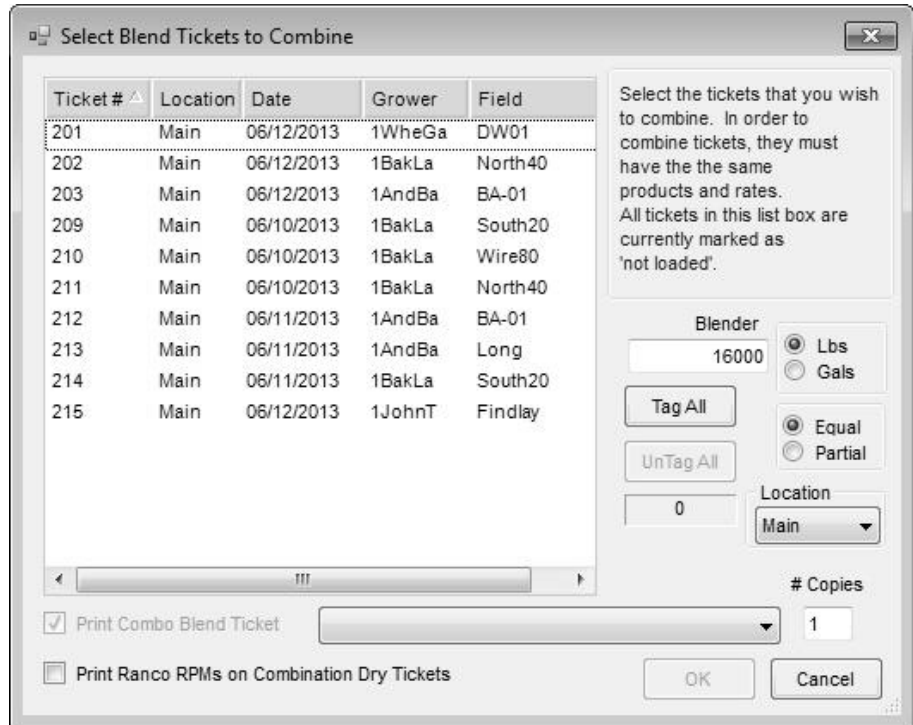
Combination Batch Sheet

This option, found at *Edit / Combination Batch Sheet*, allows several tickets to be selected at one time. This feature prints a blend sheet that combines these tickets on one load sheet. This is helpful when there are several small fields that require the

same treatment to maximized blender efficiency. At this screen, edit the capacity to be used for the batch breakdown—it defaults to the last capacity entered. In addition, use the *Location* filter option to view tickets created at a specific location or tickets from all locations.

If the products, rate/acre, lot number, crop code, or container on the selected tickets are not the same, a message appears indicating items are different. The tickets may still be combined, but the rate/acre information will not be on the combination batch sheet.

This function does not create a new ticket—it simply prints a batch sheet so the requested product from several tickets may be loaded at once.



Combine and Split Out Blend Ticket

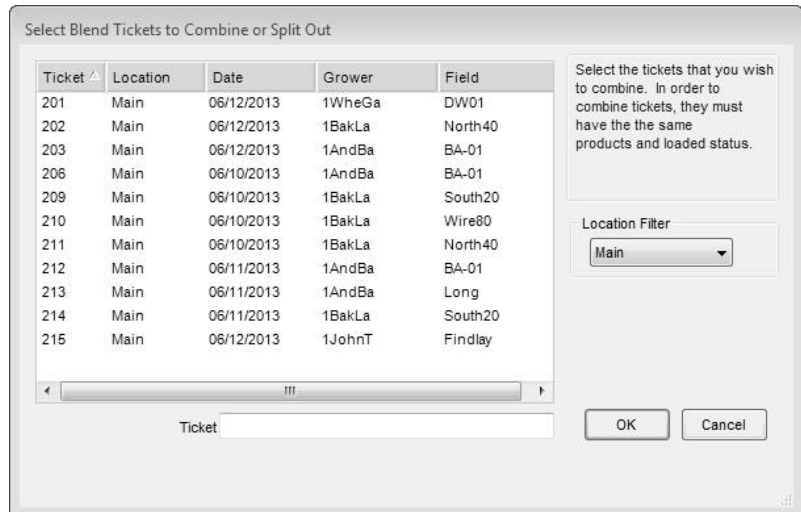
This feature is designed for situations where product is spread from the same ticket on several fields or several tickets need to be combined into one or more new tickets. This function combines and splits out Blend Tickets to the actual fields involved when the ‘by field’ breakdown is known.

The Combine and Split Out feature is useful for field record keeping as well as preparing for invoicing.

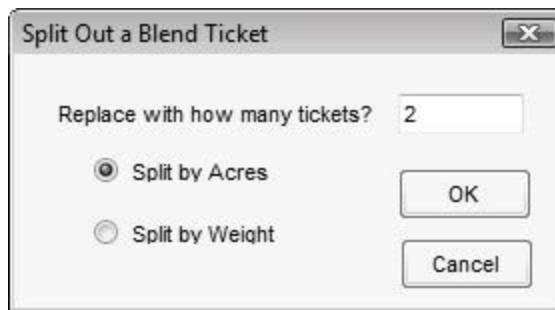
Using this feature also allows an Edit to Actual Scale for the entire ticket, and then loaded quantities can be prorated over the individual fields.

Using the Combine and Split Out Blend Tickets

Hint: Selecting a ticket and then right-clicking provides more details about the ticket.



1. Select the *Edit / Combine and Split Out Blend Tickets* menu option.
2. Select the ticket(s) to combine or split out. The tickets must have identical analysis, rate/acre, lot numbers, crop codes, loaded status, and containers. Blend Tickets that have the “ship from” locations set may be used, but the line items for the same product must have the same “ship from” location. Filter for a specific location or view all tickets.
3. After selecting the ticket(s), a screen displays to split the ticket by acres or by weight. If a ticket being split out is a multi-field ticket, it must be split out individually. Agvance automatically sets the ticket count at one ticket per field. Once the *Replace with how many tickets* and the method of split out are completed, click **OK**.



4. Select the fields involved with each new Blend Ticket and confirm their billing splits.
5. The final step is to identify the product breakdown by field for each of the new Blend Tickets. Once that is done, click **Apply** to automatically calculate the information for the new tickets, which may optionally be printed when the **Save** button is clicked.

Note: If the print settings should apply to all new tickets, check the box to *Apply 1st Print Settings to All*.

Split Out A Blend Ticket

	Ticket #	Grower ID	Field ID	Grower Name	Acres	Weight		
1	▶ 206	1AndBa	BA-01	Barry Anderson	66.200	40550.000		

	Ticket #	Grower ID	Field ID	Grower Name	Acres	Weight	Ship To	<Salesman>
1	216	1AndBa	Long	Barry Anderson	34.000	20826.284		Farbre
2	▶ 217	1AndBa	East	Barry Anderson	32.200	19723.716		Farbre

Totals	66.200	40550.000
Left to Use	0.000	0.000

Apply

Apply 1st Print Settings to All

Save Cancel

Upon saving the new Blend Tickets, the original ticket(s) are voided. There is no inventory adjustment since the process forces the sum of the new tickets to equal the sum of the original tickets. However, inventory detail is generated to track changes made.

Import Automated Blender Done Files

This functions the same as the **Read Blender** button on the *File / Open / Blend Ticket* window, or the **Capture Blender** button in the edit mode of the Blend Ticket. The files processed through the automated blender are listed here. Select the ticket to edit and click **OK**. If the blender returns a file with actual loaded quantities for each item, those quantities display in the *Done* column of the grid. Saving this screen edits the Blend Ticket product quantities to the numbers in the *Done* column. The *Review Single Ticket* checkbox and the *Review Quantities* checkbox give the ability to review a ticket similar to the Edit mode. Make sure all line items have a quantity filled out for them. Application and prepackaged products should be included in these line items as well.

The *Archive Blender File* checkbox controls whether the blender file may be reused or not. If this box is not checked, the blender file will be available to use again. If the file was created from the Junge® Blender System, this option is not visible. In this case, the “Done File” found on the Read/Capture of the Blender File is only available for a single use.

This function marks the ticket ‘Loaded’ and affects inventory.

Blend to Stock

This feature is designed to formulate a blend to inventory (for stockpile) instead of invoicing the resulting blended material. It combines the power of the Blending module and the manufactured blend function. There are two options now, *From Weights* and *From Automated Blender File*.

From Weights

The first step is to create a Blend Ticket. Next, either move the inventory from that ticket to an existing product or create a new product to which the inventory will be moved. Once a ticket is selected the *Edit Blend to Stock* window displays, which is similar to the *Edit to Actual Scale* screen. Here, the actual weight of the product is entered and is prorated over the analysis products on the ticket by clicking **Apply**.

Edit Blend to Stock (216)

Enter actual scale weights

Load	Gross	Tare	Net
1	10100		10100
2			
3			
4			
5			

Blend Ticket # 216
 Total Analysis 2000
 Total Lbs 2000
 Total Tons 1

Grower ID 1Quote
 Field ID 8

Apply Total 10100

Enter the weights of the completed blend and press OK to select the product to add the inventory to.

	Product	Old Weight	New Weight	U/Wght	Analy	Fee	Scale	Prorate
1	Urea (46-0-0)	340.000	1717.000	1	Yes	No	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2	Dap (18-46-00)	570.000	2878.500	1	Yes	No	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
3	Potash (0-0-60)	430.000	2171.500	1	Yes	No	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
4	Sulfur 90	270.000	1363.500	1	Yes	No	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
5	Dry Filler	390.000	1969.500	1	Yes	No	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
6							<input type="checkbox"/>	<input type="checkbox"/>

OK Cancel

Clicking **OK** prompts to either select an existing product or add a new product. If the **New Product** button is selected, the *Add a New Product* screen displays to enter the information needed to setup the new product. Once the product is selected, a valid lot number may be added here manually, or one previously set on this product may be chosen from the drop-down.

Capture Blend To Stock Amount

Date 06/13/2013

<Product>

Lot Number

Quantity

New Product

Add a New Product

<Department ID> Product ID Product Name
 DryBgm 13-13-13B Bagged Fert 13-13-13-12S

Product Density 65 Liquid Dry

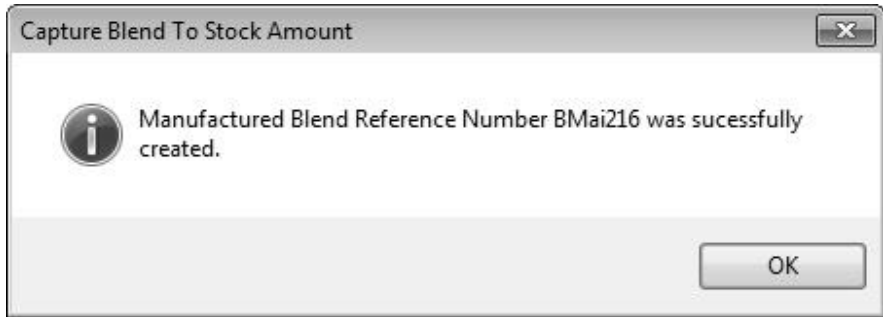
Inventory Units Rate / Acre Units Blending Units Billing Units Package Units
 Bags Lbs Lbs Bags Bags

Blend to
 Rate to Inventory Billing Package
 Blend Ratio Ratio Divisor Size Unit Weight

1.	50	1	1	50
N	13	P 13	K 13	S 12.0 xx 0 C 0.0
M	0.0	Z 0.00	F 0.00	M 0.00 C 0.00 B 0.00

Calculate Clear Save Cancel

Once a product is selected or created, indicate the quantity of final product produced, and click **Save**. A message displays indicating Manufactured Inventory was created successfully and provide a reference number. The Blend Ticket is marked as 'Processed' and the *Amount on Hand* of the selected product is increased by the *Quantity*.

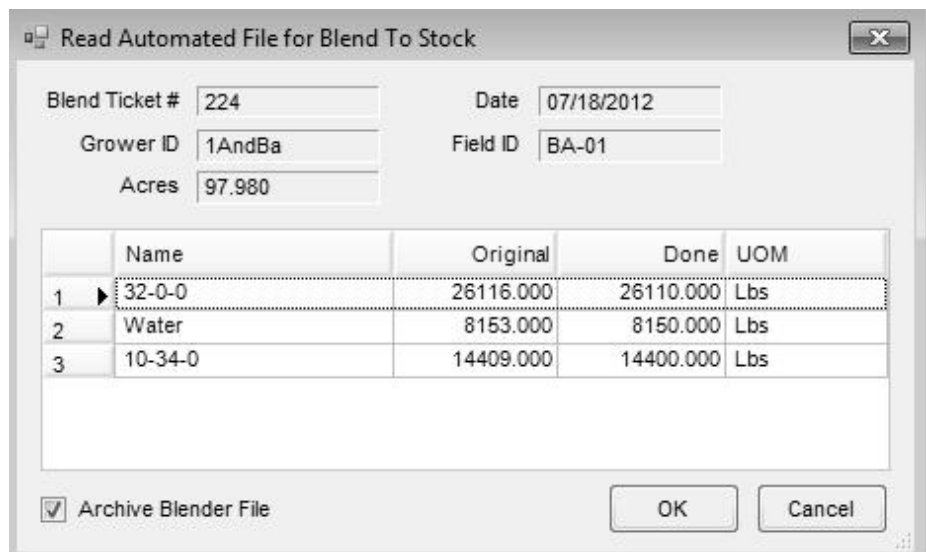


From Automated Blender File

Once the product has been made, go to *Edit / Blend to Stock / From Automated Blender File*.



Select the Scale Ticket. Only Blend Tickets that have completed blender files show in the list. Choose the finished good, enter the finished quantity, and click **OK**. The *Read Automated File for Blend to Stock* screen opens and displays the Products, *Original* weights, *Done* weights, and *UOM*. The *Done* weights may be edited if corrections are needed.



A message appears indicating that the manufactured blend was successfully created.



Posting Notes for Blend to Stock Entry

Inventory Detail – an inventory record is made for the finished product and each raw material for an audit trail of inventory activity.

Inventory Amount on Hand – the product's *Amount on Hand* quantity is updated for each of the products involved. For the finished product, quantity increased and the quantity is decreased for each raw material.

Finished Product Cost – the blended product's *Average* and *Last Cost* is updated based on the cost of the raw materials.

General Ledger

General Journal Entry	Debits	Credits
Total cost of all raw materials	Cost of Sales for finished product	
Each raw material cost		Cost of Sales for each raw material product
If using Transactional Inventory valuation		
Total cost of all raw materials	Inventory Asset for finished product	
Each raw material cost		Inventory Asset for each raw material product

Reports

All reports available in the Blending module are blend-related. Other reports such as field splits, customer lists, etc., are found in the Hub, Planning, or Accounting modules. The Hub has many reference and general information reports for files that are common between all the modules (customers, fields, inventory products).

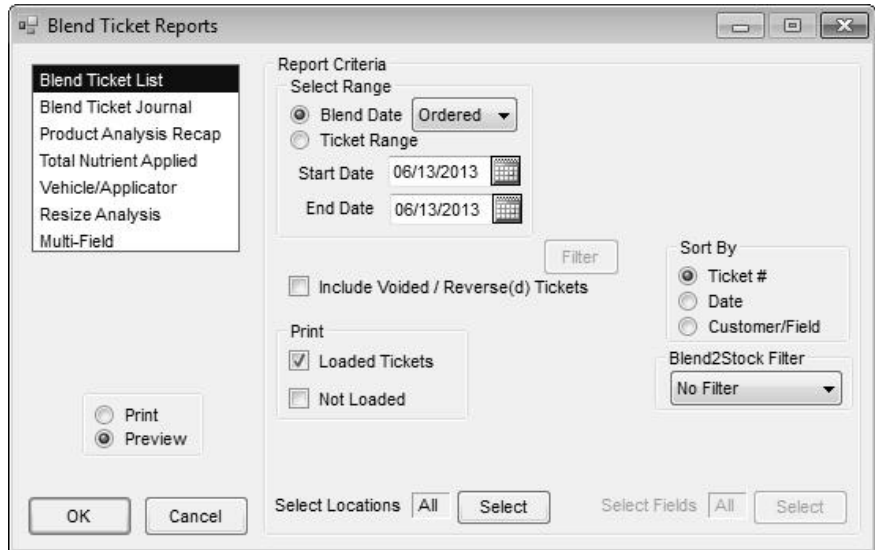
Blend Ticket Reports

These reports summarize Blend Ticket activity a variety of ways.

Blend Ticket List

This report is a chronological listing of Blend Tickets without product detail. The report may be printed on a date or ticket number range. Optionally, filter by 'Loaded' status, 'Blend' status, or all tickets in the range. Voided or reversed tickets may optionally be included.

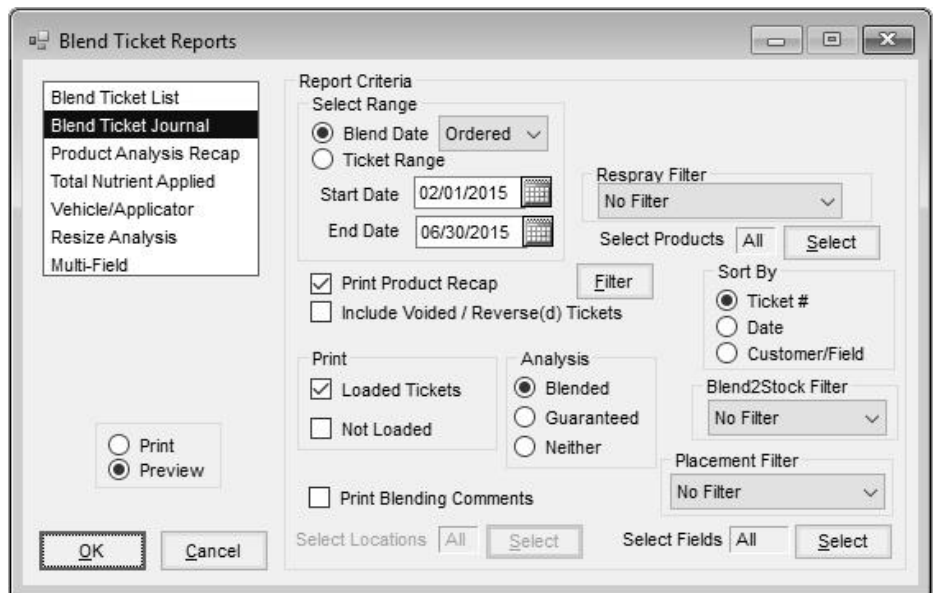
The report prints Ticket Number, Date, Loaded status, Customer Name, Field ID, Description, and Void status.



Blend Ticket Journal

This report provides a chronological listing of Blend Tickets with product detail. The report may be printed on a date or ticket number range. Optionally, print 'Loaded' status, 'Blend' status, or all tickets in the range.

The **Filter** button is also available to limit or exclude certain types of Blend Tickets. This filter uses Customer, Field, Product and Blend information.

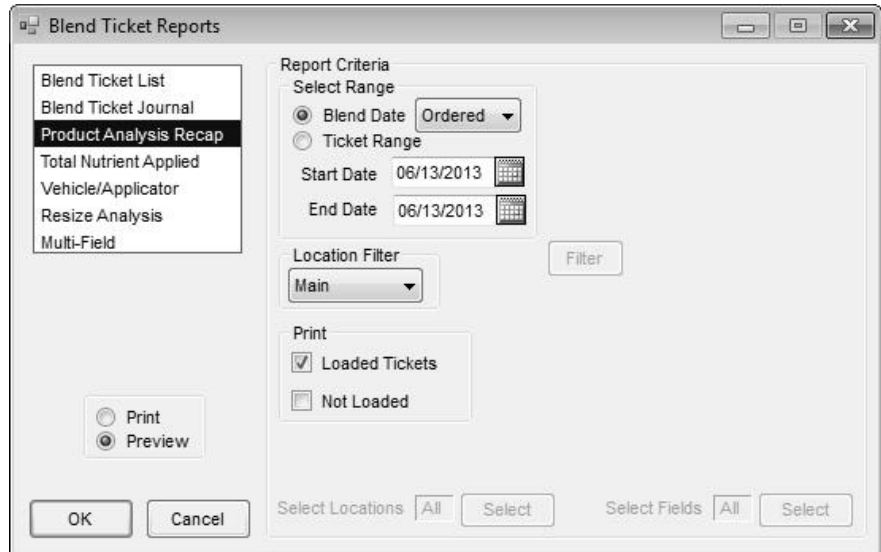


The report prints Ticket Number, Date, Customer, Field ID, Acres, Crop, Placement, Products, Rate/Acre, and Total product. This report also shows the analysis selected and if the Blend Ticket has been voided/reversed.

Product Analysis Recap

This report totals the product blended, displaying the total blending units and total inventory units. It shows one line per product in inventory and blend units of measure.

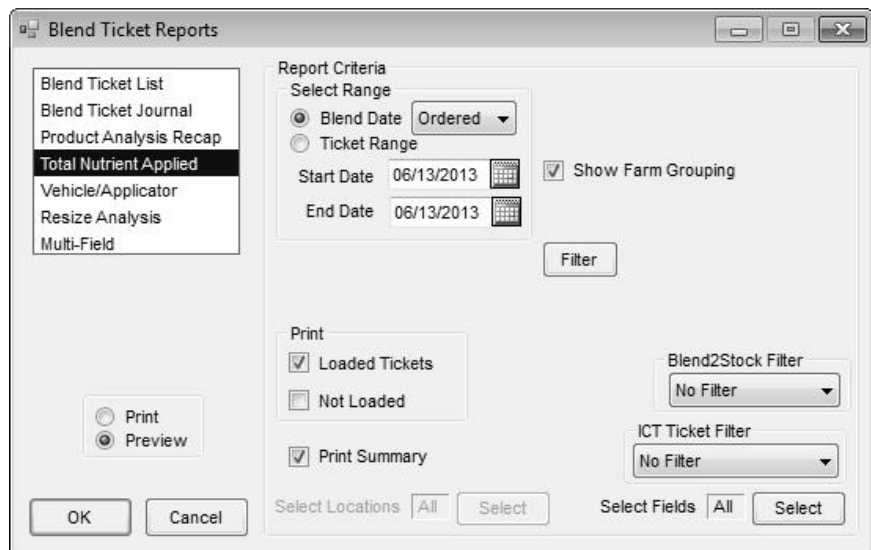
“Not Loaded” blend tickets are often considered work orders. This report may be used to determine if on-hand inventory is sufficient to fill existing unloaded Blend Tickets.



Total Nutrient Applied

This report totals the nutrients applied to a field and subtotals them on a field-by-field basis. The report may be filtered by grower, field, or blend and may be grouped by farm.

The report may also be used to determine additional fertilizer required to be applied on a field to satisfy the recommendations.

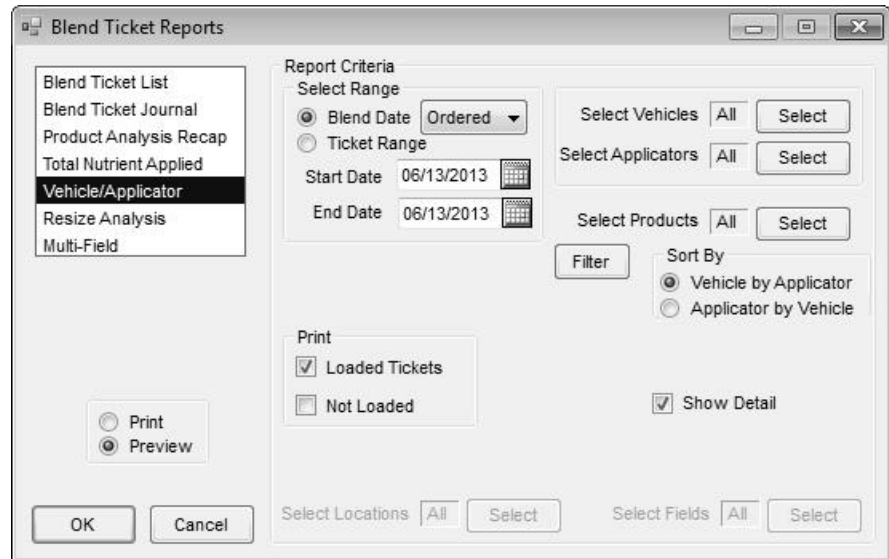


Vehicle/Applicator

Note: For this report to be accurate, the vehicle and applicator must be selected on each Blend Ticket. If running a report for custom application, the custom application checkbox must be marked.

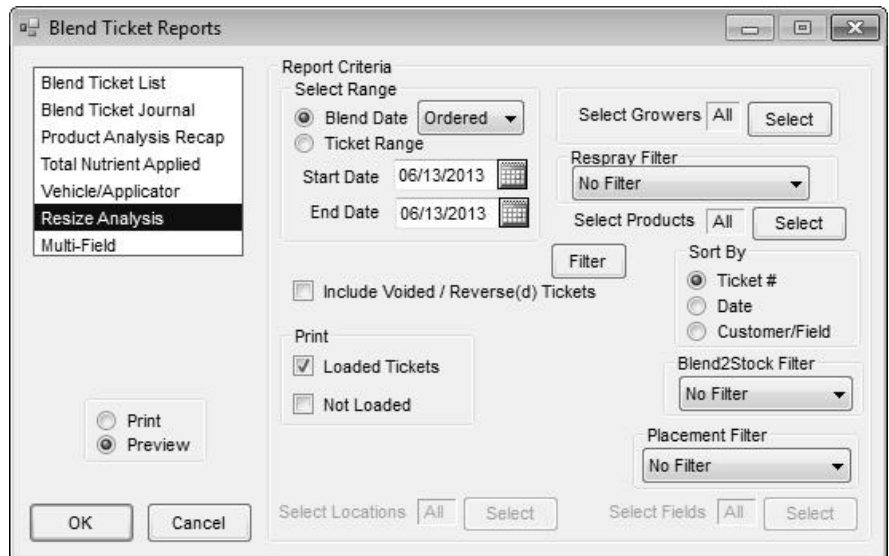
This report tracks acres applied by a driver or vehicle. The report prints alphabetically by the selected sort option.

This report is helpful for bonus calculations based on acres spread.



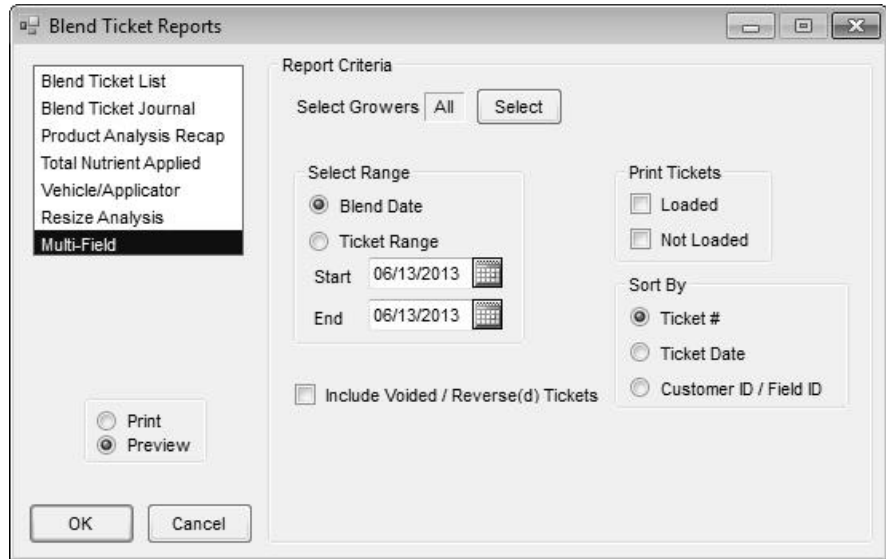
Resize Analysis

This report shows the information tracked on the *Resize Ticket* window. The report includes the original Ticket #, Time, Date, Acres, Weight, and Volume of the original ticket. The information is also broken down for each batch.



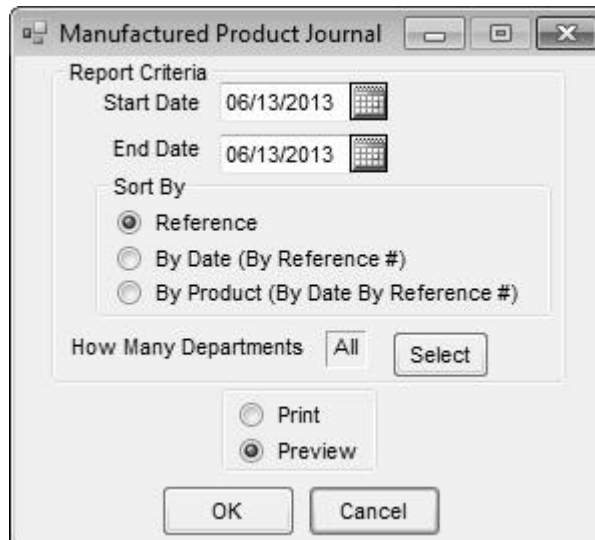
Multi-Field

This report provides information about the fields used on multi-field tickets.



Manufactured Product Journal

This is a journal of products blended by fixed formula rather than custom blended. Manufactured blends are often used for product that is pre-blended and stockpiled.

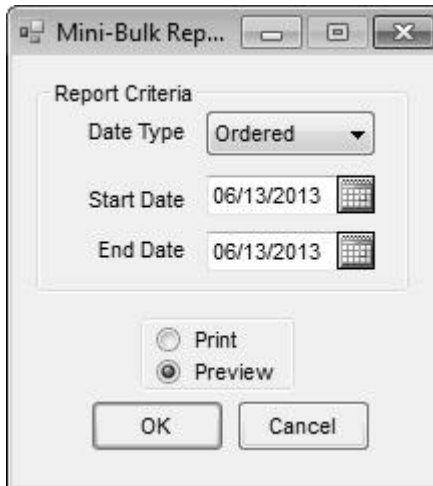


Listed by either Reference number, Date or Product, this report prints the manufactured blend activity for the date range. It displays the raw materials used and the finished goods, along with the quantities of each.

The entries originate from products manufactured at *Accounting / Inventory / Manufacture Inventory* or from invoices with manufactured products set to *Affect Inventory at Billing*.

Mini-Bulk Report

This is a log of all re-packaged products delivered or picked up. The report lists any 'Loaded' Blend Tickets and Delivery Tickets marked as mini-bulk sales. It includes the Date, Customer, Ticket #, Dept ID, Product ID, Package Size, Quantity, and EPA# if applicable.

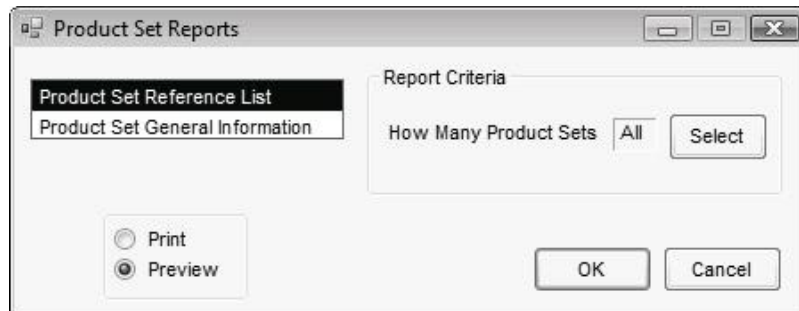


Product Sets

Product Sets are defined at *Setup / Product Sets*. These reports default to all Product Sets created. Filtering for selecting specific Product Sets is also available.

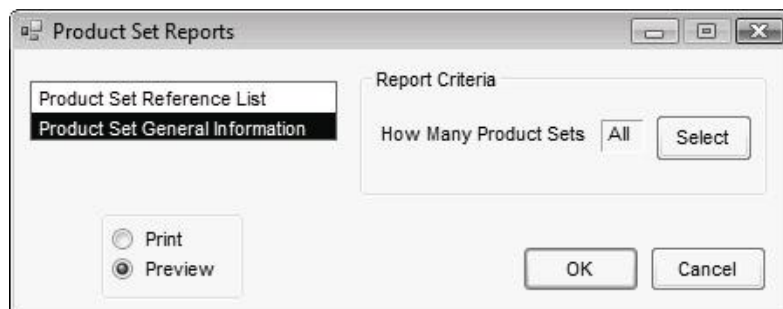
Product Set Reference List

This report displays the Product Sets in alphabetical order along with the Dry/Liquid status. Limited detail is shown here.



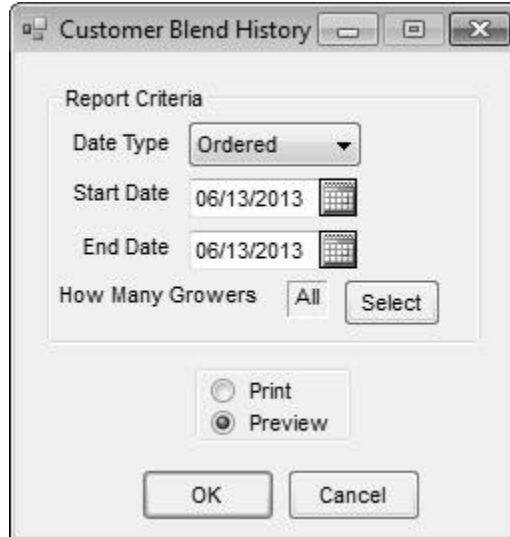
Product Set General Information

This report displays the Product Sets in alphabetical order along with all details of the set, including each product, nutrient contribution, formulation, and blend order. The report also provides the nutrient constraints and other critical information from the Product Set.



Customer Blend History

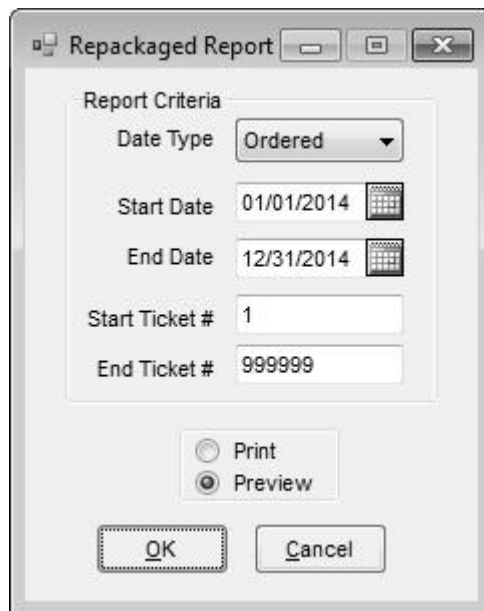
This is a listing of all blends ‘by customer by field.’ This report shows Ticket #, Date, Acres, Crop, Products, Rate/Acre, and Totals of inventory units applied. This history may be transferred to field history by using the *Transfer to Field History* function in the Hub.



The screenshot shows a dialog box titled "Customer Blend History". It contains a "Report Criteria" section with the following fields: "Date Type" set to "Ordered", "Start Date" set to "06/13/2013", "End Date" set to "06/13/2013", and "How Many Growers" set to "All". There is a "Select" button next to the "How Many Growers" field. Below the "Report Criteria" section are two radio buttons: "Print" (unselected) and "Preview" (selected). At the bottom are "OK" and "Cancel" buttons.

Repacked Report

This report lists the Date, Customer, Ticket #, Dept ID, Prod ID, Name, Pkg Size, Quantity, and EPA # for all Blend Tickets marked as *Repacked*.



The screenshot shows a dialog box titled "Repackaged Report". It contains a "Report Criteria" section with the following fields: "Date Type" set to "Ordered", "Start Date" set to "01/01/2014", "End Date" set to "12/31/2014", "Start Ticket #" set to "1", and "End Ticket #" set to "999999". Below the "Report Criteria" section are two radio buttons: "Print" (unselected) and "Preview" (selected). At the bottom are "OK" and "Cancel" buttons.

Setup

Product Sets

Product Sets are groups of inventory items often combined as blended products. The sets determine the inventory products used to satisfy a particular analysis. They also determine the order products print on the Blend Ticket and the order the products are loaded. Product Sets are location specific. This allows locations to only use the Product Sets created for their location, ultimately affecting inventory from their specific departments for the Blend Ticket.

Each Product Set stores the information necessary for Agvance to interface with various automated blenders. This information is Product Set specific, therefore may be different for each Product Set.

Companies that blend dry and liquid products may have several Product Sets where the source of nitrogen is different in each set. One set could include certain micronutrients and another one not. Another option is to have a liquid and dry set containing all the products a location would use. The products may be marked *Active*. The inactive products are not used in the blend. If products are inactive in the Product Set, blending order is still important because inactive products are skipped when the Product Set is used on a Blend Ticket.

General

General | Blender Interface / Print Preference

Set Description: Basic Dry | Water Rate/Acre: | Water %: |
Type: Dry | Clay Rate/Acre: | Clay %: |
Blender Capacity: 16000 Lbs | Minimum Gal/Acre: | Inactive:

Key Inventory Items:
<Water> Water | LiquiM Water
<Clay> Clay | LiquiM Clay
<Dry Filler> Dry Filler | DryM Filler

Batch Defaults:
 Equal load amounts
 Partial based on capacity
Location: Main

Visible to Dispatcher Only | Ship From Location: |

Allow Nutrient To Run Over:
 N P K S xx Ca Mg Zn Fe Mn Cu B

<Product>	BO (Blending Order)	Invoice	Active	Set Limits
1 Ammonium Sulfate	5	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Set Limits
2 Sulfur 90	6	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Set Limits
3 Potash (0-0-60)	4	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Set Limits
4 Dap (18-46-00)	3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Set Limits
5 Triple (0-46-0)	2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Set Limits
6 Urea (46-0-0)	1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Set Limits
7 Dry Filler	7	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Set Limits

Buttons: Insert Row, Tag All, Untag All, Advanced..., Save, Cancel

Note: Apostrophes and Slashes (/ \) are invalid characters and should not be used in the 'Set Description.'

Note: To use this setting, water must be one of the products listed in the set and that same item must be listed as the <Water> Key Inventory Item.

Note: Key Inventory Items must be filled out, even if they are not used – when this is the case, select an item that would not be used on a Blend or Plan, such as finance charge.

Set Description – displays in the list of possible blend sets to help identify the set when adding a Blend Ticket. Be as descriptive as possible in the space provided. There are 15 characters available for the description.

Type – select from the drop-down list to identify the type of blend set. Choices include Dry, Liquid, Suspension, Feed, and Other.

Dry – calculates density in Lbs/Cubic Foot. It causes the blending process to be aware of any dry filler.

Liquid – calculates density in Lbs/Gallon. It causes the program to be aware of the use of water and clay. Blending capacity may be stated in gallons when working with liquid blends.

Suspension – calculates density in Lbs/Gallon. The suspension setting causes the minimum amount of water to be calculated so the sum of all nutrients does not exceed the suspension target percentage or given salt out temperature specified in the Product Set.

Feed – this setting changes acres to tons on printouts and reformats the printed batch tickets for feed.

Blender Capacity – the default for the blender used to mix the product (may also be used as the capacity for the spreader). The capacity has an effect on the number of batches required for the blend. The capacity may be overridden at the *Blend* tab when generating a Blend Ticket. Also indicate how batches are measured – Lbs, Gal/CuFt, or KG.

Water & Clay Rate/Acre – if the water and clay percentages are not used, these optional Rate/Acre settings may be used to indicate the default amount of either item to include. They must be included in the list of products as well as in the *Key Inventory Items* to be used.

Minimum Gal/Acre – applicable only to liquid and suspension blend sets, the program adds enough water to meet this minimum if the calculated Gallons/Acre falls below this figure during the formulation process. If filled out, when a Blend Ticket is created, on the *Products* tab the water product is added in an amount so the blend meets this minimum setting.

Water % & Clay % – these optional settings cause water and/or clay to be added in as a percentage of the total product. If using these percentages, the *Clay Rate/Acre* and *Water Rate/Acre* must be zero or blank. To utilize either of these items, they must be included in the list of products making up the Product Set and in the *Key Inventory Items*.

Inactive – a checkmark indicates the Product Set is inactive. Marking a Product Set inactive prevents it from being available in the list of Product Sets on the *General* tab of the Blend Ticket window.

Key Inventory Items – double-click in the box next to each item to display the *Select a Product* screen. Indicate the inventory product for each of the items listed. Note the product used for clay must have a clay percentage filled in on the product's *Blend Setup* tab (found at *Hub / File / Open / Products*). The inventory department and product ID display to the right of the items for quick reference.

Batch Defaults – choose from *Equal load amounts* or *Partial based on capacity* options.

Location – specify the location for this Product Set. Only the Product Sets created for the location assigned to a Blend Ticket are available for

selection when the Blend Ticket is created. When an existing Blend Ticket is edited, product sets from all locations are available to use as needed.

Visible to Dispatcher Only – a product set that is “Dispatcher Only” is not visible to blend operators when adding or editing a Blend Ticket unless the dispatcher has saved the Blend Ticket with one of these product sets assigned to it.

Ship from Location – this option relates to the Dispatch module only. Specifying a Ship From Location on the product set allows the Dispatcher to be more in control of products available when selecting product sets in Dispatch to create automated blender files. This is available regardless of the selections in Accounting for the *Ship From Location* or *Sell From DeptID* preferences. Setting a location on a job through one of the viewing buttons (Ship From or Sell From) has the original product set associated with the blend, as well as any other product sets from other locations which match that location, available in the Product Set drop down list.

Allow Nutrient to Run Over – check any nutrient allowed to run over the requested analysis during formulation. When unchecked, the formulation blends low on one nutrient to avoid running over on another, if necessary.

Product – select up to 50 different items that may be used to satisfy an analysis. All items must be in the product list. If clay and/or water or dry filler are to be added automatically on a Blend Ticket, they must be on the list of products.

BO (Blending Order) – the order the products appear on the printed Blend Ticket and therefore the order the products are actually mixed. This order also appears on the Invoice if pricing is done on a product-by-product basis. The order may be overridden by using the **Reorder Products** button on the Blend Ticket.

Invoice – a checkmark indicates this item should display on the Invoice. Products included in a blend, but at no charge, could be unchecked. However, if pricing by analysis, the quantity may be inaccurate if an analysis item is not checked to be invoiced. Therefore, only uncheck products that do not need to be on the Invoice. If creating Blend Tickets for chemical blends, a Product Set is needed specifically for that purpose. The chemical Product Set will only contain water in the product grid.

Active List – this column determines the products available to use when fulfilling the requested analysis. This is helpful when products are frequently substituted. Some companies make one large Product Set and set the *Active* flag when formulating a blend. However, dry and liquid products should be on separate Product Sets in order for the proper density to display.

Set Limits – used to set the maximum and minimum limits on the nutrients. The following screen is an example of setting constraints on a product.

***Hint:** Double-click in the first available row under the product column to display the Select a Product screen. Select the products needed and click **Done**.*

***Warning:** If too many constraints are set, the formulation may not be able to return a blend that meets the analysis request and ALL the constraints set. If this happens, a warning appears that states the nutrient goal was not met.*

Set Nutrient Limits

Product: Urea (46-0-0)

	Maximum % of Total Nutrient That This Product Is Allowed To Supply	Minimum % of Total Nutrient That This Product Must Supply
N	50	0
P	0	0
K	0	0
S	0	0
U	0	0
C	0	0
M	0	0
Z	0	0
F	0	0
M	0	0
C	0	0
B	0	0

Tip: Limits Only Apply When Using Least Cost Blending. You Can Have Both a Minimum and a Maximum Limit on Each of the Major Nutrients. A Value of 0 Indicates That The Limit is Turned OFF.

Save Cancel

For more information, see the Constraints section in the Technical section in this manual under “[Product Set Constraints](#)” on page 85.

Insert Row – highlight a row in the Product grid, then use this button to insert a product above the selected row. This allows a product to be added after the initial setup of the Product Set.

Advanced Button – General

Used for liquid and suspension blends, this screen allows customization of several options.

Advanced Setup

General Add On Products

<Base Grade> []

Salt Out Parameters

Use Equations Formulate to a given Salt Out Temp

System: 55% Poly UAN

Maximum Salt Out Temperature: []

Suspension Blend Target %: 38

P% Guarantee Limit (999 = Off): 999

% Chlorine Warning (0 = Off): 0

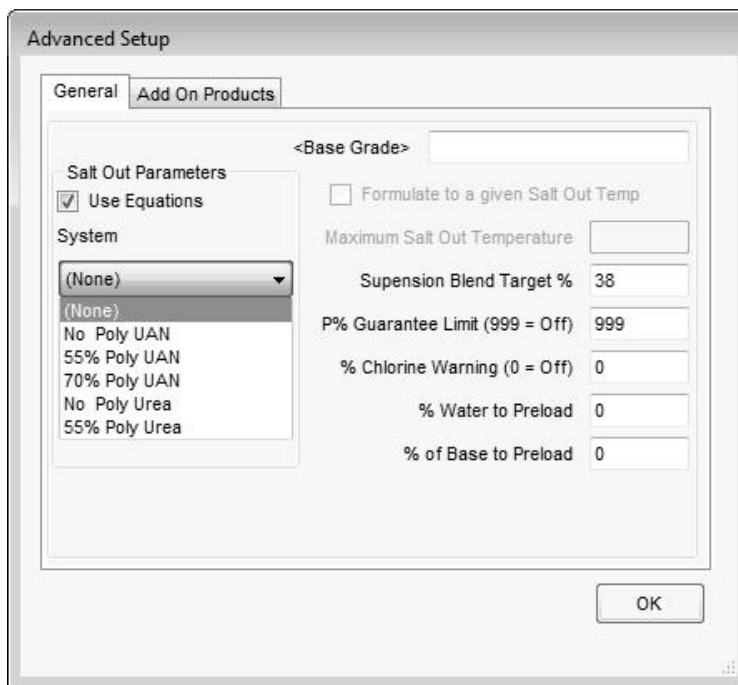
% Water to Preload: 0

% of Base to Preload: 0

OK

Salt Out Parameters – selecting the *Use Equations* checkbox activates the use of Formshare equations to calculate salt out temperatures. If *Use Equations* is unchecked while one of the five Systems is selected

Agvance uses the original/alternative method. The *System* drop-down box has several choices. Select the option that best fits the need. If '(None)' is selected as the *System*, no salt out temperature will be calculated.



No Poly UAN – this is for solutions that contain Urea Ammonium Nitrate (UAN) solution and no ammonium polyphosphate.

55% Poly UAN – for solutions that use standard quality polyphosphate and UAN solution as their primary ingredients.

70% Poly UAN – for solutions that use higher quality polyphosphate 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. For this to show up on the Field Plan, there must be a **% of Base to Preload** figure other than zero. This product is 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.

Formulate to a given Salt Out Temp – check this box to allow the program to verify the salt out temperature during formulation and make adjustments if needed. This checkbox is only available for ‘Suspension’ type Product Sets and when *Use Equations* is not checked. One of the Salt Out Parameter Systems must be set in order to formulate to a salt out temperature.

Maximum Salt Out Temperature – enter the maximum salt out temperature used for a ‘Suspension’ Product Set. *Use Equations* must not be checked for this option to be enabled.

Note: *If formulating to a given salt out temp, then set the suspension blend target to 9999.*

Suspension Blend Target % – this is the total analysis % (sum of the nutrients' percent concentration) that the guaranteed analysis cannot exceed when formulating a Suspension blend. If the percentage is higher than this number, a prompt appears for the blend operator to decide if water is to be added to the blend until the total of the nutrients' guaranteed analysis is at or below this setting.

P% Guaranteed Limit (999=Off) – this upper limit setting for the P2O5 Guaranteed Analysis adds water to the blend until this blend's P2O5 guarantee is at the upper limit entered here. This is used by companies when the amount of a product should be limited, such as Acid, to keep the fertilizer mixture from getting too hot. A setting of '999' deactivates this checking.

% Chlorine Warning (0=Off) – the percentage at which a warning is displayed after formulating a blend. If set to zero, the warning is disabled.

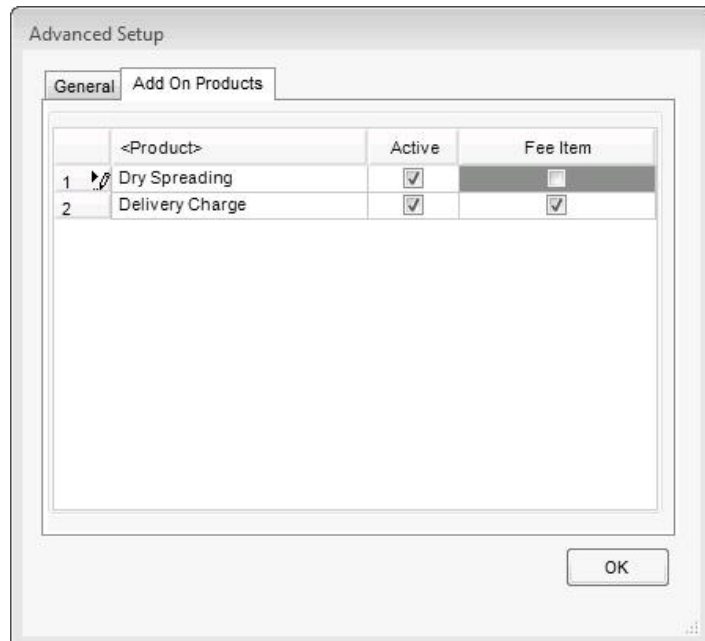
% Water to Preload – if completed, the percentage of water is listed first on the Blend Ticket regardless of its blend order.

% of Base to Preload – if completed, the percentage of the Base Grade product is listed first on the Blend Ticket regardless of its blend order.

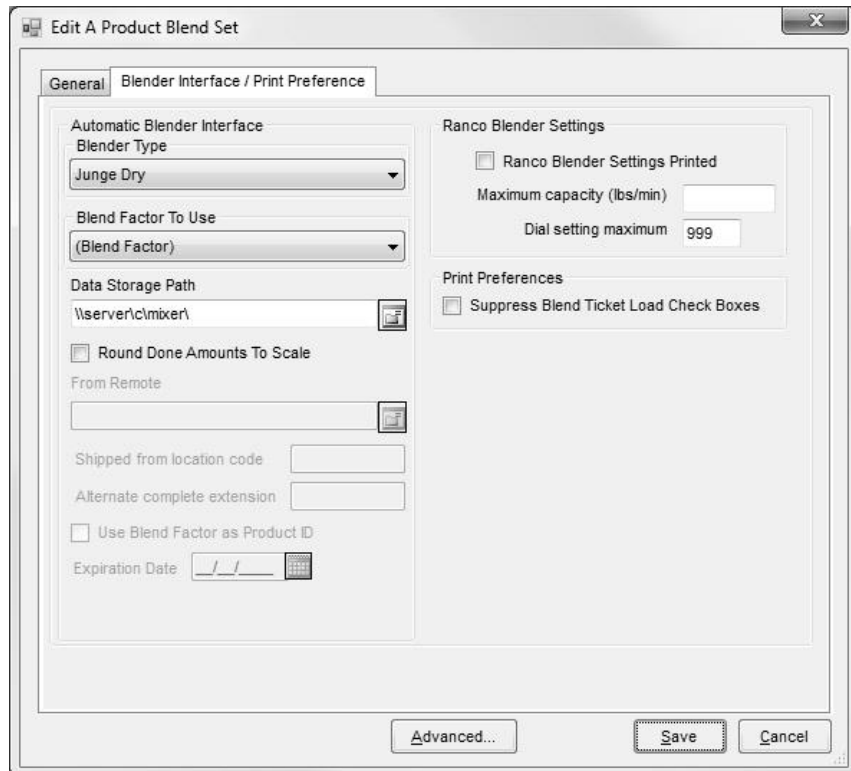
Advanced Button – Add On Products

This may be set to add any product automatically to a Blend Ticket or Field Plan when formulating to an analysis. Double-click on the <Product> heading and select the products to add. Each product marked as *Active* is added to the Blend or Plan when the **Formulate** button is clicked. This is often used for items such as delivery charges, mixing fees, or surcharges.

The *Fee Item* checkbox should not be checked if the Add On Product is to be charged per acre, such as custom application for example. If the Product is to be charged per pound or per unit of blended material, the *Fee Item* checkbox should be checked.



Blender Interface / Print Preference



Automated Blender Type – if interfacing with an automated blender, indicate the type of blender. Call SSI if the desired unit is not listed. For technical details of interfacing with specific automated blenders, see “[Automated Blender Interfaces](#)” on page 86.

Blend Factor to Use – this allows the same product to have multiple blend factors by using the product attributes setup at the *Hub / File / Open / Products* on the *Profile* tab.

Data Storage Path – it is recommended the Data Storage Path be set to the UNC path. (Example: [\\computername\drive\](#))

Round Done Amounts To Scale – in the blender files, if the final product amounts should be rounded based on the scale settings, select this option.

From Remote – available for certain blender types, enter the path where the blender file is located.

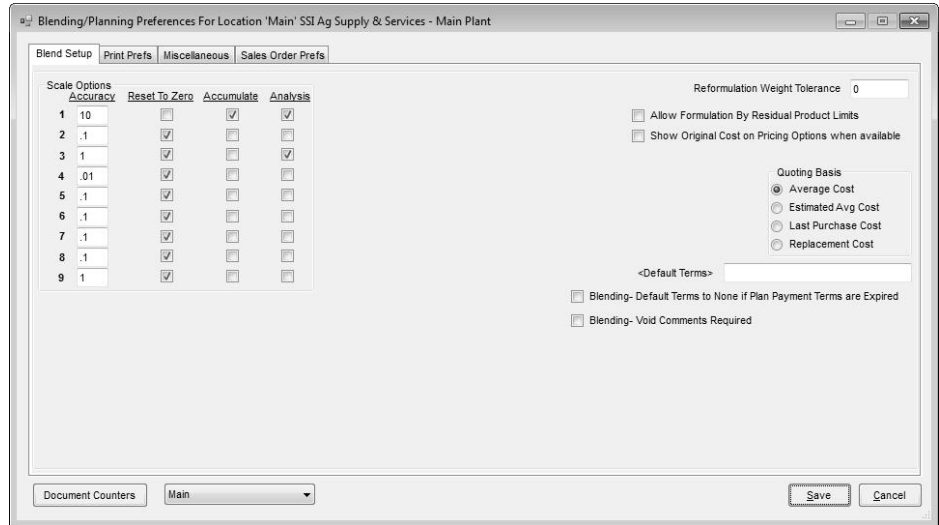
Ranco Blender Settings – this area allows the Product Set to figure and print the RPM settings needed to operate a non-digital Ranco Blender.

Suppress Blend Ticket Load Check Boxes – boxes to mark for orders requiring multiple batches typically print on the Blend Ticket. To override this default and suppress printing those boxes on the Blend Ticket, mark this option.

Location Preferences

Preferences allow options to be set, therefore customizing, to a degree, how the program works for the company. Often these “default settings” may be overridden as transactions are being entered. This information may be edited from either the Blending or Planning modules.

Blend Setup



Scale Options – these set the accuracy for a group of products. Each inventory department is assigned a scale setting, 1 through 9, assigned at *Hub / Setup / Inventory Departments*. Setting a scale also allows a group of items to be separated on the Blend Ticket. Each time a new scale is used on the ticket, a line separates the items.

Accuracy – enter the blending accuracy to the nearest unit. This is a practical way to manage inventory relief. The *Blended* column on the *Products* tab of the Blend Ticket reflects the accuracy defined here. The amount is rounded and represents the quantity converted to inventory units, which is the amount taken out of inventory when the Blend Ticket is marked as *Loaded*.

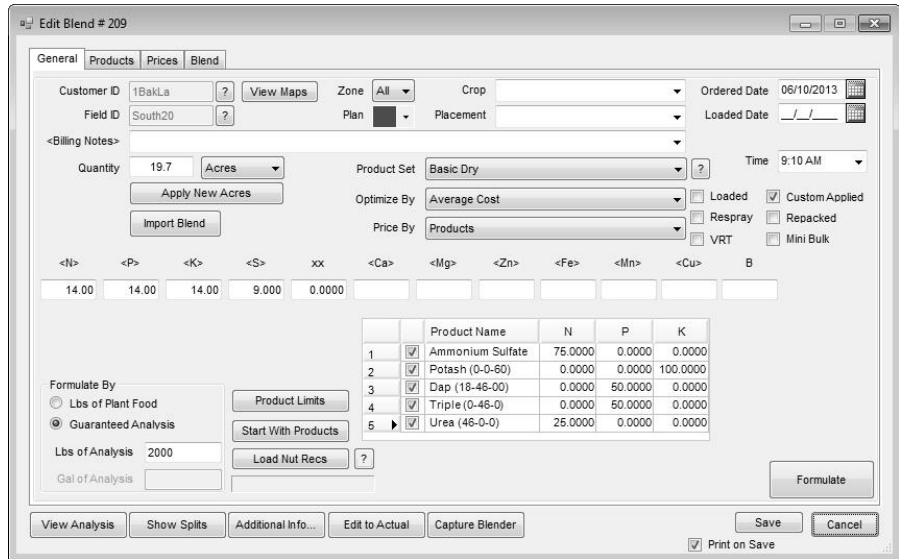
Reset to Zero – as the Blend Ticket prints, indicate if the accumulating figures should reset to zero when the department changes.

Accumulate – as the Blend Ticket prints, the product quantities accumulate from product to product, giving a cumulative weight. This method is generally used for fertilizer products loaded one after the other on a scale to give the proper scale stops.

Analysis – a checkmark indicates any items in departments set to this scale are to be included in the blended and guaranteed analysis weight calculation.

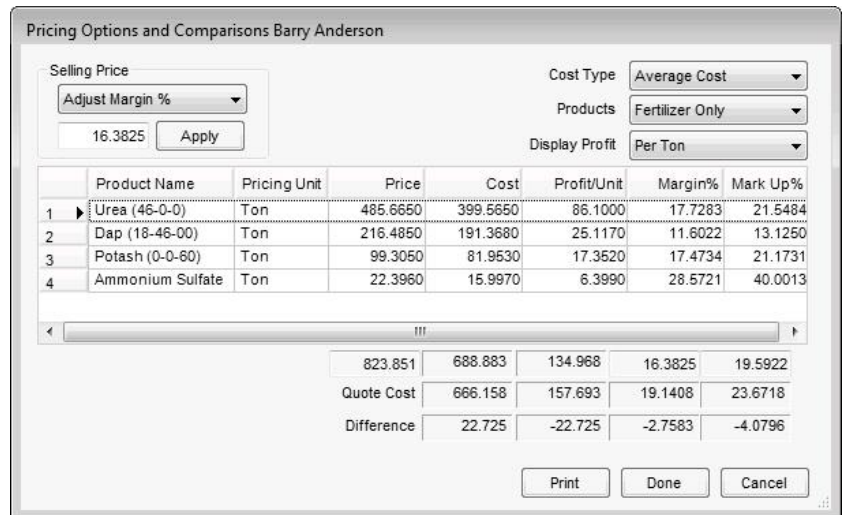
Reformulation Weight Tolerance – when an analysis quoted blend is reformulated, this tolerance controls how much the new analysis may vary from the original and still be considered the same analysis.

Allow Formulation by Residual Product Limits – this feature is available only when formulating by Guaranteed Analysis. It allows a % of the N, P, and K supplied by certain products to meet the analysis requested to be specified on the Blend Ticket. When checked, the Blend Ticket displays a **Product Limits** button (see below).



Clicking **Product Limits** displays the grid of products. Specify which products in the product set supply what % of the N, P, and K nutrients. Each column must total to 100. This feature allows analysis blends to be customized outside the usual parameters of the *Optimize By* feature.

Show Original Cost on Pricing Options when available – when a quoted and approved Field Plan is imported into a Blend Ticket, additional cost and margin comparisons are added to the *Pricing Options* window. Field Plans are usually made well ahead of season and product costs may have changed before the application is actually made. These display in the Quote Costs area. This allows comparing the original cost and margins quoted on the Field Plan to those of the products at the time the Blend Ticket is made.



Quoting Basis – the cost, not selling price, saved with each line item of the Blend Ticket. ‘Loaded’ tickets are valued on this basis when calculating available credit for a customer.

<Default Terms> – payment terms set here default into new Field Plans and Blend Tickets.

Blending – Default Terms to None if Plan Payment Terms are Expired – check this box to keep expired payment terms from a Field Plan from being used when the Plan is imported into a Blend Ticket.

Blending – Void Comments Required – with this option selected, when a Blend Ticket is voided, a box appears requiring a *Void Reason* be entered. The reason that is entered gets prepended onto the Blend Ticket comments on the voided ticket.

Document Counters – allows the Blend Ticket and Sales Order numbering sequences to be either global or location specific, and to set the first number of that sequence.

Location selection box – these preferences are set by location. By selecting the various locations, the preference settings may be changed for the selected location.

Print Prefs

The screenshot shows the 'Blending/Planning Preferences' dialog box for location 'Main'. The 'Print Prefs' tab is selected. The 'Field Plan' section includes 'Print Company Heading' (checked), 'Analysis String to Print' (None), and 'Format' (Standard). The 'Blend Ticket' section includes 'Regular Font Size' (selected), 'Large Font Size' (selected), 'Calculated Lbs.' (selected), and 'Adj Scale Start' (checked). The 'Create Automated Blender File' section includes 'Print From Add' (checked), 'Print From Edit' (checked), and 'Print From Dispatch' (checked). The 'Consolidated Blend Ticket' section includes 'Print Department ID' (unchecked), 'Suppress G. Analysis' (unchecked), 'Suppress Density' (unchecked), 'Print Tech Lic #' (unchecked), 'Print Lot #' (unchecked), 'Print Blend Comments' (unchecked), and 'Print Field Directions' (unchecked). The 'Custom Application Sheet' section includes 'Suppress Soil Conditions' (unchecked), 'Print Manufacturer' (unchecked), 'Print Totals in these Units' (Blending), and 'Print on Collated Paper' (unchecked). The 'Guaranteed Analysis Decimal Accuracy' table is shown below.

	Accuracy	Tolerance
N	Whole	0
P	Whole	0
K	Whole	0
S	Tenths	0
Ca	Tenths	0
Mg	Tenths	0
Zn	Hundredth	0
Fe	Hundredth	0
Mn	Hundredth	0
Cu	Hundredth	0
B	Hundredth	0

Field Plan

Print Company Heading – check this box to print the company heading on the Planning forms, or leave unchecked if using pre-printed forms.

Analysis String to Print – options include None, Blended Analysis, Guaranteed Analysis, or Both.

Format – select Standard, Standard-Invoice, or Bill To/Ship To-Invoice, or Bill To/Ship To format.

Blend Ticket

Regular/Large Font Size – controls the font size of the product's names and their quantities to mix on the printed Blend Ticket.

Calculated Lbs. – allows the calculated pounds of a product for each line item to display on the Blend Ticket, regardless if the product is rated in pounds.

Adj Scale Start – allows a starting weight to be entered for the scale settings on the Blend Ticket to allow for the weight of the truck, if known.

Print Salt Out on Blend – selecting this option prints the salt out temperature on the Blend Ticket.

Print Ticket # Barcode – when selected, this options prints a barcode on the Blend Ticket that represents the Blend Ticket number. This option is used by certain blender interfaces.

Print Container ID – with this option selected, for products tracked in the Refillable Container Management area, the refillable container ID prints on the Blend Ticket.

Print VRT Ticket on Single Page – when selected, one Blend Ticket prints for all products on the blend, regardless of the VRT checkbox setting on the Blend Ticket.

Create Automated Blender File – options are available to create the automated blender file from a Blend Ticket. There are options to print from the Add and/or the Edit of a Blend Ticket and also an option to print from Dispatch.

Consolidated Blend Ticket – select the options include on the Consolidated Blend Ticket. The available options are *Print Department ID*, *Suppress Guaranteed Analysis*, *Suppress Density*, *Print Tech License #*, *Print Lot #*, *Print Blend Comments*, and *Print Field Directions*. Field Directions are set in the Hub at *File / Open / Fields / Edit*.

Custom Application Sheet – options are available to *Suppress Soil Conditions*, *Print Manufacturer*, *Print Totals in these Units*, and *Print on Collated Paper* on the Custom Application Sheet.

Guaranteed Analysis Decimal Accuracy – when printing the guaranteed analysis, indicates how many decimal places are displayed for each nutrient with the *Accuracy* selection. Different maximum amounts are allowed for different types of nutrients. Tolerances function in the following manner: The number in the *Tolerance* is added to the nutrient's blended and guaranteed analysis, then truncated to the accuracy set on the nutrient. For example, true truncation would have a tolerance set to zero. Regular rounding with an accuracy of whole numbers and a tolerance of .5 would act as normal rounding rules of math. In situations where true rounding is not desired, consider adding 0.1 to the analysis to push for the desired accuracy.

Other Preferences

Print Product ID on Blend Documents – when this option is selected, the product ID prints on the blend documents. Selecting this option enables the *Spaces* drop-down box, which allows setting the amount of space between the ID and name.

Print Farm Info – when marked, the *Farm ID* and *Description* print on all blend documents.

Do Not Print Zero Rate/Acre Line Items – select this option if products with a zero rate per acre should not be printed on the Blend Ticket.

Note: State agricultural departments regulate tolerances (decimal accuracy). It is important the accuracies be set to the tolerances tested by the inspector.

Print Selected Items in KG – when checked, the blend documents display the batch weight in units of KG/Batch.

Print One Ticket per Load – when checked, each batch from the Blend Ticket prints on a separate page. The *Print on Collated Paper* option also becomes active when this option is selected.

Print on Collated Paper – selecting this option allows printing on multi-colored collated paper.

Print “See Terms On Reverse Side” on all “Received by” lines – provides direction for users to the location of the terms.

Record Conditions on Save of Blend Ticket – when selected, the *Record Conditions* screen displays when the Blend Ticket is saved.

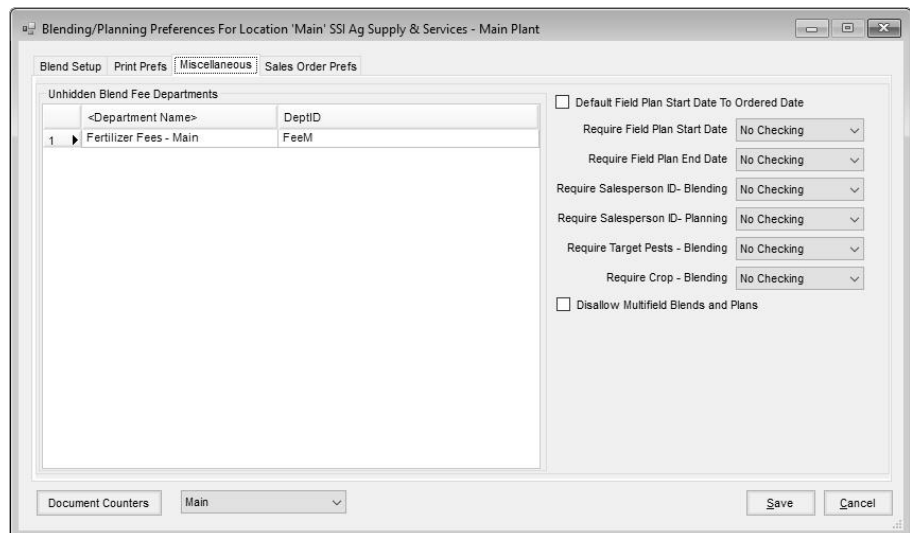
Review Tag Numbers – review and edit the customer’s state fertilizer tag prior to printing.

Manufacturer License – prints the license number of the product manufacturer.

Tag Review – Perform CI Warning – when checked, if the chlorine concentration of the blend is greater than the percent specified in the Product Set, a warning displays.

Suppress Zeros on Tags – selecting this option suppresses zero percent guaranteed analysis and nutrient break downs from printing on Blending documents.

Miscellaneous



Unhidden Blend Fee Departments

<Department Name> – products included on the blend from the departments specified here print on the blend documents like other add-on items. The products are reset at the *Edit to Actual* function but remain outside the analysis. For example, when charging buggy rental by the ton, the program keeps the “Unhidden Fee” item’s quantity matched to the total fertilizer quantity when using **Edit to Actual** to update the Blend Ticket. If the total weight of

the load is adjusted from 6400 to 6550 pounds, for example, the “Unhidden Fees” are also adjusted to the total weight of 6550.

Default Field Plan Start Date to Ordered Date – when Field Plans are imported into Bookings, with this option selected, the *Start Date* from the Field Plan is set as the *Ordered Date* on the Booking.

Require Field Plan Start Date or End Date – the options are ‘No Checking,’ ‘Warning Only,’ or ‘Disallow Save.’ When warning or disallowing the save, the existence of the *Start Date* or *End Date* is verified when saving a Field Plan.

Require Salesperson ID – Blending / Planning – the options are ‘No Checking,’ ‘Warning Only,’ or ‘Disallow Save.’ When warning or disallowing the save, the existence of the *Salesperson* is verified when saving a Blend Ticket or Field Plan.

Require Target Pests - Blending – optionally set to ‘Warning Only’ or ‘Disallow Save’ when a target pest is not entered on the Blend Ticket.

Require Crop - Blending – the options are ‘No Checking,’ ‘Warning Only,’ or ‘Disallow Save.’ When warning or disallowing the save, the existence of a crop is verified when saving a Blend Ticket.

Disallow Multi-field Blends and Plans – with this option selected, only a single field may be selected when entering Blend Tickets or Field Plans.

Sales Order Prefs

These settings control the preferences for Sales Orders for the selected location.

Blending/Planning Preferences For Location 'Main' SSI Ag Supply & Services - Main Plant

Blend Setup Print Prefs Miscellaneous Sales Order Prefs

Default Offer Expires Date
Number of Day(s) 2 (0 = Today) Exclude Weekends

Lock Offer Expires Date

Require Offer Expires Date

Disallow Approval of an Expired Sales Order

Disallow Edit of an Approved Sales Order

Disallow Edit of Declined Sales Order

Disallow Edit of an Offered Sales Order except to set Status to Approved or Declined

Disallow Save of Sales Orders with Products from different Locations

Disallow Save of Sales Order Exceeding Allocation Amount

Disallow Delete of Sales Order in Mobile Sales

Disallow Save of Sales Order with a negative Quantity

Document Counters Main Save Cancel

Default Offer Expires Date – selecting this option sets the expiration date automatically when entering Sales Orders.

Number of Days – enter the number of days for the default expiration date.

Exclude Weekends – marking this option skips weekends when calculating the *Offer Expires* date.

Lock Offer Expires Date – with this option unchecked, the Expiration Date may be edited on the Sales Order. Selecting this option locks the Expiration Date so it is not available to be edited.

Require Offer Expires Date – this option verifies that an Offer Expires Date is entered on the Sales Order.

Disallow Approval of an Expired Sales Order – when selected, expired Sales Orders may only have the Status changed to ‘Declined.’

Disallow Edit of an Approved Sales Order – with this option selected, the only change that is allowed to an Approved Sales Order is changing the status to ‘Declined.’

Disallow Edit of Declined Sales Order – once a Sales Order is marked as ‘Declined,’ with this option selected, edits to that Sales Order are not allowed.

Disallow Edit of an Offered Sales Order except to set Status to Approved or Declined – this preference, when marked, restricts editing Sales Orders with the exception of changing the Status to ‘Approved’ or ‘Declined.’

Disallow Save of Sales Orders with Products from Different Locations – selecting this option check the products on the Sales Order to verify the products are from one location. If multiple location’s products have been selected, the save of the Sales Order is not allowed.

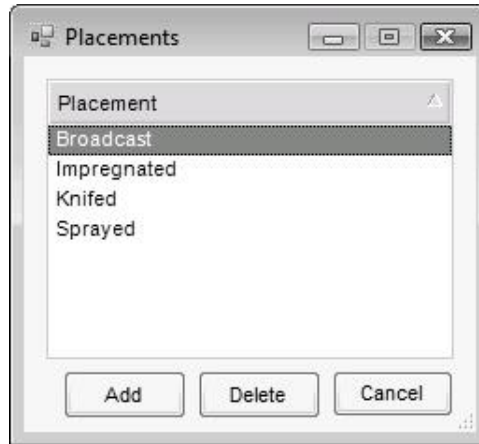
Disallow Save of Sales Order Exceeding Allocation Amount – this option, when enabled, checks the Sales Allocation amounts to confirm the Sales Order does not exceed the Sales Allocation amounts.

Disallow Delete of Sales Order in Mobile Sales – with this option selected, Sales Orders will not be allowed to be deleted in the Mobile Sales module.

Disallow Save of Sales Order with a negative Quantity – marking this option does not allow negative quantities to be entered for products on Sales Orders.

Placement

When generating a Field Plan or Blend Ticket, select the placement from the drop-down list. Available options are set up in Blending or Planning under *Setup / Placement*. Several ‘Placement’ methods come loaded with the program, but items may be added or deleted from the list.



Set Default Location

In a multi-location company, select the location to use for the blending transactions. A location is associated with each Blend Ticket. The location selected affects which inventory departments default as products are selected. A warning is given when attempting to generate a blend for a grower not associated with the current location.

Crop Chemistry

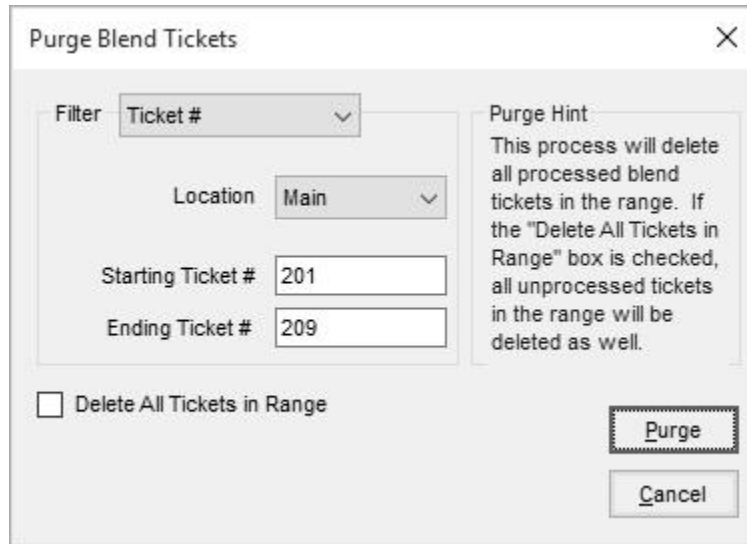
Crop Chemistry is now an optional selection on the *General* tab of the Blend Ticket. Due to Roundup resistance issues, chemistry applied on the field may be recorded for future reference.

Utilities

Note: *If Blend Tickets exist to be used as templates, be sure these tickets are not included in the purge process.*

Purge Blend Tickets

Ending the fiscal year does not purge Blend Tickets from the new fiscal year database. Therefore, purging tickets allows the company to remove the tickets from the new fiscal year. **This optional utility should only be used AFTER ending the fiscal year. It is also strongly recommended to back up the data before performing this function.** The utility purges Blend Tickets for all locations, based upon the selected filter option. The options are Ticket number range or Ticket Date range. To purge only tickets that have been invoiced, DO NOT place a check in the *Delete All Tickets in Range* checkbox. If there are tickets that have not yet been transferred to the field history file, or invoiced, a warning appears before deleting. When the purge process has completed, enter in the new starting ticket number.



ASCII Transfers

Designed to allow the transfer of Blend Ticket information to programs other than SSI's Agvance modules, the file created is saved in the avdata folder with the rest of the Agvance data. Optionally, enter in the full file path and 'Filename.'

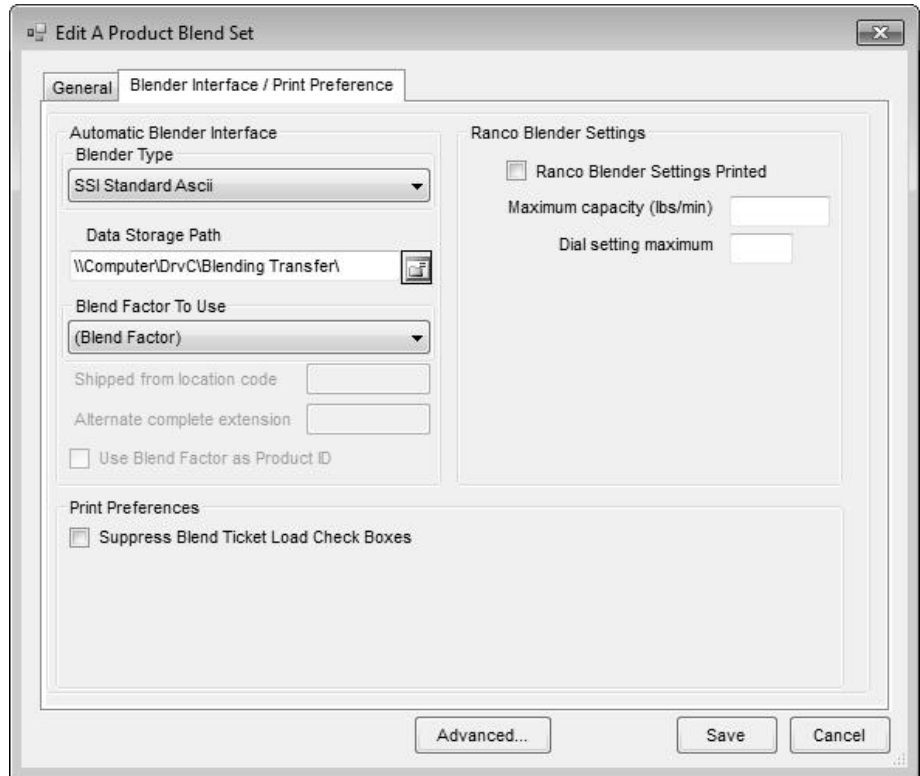
Blend Plant Transfers

The *Blend Plant Transfer* utility allows a location that does not have a blending facility to create Blend Tickets for a customer and field, and then export the ticket to a facility that will make and edit the blend. The facility physically making the blend sends the ticket back to the original location where the ticket is imported back in to the customer and field. Some set up is required to facilitate this process. Note: Both companies must have the Agvance Blending module.

Set Up Procedure

1. Facility A has the customer and field set up.
2. Facility A has the products from Facility B set up with the same blend factors or attributes as Facility B.
3. Facility A sets up a folder on the C drive and sends the files created from the blending program to that folder.

Facility A sets up a Product Set using products from Facility B. On the *Blender Interface* tab, *Blender Type* should be set to 'SSI – Standard ASCII' and the *Data Storage Path* directed to the folder created in step 3. The UNC naming convention is recommended for the path. For example: `\\Computer\Drvc\Blending Transfer`.



4. Facility B sets up Facility A as a customer and creates a field (usually an ALL field).
5. Facility B sets up products that match the blend factors or attributes of those created at Facility A in step 2.
6. Facility B creates a folder on the C drive where the files from Facility A are placed.

Tip: If the name of the folder created at Facility B is the same as the Customer ID assigned to Facility A, then the customer ID defaults automatically at the import screen.

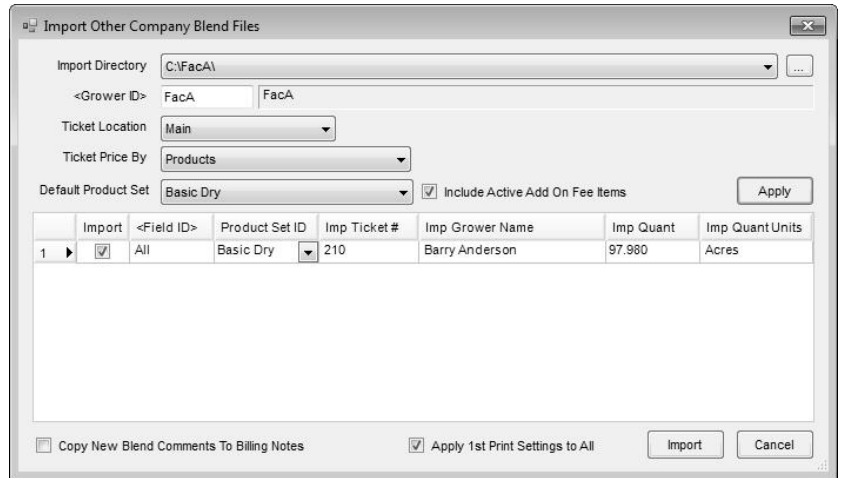
Creating a Blend Ticket to Transfer

1. Create a Blend Ticket at Facility A using the Product Set made specifically for the blend plant transfer.
2. At the save of the ticket, the *Print Blend Documents* window has a *Create Automated Blender File* option. The customer name is included in the file unless the *Suppress Customer Name in Export File* option is selected. Marking the *Create Automated Blender File* box saves a file in the folder created in step 3 of the setup directly above. This file contains an REQ extension.
3. Facility A sends the REQ file to facility B via email, FTP, or some other electronic means.

Importing the Ticket at the Blending Facility

1. Facility B places the file received from Facility A in the folder created in step 6 of the Set Up Procedures.

2. Select *Utilities / ASCII Transfers / Blend Plant Transfers / Import*. Choose the *Import Directory* (i.e. the folder created at Facility B). Search by clicking the box with the ellipses.



3. The *Ticket Location*, *Ticket Price By*, and *Default Product Set* are options to determine how the ticket is handled at Facility B but do not affect the original Blend Ticket created by Facility A. Facility B chooses the appropriate options from the drop-down selections and clicks **Apply**.
4. Check the box in the *Import* column for tickets that are ready to blend. The Ticket Number, Customer and Acres of the original Blend Ticket appear on the new Blend Ticket created for Facility B.
5. Click **Import** and the new Blend Ticket is created for Facility B. The new Blend Ticket displays on the screen, followed by the *Print Blend Documents* window.
6. After printing the Blend Ticket, Facility B mixes the blend, edits the ticket if necessary, and marks the ticket as *Loaded*.

Note: When the 'Apply 1st Print Settings to All' box is marked, all documents set to import will retain the same print settings as specified on the first ticket.

Exporting the Ticket from the Blending Facility to the Original Facility

1. Facility B goes to *Utilities / ASCII Transfers / Blend Plant Transfers / Export* to export the ticket. At the *Export Other Company Blend Files* screen, select the path to the folder created in Step 6 of the Set Up Procedure. Input the <Grower ID> if it does not default in. Click **Export**. A file with an ACT extension is created in the export directory. Facility B sends this file back to Facility A.



- When Facility A receives the file and saves it in the original folder, the process is completed by using Read Blender, Capture Blender, or Import Automated Blender Done Files.

Export Blend Tickets

This utility exports ASCII files to be imported into other software programs. For more information, call SSI.

Automated Blender Interface

This program launches the Automatic Blender Interface developed by SSI to control the Ranco Automated Blender. For more information, call SSI.

Note: The program can support multiple Ranco blenders on one network. Call SSI for more information on this capability.

Yargus Setup Program

This setup is used by companies with Yargus blenders. Please contact SSI for setup instructions.

Batch Print Fertilizer Tags

This utility is designed for printing fertilizer tags to comply with state guidelines for bagged fertilizer. For more information, call SSI.

Batch Print Consolidated Blends

This utility allows batch printing Consolidated Blends based on a date range or ticket range. Additional filtering options are also available.

Batch Print Consolidated Blends

Printer: \\SU_MELISSA7\HP LASERJET P2050 SERIES PCL6 # Copies: 1

Print \$/Acre Print \$/Ton Print Analysis Recap

Select Locations: All Select

Select Range:

- Blend Date Ordered
- Ticket Range

Start Date: 03/25/2015 End Date: 03/25/2015

Print:

Ticket Type: Not Processed

Include Voided / Reverse(d) Tickets

Sort By:

- Ticket #
- Customer Name

Print Cancel

Generate Repete SABRE NXT Done Files

For more information on this feed blending interface, contact SSI.

AgSync User Setup

For more information on this feature, contact SSI.

Dispatch Job Status

For companies using the Dispatch module, this utility allows viewing the status of application jobs filtered by the selected criteria. Blend Tickets may be opened and edited from this window. The **Set Ready** button allows the *Dispatch Status* on the selected Blend Ticket to quickly be changed to 'Ready.' For more information, contact SSI.

The screenshot shows a window titled "Dispatch Job Status" with a table of application jobs and a filter panel at the bottom.

Ticket #	MultiField	Applied Date	Customer Name	Customer ID	Blend Quantity	Unit of Measure	Farm ID	Farm Description
201	<input type="checkbox"/>	03/15/2003	Wheeler Gary	1WheGa	80	Acres	Home	Home Farm
202	<input type="checkbox"/>	03/15/2003	Baker Larry	1BakLa	38	Acres	All	
203	<input type="checkbox"/>	03/15/2003	Anderson Barry	1AndBa	66.2	Acres	AndFred	Fred Anderson Fa
204	<input type="checkbox"/>	03/15/2003	Bummer Jimmy	3BumJi	44.7	Acres	All	
205	<input type="checkbox"/>		3Quote	3Quote	1	Acres	All	
206	<input type="checkbox"/>	03/23/2015	Anderson Barry	1AndBa	66.2	Acres	AndFred	Fred Anderson Fa
209	<input type="checkbox"/>		Anderson Barry	1AndBa	97.98	Acres	AndFred	Fred Anderson Fa
210	<input type="checkbox"/>		Anderson Barry	1AndBa	33.71	Acres	SouthFar	South Farm
211	<input type="checkbox"/>		Anderson Barry	1AndBa	60.57	Acres	BarbWire	Barry's Wire Farm
212	<input type="checkbox"/>		Anderson Barry	1AndBa	65.59	Acres	BarbWire	Barry's Wire Farm

Below the table is a filter panel with the following controls:

- Ticket # input field
- Select Range:
 - Blend Date
 - Ticket Range
- Start Ticket # input field (value: 201)
- End Ticket # input field (value: 212)
- Ticket Status:
 - Loaded Only
 - Unloaded
 - Both
- Location dropdown menu (value: All)
- Job Status dropdown menu (value: Ready)
- Applicator dropdown menu (value: All)
- Vehicle dropdown menu (value: All)
- Apply button
- Set Ready button
- Edit Ticket button
- Close button

Tutorial

Overview

In this section, a variety of Blend Tickets will be created. The examples are designed to give an overview of the many ways the Blending module may be used.

It helps to know all Blend Tickets have a status indicating if they are actually loaded (and therefore affect inventory) or saved but not yet affecting inventory. This important status flag is discussed in the following exercises but is only important if using Agvance Accounting which features full inventory control, both in-bound and out-bound.

The exercises do not cover all the features and topics of the Blending program. The lesson data may be used to experiment with any other features of interest. All the topics are featured in the Menu section of the manual. Blend Tickets may be entered and purged without consequence as long as the tickets are not marked "Loaded." Experimental Blend Tickets may be purged at *Utilities / Purge Blend Tickets*.

Creating Blend Tickets

Dry Blend

Blending to an ordered analysis is quite common. The following dry blend introduces the blending screens and some of the many options available.



Add a Blend Ticket shortcut

Hint: An alternative method of adding a ticket is through *File / Open / Blend Tickets*.

1. In the Agvance Blending module, click the **Add a Blend Ticket** shortcut button.
2. At the *Select a Field* screen, choose Larry Baker's South20 field. Click the **Select** button. Another screen displays the billing splits for Larry's South20, along with all the other fields under Larry's name that are now available to add to this Blend Ticket. Click **OK**.
3. The blending function has several facets, each represented by a different 'tab.' Specifics about the job are defined on the *General* tab. The actual products used, along with their rates are displayed on the *Products* tab. Pricing information is set on the *Prices* tab. The *Blend* tab is used to specify the size and number of batches as well as enter application-related information.

Fill out the *General* tab as shown in the following screen, entering the requested analysis of 36-92-120.

Customer ID: 1BakLa, Field ID: South20, Zone: All, Crop: Corn, Placement: Broadcast, Ordered Date: 03/25/2015, Loaded Date: / / , Time: 11:16:52 AM

<Quantity>: 19.700 Acres, Product Set: Basic Dry, Optimize By: Average Cost, Price By: Products

<N>	<P>	<K>	<S>	HA	<Ca>	<Mg>	<Zn>	<Fe>	<Mn>	<Cu>	B
36.00	92.00	120.00									

Formulate By: Lbs of Plant Food, Guaranteed Analysis

Lbs of Analysis: 100, Gal of Analysis:

Buttons: View Analysis, Show Splits, Additional Info..., Edit to Actual, Capture Blender, Formulate, Save, Cancel, Print on Save

Note: If a nutrient recommendation had been calculated for this field, you could click the **Load Nut Recs** button to automatically bring that into this screen.

Click the **Formulate** button to calculate the products from the selected blend set to satisfy the 36-92-120 analysis request.

- When the calculation is complete, the *Products* tab displays Dap and Potash, both at 200 pounds per acre. The *Total Product* column is shown in Rate/Acre units. The *Blended* column is the same quantity, but in blending units. Often this is the same as rating units, but may differ, especially in chemicals.

Additional products may be added by double-clicking on the *<Product Name>* heading. Add Ammonium Sulfate and Dry Spreading to the ticket. Enter 20 Lbs for the *Rate/Acre* on Ammonium Sulfate. Then click **Recalc Using Rate/Acre**.

<Product Name>	Rate/Acre	Unit	Total Product	Unit	Blended	Blended Unit	Scale	Lot #	Crop
1 Dap (18-46-00)	200.000	Lbs	3940.000	Lbs	3940.000	Lbs	1		Corn
2 Potash (0-0-60)	200.000	Lbs	3940.000	Lbs	3940.000	Lbs	1		Corn
3 Ammonium Sulfate	20.000	Lbs	394.000	Lbs	390.000	Lbs	1		Corn
4 Dry Spreading	1.000	Acre	19.700	Acre	19.700	Acre	5		Corn

Buttons: Recalc using Rate/Acre, Recalc using Total Product, Recalc using Blended, Recalc using Scale

Summary: Density: 63.156, % Water: 0, % Clay: 0, CuFt/Acre: 6.65, Total CuFt: 131.005, Est Salt Out Temp: N/A, Lbs/Acre: 420, Total Lbs: 8270, Est Temp Change: 0

Buttons: View Analysis, Show Splits, Additional Info..., Edit to Actual, Capture Blender, Save, Cancel, Print on Save

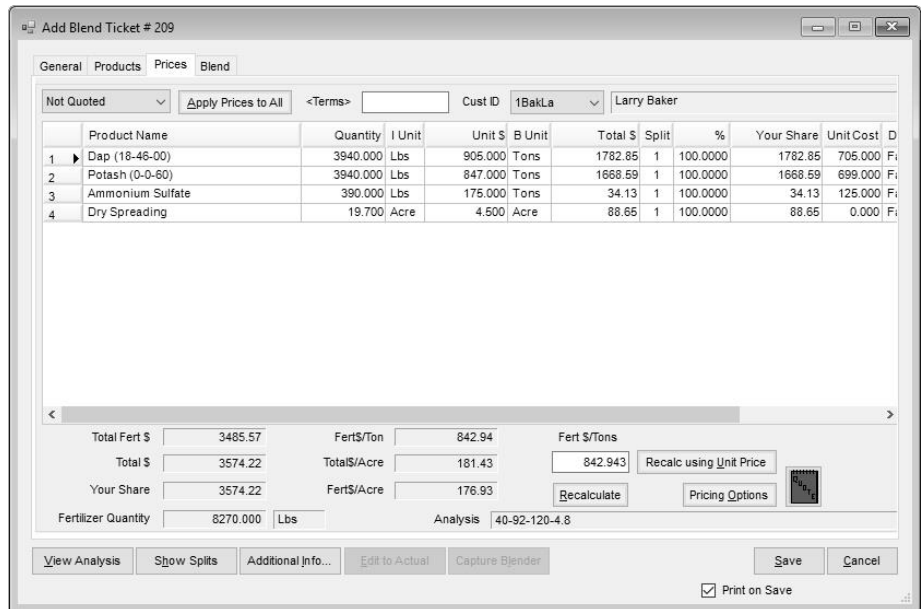
From this screen, the Blend Ticket could be saved and printed, but generally it is recommended to double-check the number of batches

calculated on the *Blend* tab. Also, the prices are often set or at least verified on the *Pricing* tab. For this example, we will edit information on these tabs prior to printing.

5. Click the *Prices* tab. The prices default from one of two places.

- In this case, the prices default the product’s List prices. Each product optionally has several price levels. If the customer involved in the blend is set to default to a price level other than “List” that level of pricing defaults here.

If the Blend Ticket originated from the Agvance Planning module’s Field Plan, where the product is formulated and quoted ahead of the actual product movement, the prices set on the Plan default if the Plan is selected in the drop-down list on the *General* tab.



Regardless of how the prices defaulted, they may be edited on this tab. If prices are edited, select the *Quoted* status prior to saving the Blend Ticket or edited prices will not be saved with the Blend Ticket.

Click on the *Blend* tab. By clicking in the text box, optional information may be added such as application notes, notes to the blend operator, and target pests. Functionally, the most important area is the *Batch Breakdown*. For this example, leave the # of batches set to “1.”

6. With the *Print on Save* option marked, click **Save** to save the blend and optionally print the documents from the *Print Blend Documents* window. Review the printed ticket:

- The top portion of the Blend Ticket has the basic field information displayed.
- The horizontal lines separating the products are determined by the 'scale' settings of each item. The lines are displayed to show a change in the scale. The scale accuracy is set at the *Setup / Location Preferences* on the *Blend Setup* tab. Each inventory department is assigned a default scale when the department is defined.
- In this example, the rating units and blending units were the same for all the products. The Rate/Acre is displayed as well as the Total Product. The Scale column shows the target scale reading as the blend is loaded.
- The ordered, blended, and guaranteed analysis are displayed below the products.
- Some ratios are printed in a box below the analysis.
- The number of batches is displayed. Depending on the setting from the *Blend Setup* preference tab mentioned above, the program either prints separate sheets for each batch or prints one sheet with a 'check-off' box for each batch.

Edit Load to Actual Weight

Many users weigh trucks after they are loaded then adjust the fertilizer inventory for the actual product. This exercise will demonstrate how this function works.



Edit to Actual Scale shortcut

1. At the Agvance Blending module, click on the **Edit to Actual Scale** shortcut button. Optionally edit the blend ticket then click the **Edit to Actual** button at the bottom of the screen.

- Highlight the ticket created in the first exercise for “Larry Baker's South20”, then click the **OK** button.
- The *Edit to Actual Scale* window will be displayed. The grid on the top half of the screen represents the separate loads necessary to fulfill the job. The grid at the bottom summarizes the products, showing the original weight and the edited weight.

Edit Ticket to Actual Scale (209)

Actual Scale Weights are in Kilograms

Enter actual scale weights

Load	Gross	Tare	Net
1	8300		8300
2			
3			
4			
5			

Blend Ticket: 209
 Total Analysis: 8270
 Total Lbs: 8270
 Total Acres: 19.7
 Grower ID: 1BakLa
 Field ID: South20

At the completion of this process, inventory levels will be adjusted and this ticket will be elevated to a 'Loaded' status for billing.

Apply Total: 8300

	Product	Old Weight	New Weight	U/Wght	Analy	Fee	Scale	Prorate
1	Dap (18-46-00)	3940.000	3954.292	1	Yes	No	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
2	Potash (0-0-60)	3940.000	3954.293	1	Yes	No	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
3	Ammonium Sulfate	390.000	391.415	1	Yes	No	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
4	Dry Spreading	0.000	0.000	0	No	No	<input checked="" type="checkbox"/>	<input type="checkbox"/>

OK Cancel

- On the top grid, either type in the *Gross* and *Tare* so the *Net* calculates or enter the net directly in either the *Gross* or the *Net* column. In this case, type 8300 in the *Gross* column in the Load 1 row.

Click **Apply**. Notice the New Weight column in the grid changes accordingly. The computer automatically prorates the change in weight over the items involved in the analysis (generally the fertilizer). For more information on how the new quantities are assigned, see “[Edit to Actual Scale](#)” on page 31.

Upon saving the edited ticket, it is marked as *Loaded* and therefore relieves inventory using the new quantity figures. Any of the blend-related documents may optionally be printed at this time.

- Click **Cancel** to close the *Select a Blend Ticket to Edit to Actual Scale* window.
- Click the **Record Conditions** shortcut button to enter specifics about the conditions during the application of the job. Complete the information on the window and click **OK**.
- From the main menu, select *File / Open / Blend Ticket*. At the *Select a Blend Ticket* screen, choose the Larry Baker South20 ticket used previously. Click **Reprint**. The *Print Blend Documents* screen displays with several document options. Select to print the Consolidated Page (in a multi-load job, this document summarizes the job) and the Custom App. sheet.



Record Conditions shortcut

Note: When checking the ‘Print Custom App’ box, go to the Individual Custom App. Options and check the ‘Print Gridded Map’ box since there is no map available from the Agvance Mapping module. A square field with gridlines will print where you can sketch field details.

8. The Consolidated Blend Ticket is often used as the billing control document. The Custom Application sheet is the application record for the customer file.

Building Product Sets

This exercise is duplicated in the Agvance Planning module. If the Basic Liquid Product Set has already been added in Planning, skip to the next exercise.

Product Sets are groups of inventory products often combined as blended products. The sets determine which inventory products are used on a Blend Ticket or Field Plan. In the formulation example above, the Basic Dry Product Set from sample data was used.

Liquid Product Set

In this exercise a liquid product set is added using products that already exist in the lesson data.

1. In the Blending module, choose *Setup / Product Sets*.
2. Click **Add**.
3. Fill out the screen exactly as shown below. Pay special attention to the *BO (Blending Order)* column. The blend order is the order in which the products are listed on the printed Blend Ticket (the order the products should be loaded into the blender) when the **Formulate** button is used to automatically select the products for the Blend Ticket.
4. The *Key Inventory Items* must be filled out whether they are used or not. Double-click in each key item box and select the corresponding product.

Note: To enter inventory items, double-click in the first empty text box under the Product heading column and a Select Products screen displays.

The screenshot shows the 'Add A Product Blend Set' window with the following details:

- General Tab:**
 - Set Description: Basic Liquid
 - Type: Liquid
 - Blender Capacity: 1200 Gal/CuFt
 - Water Rate/Acre, Clay Rate/Acre, Minimum Gal/Acre: (empty)
 - Water %, Clay %: (empty)
 - Inactive:
- Key Inventory Items:**
 - <Water>: Water (LiquiM)
 - <Clay>: Clay (LiquiM)
 - <Dry Filler>: Dry Filler (DryM)
- Batch Defaults:**
 - Equal load amounts:
 - Partial based on capacity:
 - Location: Main
- Allow Nutrient To Run Over:**
 - N P K S HA Ca Mg Zn Fe Mn Cu B
- Product Grid:**

	<Product>	BO (Blending Order)	Invoice	Active	Set Limits
1	12-0-0-26	4	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Set Limits
2	10-34-0	3	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Set Limits
3	10-30-0	3	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Set Limits
4	28-0-0	2	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Set Limits
5	32-0-0	1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Set Limits
6	Water	1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	Set Limits
7			<input type="checkbox"/>	<input type="checkbox"/>	Set Limits

Note: If billing by individual products, leave the *Invoice* checkbox next to water unchecked. If billing by analysis, the water **MUST** be included in the invoiced products.

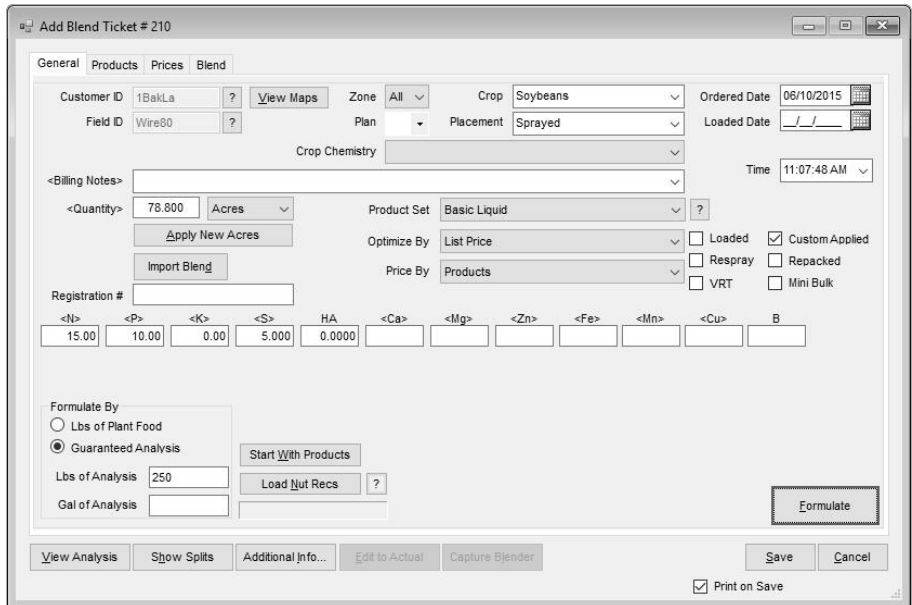
- The items marked in the *Invoice* column will appear on an invoice either listed separately or combined with other products to display the analysis in place of the individual product names.
- All items in the product grid are checked as 'Active.' By un-checking this column, the product is unavailable in the Product Set until it is checked as active again.
- Click the **Save** button. For more information on the Product Set screen, see "[Product Sets](#)" on page 50.

Liquid Blend

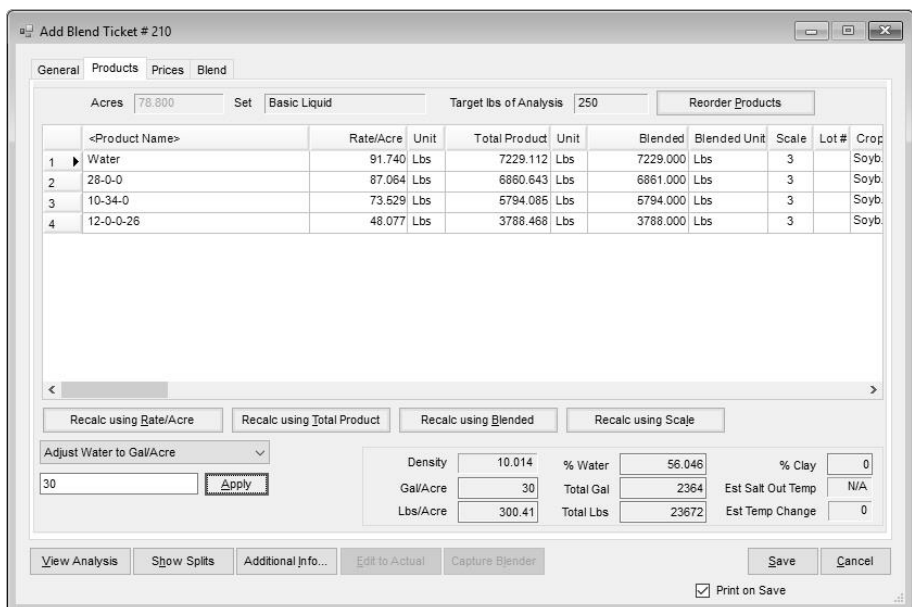
In this exercise, a liquid blend ticket is generated using the liquid blend set which was previously entered.

- Click the **Add a Blend Ticket** shortcut button.
- Select Larry Baker's Wire80 field, click **Select** and then click **OK**.

Fill out the *General* tab of the *Add Blend Ticket* window as shown below. Notice the Product Set has defaulted from the last ticket saved. Type in the analysis of 15-10-0-5. We also are formulating by guaranteed analysis to 250 pounds per acre.



3. Click **Formulate**. The *Products* tab displays with the products and quantities the program calculated based on least cost formulation, defined by the products in the liquid blend set.
4. Click the **View Analysis** button to see the Ordered, Blended and Guaranteed Analysis of the products used. Click **Close** to return to the Product screen.
5. The gallons per acre, the total pounds, or total gallons of product may be altered by selecting from the drop-down options in the lower left portion of the screen. When an option is selected, the current setting for the option displays. Type in the new amount and click **Apply**. Water is added to the blend to make the desired quantity.



6. For this example, we want to spray at the rate of 30 gallons to the acre. Select the 'Adjust Water to Gal/Acre' option in the lower left portion of the screen and type '30' in the box below it, replacing the 23.926. Click

Apply to have the program calculate the amount of water needed to make this rate change.

Because water was added to the blend, the guaranteed analysis has changed. Click **View Analysis** to view the new analysis.

7. Click the *Blend* tab to show the number of batches this job requires at the default blend capacity. At this point, either the capacity or the number of batches may be overridden. If one of those numbers is changed, re-calculate the other by clicking the **Calc this** button next to it.

For this example, edit the capacity to 1750 Gallons and change the batch breakdown to *Partial*. Click the **Calc this** button next to the '# of batches.' Notice the number of loads did not change, only the way in which the batch is broken out.

8. To save and print this Blend Ticket, click the **Save** button and select the Blend Ticket to print.

Chemical Load Out

Blend Tickets may be used for chemical and water loads as well as fertilizer. This example works with a chemical load-out to show how to directly request products at a certain rate/acre rather than requesting an analysis as we did in the previous examples.

1. Click the **Add a Blend Ticket** shortcut button to start a new blend ticket. Select Larry Baker's North40 field, and click **OK**. Fill out the *General* tab as shown below. Notice even though we aren't formulating product to an analysis (the nutrient inputs are blank), selecting a Product Set that correctly identifies the job as liquid or dry is still required. Notice that the *Loaded* checkbox shows as checked. This causes inventory to be relieved upon saving this ticket rather than setting it to *Loaded* later.

The screenshot shows the 'Add Blend Ticket #211' window with the following details:

- General Tab:**
 - Customer ID: 1BakLa
 - Field ID: North40
 - Zone: All
 - Crop: Corn
 - Placement: Sprayed
 - Ordered Date: 03/10/2015
 - Loaded Date: / /
 - Time: 12:28:49 PM
- Quantity:** 38,000 Acres
- Product Set:** Chemical
- Optimize By:** List Price
- Price By:** Products
- Loaded:**
- Respray:**
- VRP:**
- Repacked:**
- Mini Bulk:**

Registration # and nutrient input fields (<N>, <P>, <K>, <S>, HA, <Ca>, <Mg>, <Zn>, <Fe>, <Mn>, <Cu>, B) are present but empty.

Formulate By:

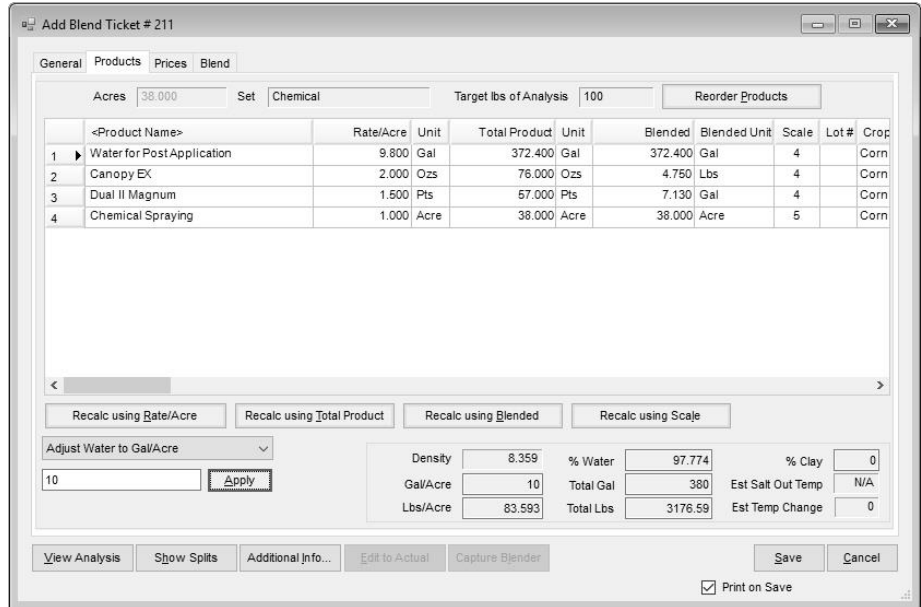
- Lbs of Plant Food
- Guaranteed Analysis

Buttons: **Formulate**, **View Analysis**, **Show Splits**, **Additional Info...**, **Edit to Actual**, **Capture Blender**, **Save**, **Cancel**.

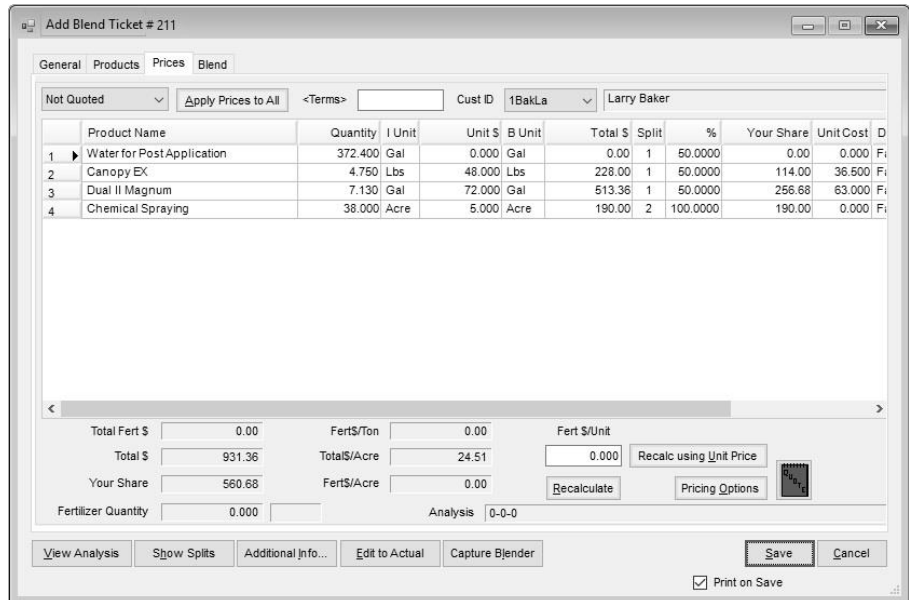
Print on Save

2. Click the *Products* tab. Enter the products shown below by double-clicking on the <Product Name> heading, which displays the *Select*

Products screen. The recommended rate/acre of the chemicals and spraying default. Choose *Adjust Water to Gal/Acre*, enter 10, and then click **Apply**. Your screen should look like the one below.



3. Click the *Prices* tab. Prices may optionally be set for the customer here. The prices default first to reflect the price levels set for each customer at the Customer Profile screen. If no default prices are set for the customer, the product prices default to list prices.



Notice Larry is paying 100% of the spraying charge. This defaulted from the field set at *Hub / File / Open / Field / Bill Split* tab. Clicking the customer dropdown and selecting Barb's Customer ID allows viewing the pricing for Barb's portion. Prices may be set for each person independent of others on the split.

To lock in prices at this screen, be sure to select the proper Quoted status before saving.

4. View the *Blend* tab, then click **Save** and select the Blend Ticket and Custom Application Sheet to print.

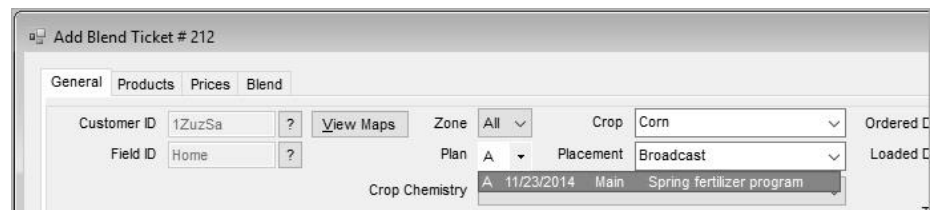
Blending from a Field Plan

One advantage of using the Agvance Planning program in conjunction with the Blending module is any field planning done in the Planning program is readily available during the busy blending season. The following is an example of how Plans are imported into Blend Tickets.

Important: There are two situations where you might bring in an existing field plan. One example is when you are blending for a specific Field Plan saved for a grower. The other case is when you are using an existing plan (saved for any field) as a template or starting point for a particular blend.

The case below is assuming the Plan was made for this particular field and you are now in season wanting to blend the job, retaining products and pricing from the Field Plan.

1. Click the **Add a Blend Ticket** shortcut button.
2. Select Samuel Zuzzle’s Home field and click **OK**.
3. At the *General* tab, click the *Plan* drop-down arrow to display the existing plans for this field. Select Plan A.



Note: Importing the Plan from the **Import Blend** button retains products, rate/acre, crop, placement, and Product Sets but not pricing.

4. Selecting the Plan from this drop-down list retains all aspects of the Field Plan including pricing. Notice the nutrient recommendation area automatically populated. Now click the *Products* tab. See how the products are already formulated?
5. Click the *Prices* tab. Note the pricing option is set to ‘Quoted.’ These prices were set in the pre-season and will carry through blending to invoicing. (Had the Plan been set to ‘list’ instead, the current list price would be used.)
6. Click the *Blend* tab. This job is basically ready to blend. Optionally click the **Additional Info** button to add information such as the Applicator and Vehicle, and then click **OK** on the *Additional Info* screen. Click **Save** on the Blend Ticket.

Using the Split Out of a Blend Ticket

Sometimes a blend job is split out between two (or more) fields rather than the one noted on the Blend Ticket. To keep the field and application history correct, you should change the Blend Ticket to accurately reflect all the fields involved. The following example splits the liquid Blend Ticket entered earlier for Larry Baker’s Wire 80.

From the menu options, select *Edit / Combine and Split Out Blend Ticket*. The *Select Blend Tickets to Combine or Split Out* window displays.

1. When ticket #210 is highlighted, verify it's the liquid blend for Larry Baker's Wire80 field, click **OK**.
2. The *Split Out a Blend Ticket* windows displays asking how many different tickets to create from the original. There are also options to *Split by Acres* or *Split by Weight*. Type in a 2 to indicate we'll be making two new tickets and leave the *Split by Acres* selected. Click **OK**.
3. The *Select a Field* window displays. Choose Larry Baker's Wire80 field as the first field. Confirm the field split arrangement for each new ticket to be created. Click **OK**.
4. Next, identify the second field involved in the ticket. Select Larry Baker's South20 field. When the field splits display, click **OK**.

The following screen displays the two selected fields. Next specify the number of acres for each field. Fill out the acres as shown below and click the **Apply** button. If print settings should apply to all new tickets, check the box to *Apply 1st Print Settings to All*, then click **Save**.

The screenshot shows a window titled "Split Out A Blend Ticket" with a close button (X) in the top right corner. It contains two tables and a summary section.

	Ticket #	Grower ID	Field ID	Grower Name	Acres	Weight
1	210	1BakLa	Wire80	Larry Baker	78.800	23672.000

	Ticket #	Grower ID	Field ID	Grower Name	Acres	Weight	Ship To	<Salesman>	Fi
1	213	1BakLa	Wire80	Larry Baker	50.000	15020.305		CroJam	78
2	214	1BakLa	South20	Larry Baker	28.800	8651.695		CroJam	19

Totals	78.800	23672.000
Left to Use	0.000	0.000

At the bottom of the window, there is an "Apply" button, a checkbox labeled "Apply 1st Print Settings to All", and "Save" and "Cancel" buttons.

The *Print Blend Documents* screen displays for each of the new Blend Tickets. The Consolidated Page could be printed for your billing control sheet.

Technical Information

Product Setup Tips

This area deals with specific questions regarding the setup of certain products that are on the market today.

Pre-Packaged Pesticides

As the industry tries to make the blending of pesticides safer, the development of dissolvable packages has been a challenge for blending programs. The following steps guide the setup of these products.

Setting up packaged products

Set up an inventory department for all of the prepackaged items. This department should use a scale default set to round to a scale accuracy of 1. Typically, this is the setting for scale 3 on the *Setup / Location Preferences* on the *Blend Setup* tab.

Add the products using the following formulas:

1. The *Inventory Units* and the *Billing Units* should be the same. This makes the *Billing Divisor* equal to one (1). For our example, set these as Lbs.
2. The *Package Size* is how many “Lbs or Ozs” are in the dissolvable package. **Note:** *This must be in the same units as the Inventory Units.*
3. The *Package Units* are set to ‘Each.’
4. *Product Density* per cu. ft. = a number greater than zero. The higher this number the less it affects the gallon per acre.
5. The *Rate/Acre Units* are entered. These are usually in Ozs. This is also called the Rating Unit.
6. The *Blending Units* are entered as ‘Each.’

Calculate the Rate to Blend Ratio:

Multiply one (1) Rating Unit times the amount of the product in one dissolvable package. Use the same units for the package that were used for the rating unit.

For example, Basis Gold is rated at 14 oz. per acre, so its rating unit is oz. Basis Gold is packaged in a 3.5 lb bag. To determine the number of oz. in the 3.5 lb package, multiply:
{3.5 (lb/package) x 16 (oz/lb)} = 56.

Calculate the Blend to Inventory Ratio:

This is the number of *Blending Units* in one *Inventory Unit*. Divide one (1) *Blending Unit* by the *Package Size*. Using our example above, the *Blending Unit* is Each and the *Inventory Unit* is Lbs. The blend to inventory ratio is $1 / 3.5 = 0.2857$.

Calculating Salt Out

This is an estimated temperature at which a fertilizer or a fertilizer mixture begins to form crystals and salt out from suspension. It is dependent on many factors, including the products mixed, the purity of the products mixed, temperature, water content, etc. The math the program uses comes directly from the TVA blend models on liquid fertilizer blends. These models were developed from laboratory studies using highly pure products. The users' own experiences in working with his existing products will assist in refining the users' expectations for the results of these models.

- **No Poly UAN** – this is for solutions that contain Urea Ammonium Nitrate (UAN) solution and no ammonium polyphosphate.
- **55% Poly UAN** – this is for solutions that use standard quality polyphosphate and UAN solution as their primary ingredients.
- **70% Poly UAN** – this is for solutions that use higher quality polyphosphate with UAN solution as their primary ingredients.
- **No Poly Urea** – this is for solutions that use Urea solutions and no ammonium polyphosphate solution.
- **55% Poly Urea** – this is for solutions that use standard quality polyphosphate and Urea solution as their primary ingredients.

Calculating Net Temperature Change

This is the net temperature change from the base temperature of water added to the mix. When starting with 160 degree water and there is a net change of +75 degrees, the final temperature of the blend is 235 degrees.

Any products used in the temperature calculation must have the BTU/Lbs set up. This is done at the **Details** button at *Hub / File / Open / Products* on the *Blend Setup* tab. The BTU/Lbs for 'coolers' are entered as negative numbers and 'heaters' are entered as positive numbers.

The formula for calculating this change is to add the net 'heaters' and 'coolers' together. In all cases, the coolers should be entered as negative numbers. Once the net BTU's are calculated, divide by the Blend Ticket weight and multiply by .80. This calculates the Net Temperature Change.

Product Set Constraints

Below are some details on how the nutrient constraints are calculated. These constraints are added at the *Product Set* screen by clicking the **Set Limits** button to the right of the product to be limited.

Product	Urea (46-0-0)	Maximum % of Total Nutrient That This Product Is Allowed To Supply	Minimum % of Total Nutrient That This Product Must Supply
N	50	0	
P	0	0	
K	0	0	
S	0	0	
U	0	0	
C	0	0	
M	0	0	
Z	0	0	
F	0	0	
M	0	0	
C	0	0	
B	0	0	

The constraints are entered as a percentage of the nutrient to which they apply. For example, if the requested Guaranteed Analysis of N is 10% and ½ the Nitrogen is to come from a given product, the Limit for that product is set to 50.

If an exact rate per acre of a product is needed, some math must be done ahead of time to calculate the percentage the desired product contributes to the analysis. For example, a field needs 200 Lbs per acre of a particular product, UAN 32%. The

entire final blend will have a Guaranteed Analysis of 23%N. The blend rate per acre of that final blend is 500 pounds.

The amount of Nitrogen the final blend is applying is 115 pounds. The product desired, UAN 32%, at the given rate of 200 pounds contributes 64 pounds. To get the percentage supplied by the UAN 32%, divide 64 by 115 = 0.5565. This is multiplied by 100 which equals 55.56% and that is entered as the minimum and maximum percentage in the Set Limit for the UAN 32% product.

Automated Blender Interfaces

Agvance interfaces with the following automated blenders.

Junge™ Blender

The Junge blender setup has a computer dedicated to controlling the Junge blender system. Each workstation generating Blend Tickets must be networked to that machine. When a Blend Ticket is created in Agvance, the blending function saves a special file to the Junge system, which is used to mix the products. When the mix job is complete, the Junge system writes an 'actual' file that may be brought back into the Agvance Blending program to reset the Blend Ticket to the exact amount of product that was loaded.

Setting Up the Junge Interface

1. Each workstation generating Agvance Blend Tickets must be mapped to the computer that holds the ASCII files created by Agvance. Quite often, this is the computer connected to the automated blender.
2. On the computer connected to the blender, create a directory on the root drive where the ASCII files will be stored called **\JungeMix**. It does not have to be this path name, but the location of the ASCII files must be coordinated with the Junge software setup. This is done in the Junge Dispatcher under *Setup / System Info / File Locations Info*.
3. All products passing through Junge must have a blend factor number, which are established at the Agvance Hub at *File / Open / Products* on the *Blend Setup* tab. The Junge information is in the Junge Dispatcher in *Setup / Product Information Setup / Basic Info*. Agvance 'Blending Units' must match Junge 'mix' units.
4. In the Agvance Blending module, at *Setup / Product Sets* at the *Blender Interface* tab, select the Junge option. Type in the Data Storage path where the mix file was created, or use the browse button above the textbox to locate the folder where the file is to be saved. This will be something like, but not limited to, **\\Computer\DRVC\Mixer**. Be sure this is the same directory created on the computer running the Junge software.
5. The files created for the Junge blender will have the name **Jxxxx.txt** for liquid blends and **Jxxxx.dry** for Dry blends, where xxxx is the Agvance blend ticket number. For example, your blend ticket # 207 will create a Junge mix file in the **\Junge\mix** directory called **J207.txt**.
6. When the Junge blender is finished mixing the job, the Junge Dispatch software creates an 'actual' file in the same directory with a file name **Jxxxx.act** where the xxxx is the Agvance Blend Ticket number.

Note: When establishing Blend Factor numbers, note that 41-70 are not available in the Junge system. If fertilizer mixes will exceed 100,000 in total weight, the Blend Factor number assigned to the fertilizer products making up the mix must be in the range of 1-40.

Note: The Junge Plant Manager must export the **Jxxxx.act** file to the same directory to which Agvance exported the **Jxxxx.txt** file.

To use this file, click on *Edit / Import Automated Blender Done Files* or go to *File / Open / Blend Ticket*, then click the **Read Blender** button. A screen displays with the original amount for each product and the actual amount loaded displayed. Click **Save** to edit the Blend Ticket to the actual blended pounds. This also marks the ticket as 'Loaded.' After the Agvance Blending program uses this file, it is saved as a **Jxxxx.dne** file when *Archive Blender File* is checked.

Kahler Blender

The Kahler blender setup has a computer dedicated to running the Kahler system. The software, called Plan Supervisor, is an add-on for the Kahler System. The computer controlling the Kahler system should be networked to the machine running Agvance Blending.

Setting Up the Kahler Interface

1. The recommended setup for all fertilizer and chemical products controlled by the Kahler system is to set the 'Blending Units' in Agvance to match the set up in the Kahler system. If the Kahler software is running the Terminal Management 2 version or newer and using the XML interface (SSI Standard XML), the 'Blending Units' between Agvance and Kahler may be different. The Kahler software can be set to convert the units. Contact Kahler for more information and ensure proper set up.

The *Blend Units* are set in the Hub at *File / Open / Products* on the *Blend Setup* tab.

2. In Agvance, on the *Blend Setup* tab of the product file, cross-reference each inventory item to the appropriate Kahler item by putting the Kahler code for the product in the *Blender Factor* box.

In the Agvance Blending module, at *Setup / Product Sets* on the *Blender Interface/Print Preferences* tab, select the 'Kahler' option in the *Blender Type* selection box. Also enter the Data Storage path or select it using the browse button, where the mix file is to be saved. This will be something such as **\\Computer\DRVC\Mixer**. This needs to be the same path from which the Kahler system reads the files.

3. The blend file created by Agvance will start with the letter 'j' followed by the ticket number and a file extension of '.txt.' Completed tickets returned from the Kahler will start with the letter 'k' and have a file extension of 'D01.' After the Blend Ticket is loaded, if the *Archive Blender File* checkbox is checked, the file extension is changed to 'Dne' when the ticket is saved.

When a product set using the Kahler interface is used on a Blend Ticket, checking the *VRT* checkbox on the *General* tab of the ticket will put the text, *VRT*, on line 57 in the Kahler automated blender file created by that ticket. This indicates to the automated blender that the products should be loaded in separate bins or tanks.

Murray

Murray DOS and Murray Direct

Contact SSI for information on setting up these interfaces.

Murray Windows

The Murray Interface is blending software that controls the Murray blender through a PLC connection. The computer controlling this blender must be networked to the machines running Agvance. When the Murray Windows option is selected on a Product Set and a blend is created using that Product Set, the user has the ability to create a special file the Murray system uses to mix the products.

Setting Up the Murray Windows Interface

1. In the Agvance Blending Program at the *Setup / Product Sets* at the *Blender Interface/Print Preferences* tab, select the Murray (Win) option. Enter the data storage path that is the same folder as in the Murray interface program. From this computer it may not be the exact same path. Therefore, we suggest entering in the UNC name like **\\Computer\DRVC\Mixer**. This path can be found in the Murray system under *Setup / System Parameters / Data Paths* and *Options*. In the *Import* and *Export* data paths, enter the path that is the same folder as the one just entered on the Product Set above. Be sure to select *Software Solutions* as the *Blender Type* and follow the directions from the Murray documentation for setting up the rest of the information about the blender.
2. The cross referencing of the two products is done from the Murray software. In *Setup / Edit/Add Materials* – the part number of the product in the Murray software must match exactly with the Product ID from Agvance. The Murray software does not allow duplications of the ID's so care should be taken to be sure a single product in the Murray system will have the correct ID in the Agvance system, no matter how many departments they are in.

Note: All information sent to the Murray system is sent in pounds. Therefore the unit weight of the products must be entered correctly for the interface to work.

Murray Remote

This option includes a *To Remote* and a *From Remote* destination folder selection on the *Blender Interface/Print Preference* tab of the *Edit a Product Blend Set* window. *To Remote* holds the release numbers yet to be processed and the *From Remote* holds the completed blender files. The status of existing files is visible by editing the Blend Ticket and viewing the *Automated Blender* tab. This tab is created on the Blend Ticket window when the 'Murray Remote' product set is used for the blend. The extension of the file name comes from the Murray Remote's product set *Shipped from Location Code* on the *Edit a Product Set* window. For example, if the blend ticket number is 1234 and the *Shipped from Location Code* is 01, the filename in the *To Remote* specified folder will be 123401.01. If the blend ticket had 2 batches, the files created would be 123401.01 and 123402.01. The *Shipped from Location Code* must be a number from 00 – 99. An *Expiration Date* is required on the product set that will not allow this Blend Ticket to be used if the date has passed. For additional information, contact SSI.

Murray Extended _ 2

Contact SSI for information on this blender type.

SSI Ranco Automation

Contact SSI for information on this program.

SSI Yargus Automation

This interface option uses Agvance's SSI Standard ASCII file format rather than the older access database. Contact SSI for more information on this program.

SSI Standard XML

This standard file format includes detailed information about the ticket and the field.

Ranco Blender

The Ranco option prints the RPMs on the Blend Ticket along with the overall blending time to assist with setting the Ranco blender. The blend function does not actually 'control' the blender as some of the other options do.

Setting Up the Ranco RPM Interface

1. All products passing through Ranco must have a Blending Unit of Lbs. Chemicals to be impregnated with fertilizers also need to be set up in this manner. The *Blending Units* and *Blender Factor* are set in the Agvance Hub at the *File / Open / Products* at the *Blend Setup* tab.
2. Each product must have the final factor from the calibration test determined. The final factor is determined by dividing the RPM setting from the calibration by the Pounds of Output per minute. This weight value is usually determined by a three minute run with an RPM Setting of 800. This final factor represents the number of RPM's needed to dispense 1 pound of the material. Please refer to the Ranco Documentation for Calibration procedures.

If two bins are used for the same product, they should be calibrated as one bin. From this, one common final factor is obtained based on the two bins running. Both bins must be running at the same dial setting when this product is needed in a blend.

The final factor needs to be entered into the *Blender Factor* of the *Blend Setup* tab with a 3-decimal accuracy.

3. In Agvance Blending, at *Setup / Product Set* on the *Blender Interface/Print Preferences* tab, complete everything in the *Ranco Blender Settings* area. Check the *Ranco Blender Settings Printed* box in order for the settings to print on the Blend Ticket. The maximum capacity of the downflow equipment and the maximum dial setting also must be entered. The dial setting is usually 999. With these settings completed, after the save of a dry Blend Ticket, the print options screen displays a checkbox allowing the options of printing the scale stops or printing the RPM's for this blend.

Using the Blending Program for Feed

Although designed to handle fertilizer/chemical blends, the Agvance Blending module may also be used for feed blends. When setting up a Product Set, choose Feed as the 'Type.' Two common uses for feed blends are:

1. There is a common blend for either a particular livestock or a particular farmer. This process shows one product, the blended feed product name, on the invoice.

Note: Mark the box in front of blend ticket under 'Split Out When Printing' and check the box to 'Affect Inventory at Billing.' Also, a field to be used in Blending must be set up for the farmer.

The blend usually consists of the same products and same ratio. In this case the user would typically set up the blend as a product and call it something like 'Joe Farmer's Feeder Hog Mix.' Setup the manufactured formula for the product, specifying the products and ratios required to make one unit of the blend.

When the customer requests a certain quantity of the finished product, proceed to the blending area. In the case of feed, the "field" could be a barn, a livestock facility, or a bin where the feed is stored. After the customer and field are selected, input how many tons are required on the *Products* tab, select the blend and input the rate/ton, which should be 2000. Complete the rest of the Blend Ticket and print. The ticket displays the products broken out and the appropriate scale stops as well as other 'feed related' information not available on standard Blend Tickets.

2. In this example there are blends with the same basic product structure (same products being used most of the time) but the ratios or rate per ton change frequently. Using this option displays the raw materials on the invoice:
 - In this case, it is suggested a fake customer is created with a name like '1Feed', for example. Create fields under the customer like '1FeedMix', '1FeedTmp', 'Hogs' 'Dairy', etc. Next create a Blend Ticket for each field. On the Blend Ticket, leave the tons at "one". On the *Products* tab, select the products that might be used in the blend and leave the rates at zero. Save the ticket.
 - When a customer requests a blend, "Add" a new ticket for the appropriate customer and field, then use the *Import Blend* function to start with the desired template. Once the template blend is displayed, enter the tons ordered on the *General* tab, and on the *Products* tab, enter the rate/ton of the products needed (put a zero if the product is not going to be used in this blend). Save and print to display the appropriate scale stops. Remember, a product can be added on the *Products* tab if it is not part of the original template.

Hint: At *Blending / Setup / Location Preferences* on the *Print Prefs* tab, check the 'Do Not Print Zero Rate/Acre Line Items' option and then only the items used will print.

Feed Blend Tickets display "Farm Site" instead of "Field ID", "Building" rather than "Description", "Bin #" instead of "Crop", and "Type" (for type of Livestock) instead of "Placement."

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