

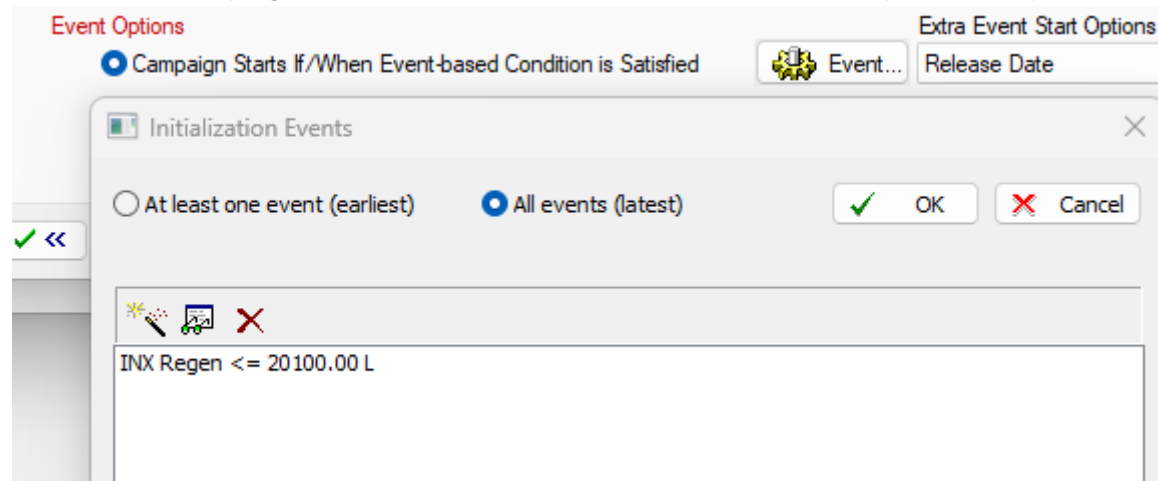
SchedulePro v11.5 New Features

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Multi-event Campaign Scheduling

Event based campaigns can be based on the earliest or latest of multiple inventory events.

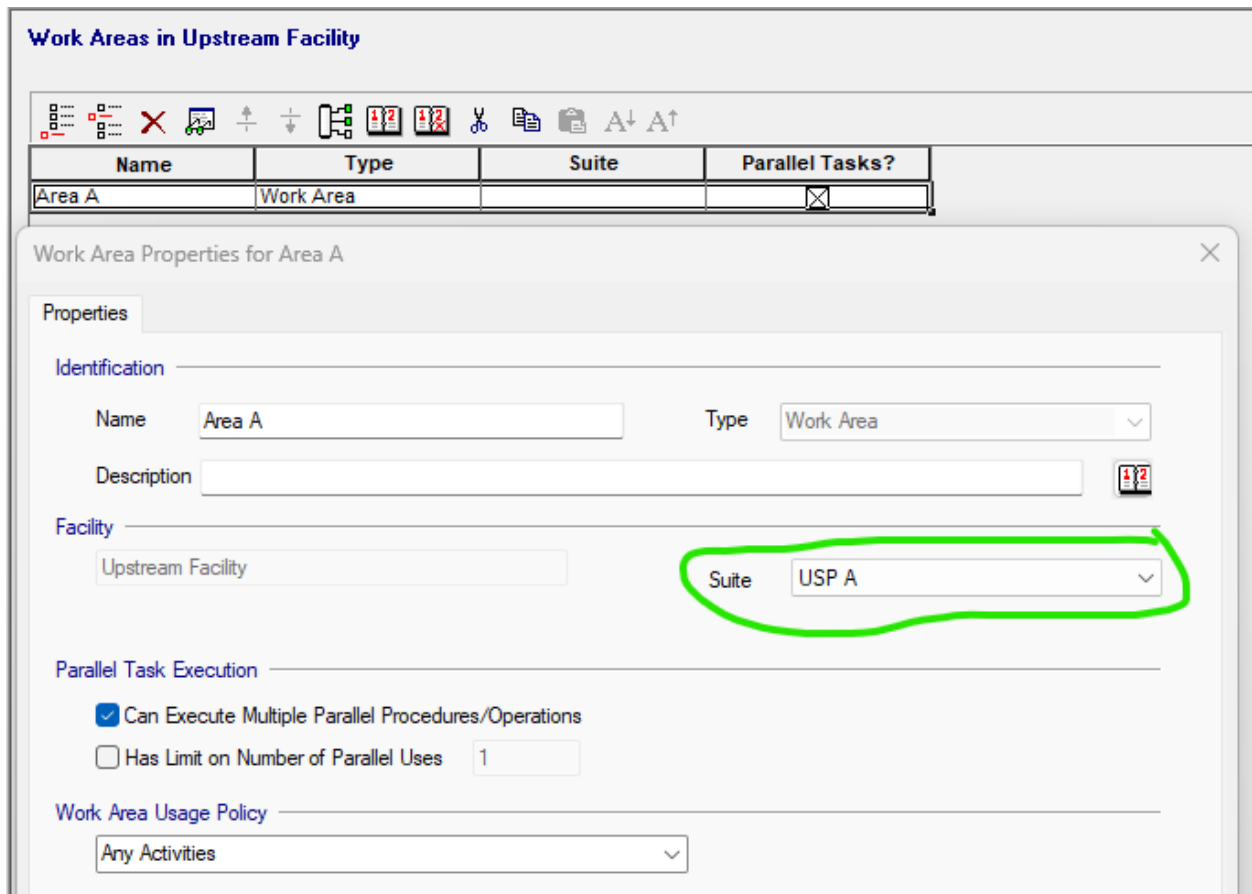


Menus Reorganized and Obsolete Items Removed

Reset Schedule Improved for Speed

Save-As-Older Version Updated for v11

Workareas may have suites



Suite restrictions will apply to procedures with work areas just as they do to main equipment.

Improved Batch Scaling for SKU Associated Campaigns

Seen in the Campaign wizard.

Improved Campaign Amount/Scale Editing

Campaign AX15MGTAB-1

ID/Amount | Time/Sequencing | Cycling | Resources | Advanced | Comments | Messages | SQL Server

Recipe-SKU / ID / Color

Associate with Recipe Coated Tabs

Associate with SKU AX15MGTAB

Campaign ID AX15MGTAB-1

Campaign Color

Batch Name Base AX15MGTAB-1

Belongs to Project Main Project

Amount

Number of Batches 2

Set Total Campaign Amount

Recipe-Based 2000000.00 entities

SKU-Based 2000000.00 entities of AX15MGTAB

Set Batch Size

Scale Factor 1.0000

Batch Size (recipe-based) 1000000.00 entities
Nominal Batch Size: 1000000.00 entities

Batch Size (SKU-based) 1000000.00 entities of AX15MGTAB
Nominal Batch Size: 1000000.00 entities

✓ << ✓ >> ✓ << ✓ >> ✓ OK ✗ Cancel ? Help

MILP, Algorithmic, or Original Cycle-time estimate

Cycle Time Estimator

Minimum Cycle Time
N/A h

Bottleneck(s)

Optimal Resource Assignments (first batch)

Calculation Method

Gross Estimate

Optimization-Based (MILP)

Solver

SCIP

GAMS

Solver CPLEX

Estimated Number of Batches 1

Calculation Time Limit 60 seconds

Consider Flexible Shifts

Simplify Recipe (merge operations where possible)

Algorithmic

Include Calculation of Feasible Cycle Time Ranges

Include Aux Equipment

Include Staff

Calculate

Done


Improved Staff Skill Interface


Staff Properties

Identification

Name: Charles

In Facility: Formulations Plant

Description: 

Phone: 

Parallel Task Execution

Can Execute Multiple Parallel Operations

Maximum Number of Parallel Tasks: 1

Display

Display in charts

Cost

Hourly Usage Rate: \$ 0.00

Should be sent notification email at:

Add Staff Skill

- Coating
- Dispensing
- Blending
- Drying FBD
- Encapsulation
- Milling HSMG
- Milling Wet Mill
- Cleaning
- Tableting
- skill1
- skill2
- skill3

OK Cancel

Schedule Evaluation Includes Run Rate & Cycle Time

If a batch size is available

Schedule Evaluation



Feasibility Statistics

Start / End / Makespan

Start

End

Makespan

Average Lateness

Campaign Flowtime / Lateness



Show Statistics Per Batch

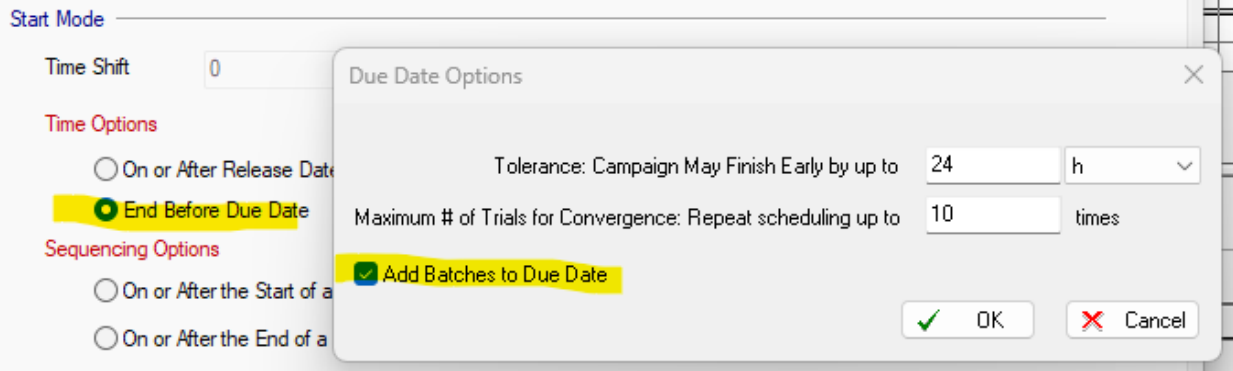
gn	SKU	Flowtime (day)	Lateness (day)	Run Rate	Avg Cycle T
GTAB-1	AX15MGTAB	2.69	n/a	135813953.49 e...	7.00 h
GTAB-1	BX15MGTAB	2.69	n/a	135813953.49 e...	7.00 h
GTAB-1	AX10MGTAB	3.69	n/a	98983050.85 en...	22.75 h
GCAPS-1	BX15MGCAPS	4.69	n/a	77866666.67 en...	0.00 h
GCAPS-1	CX15MGCAPS	6.73	n/a	54241486.07 en...	4.50 h
GCAPS-2	CX15MGCAPS	8.73	n/a	41813842.48 en...	19.25 h
GCAPS-2	BX15MGCAPS	10.69	n/a	34152046.78 en...	13.75 h
GTAB-1	DX10MGTAB	5.69	n/a	96263736.26 en...	14.00 h
GTAB-2	AX15MGTAB	6.69	n/a	54579439.25 en...	21.00 h
GTAB-2	BX15MGTAB	8.69	n/a	42014388.49 en...	20.00 h
GTAB-3	AX10MGTAB	9.69	n/a	37677419.35 en...	2.00 h
GCAPS-3	BX15MGCAPS	10.69	n/a	34152046.78 en...	0.00 h
GCAPS-3	CX15MGCAPS	12.73	n/a	28674284.42 en...	20.50 h

Number of Campaigns Due

Number of Late Campaigns

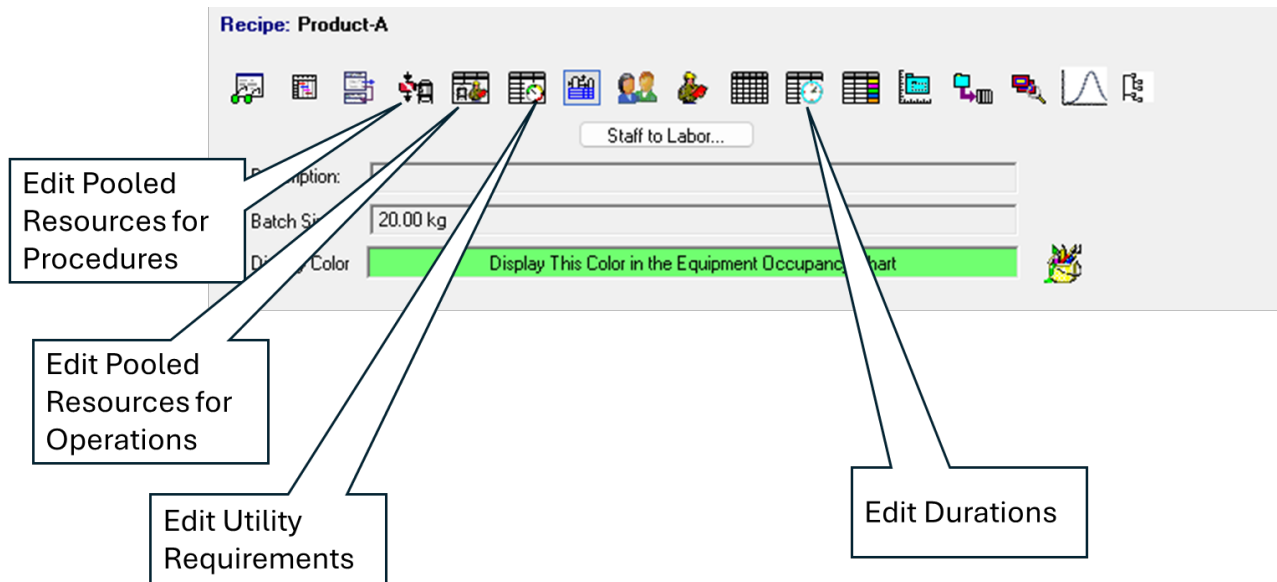
Number of Early Campaigns

Schedule to Due Date by Adding/Scaling Batches



The number of batches specified serves as a maximum limit.

New Recipe Editing Options



Operation Duration May be Based on Fill/Empty Events

Operation: Use Water in

Rate Parameters

Heating/Cooling

General Duration

Estimated Total Nominal

Duration Calculated

Constant 1.000

Sc

Rate-based Term

Amount Processed 1000 L

Duration = $\frac{\text{Amount Processed}}{\text{Rate}}$

Rate 100 L/h

Rate Basis Volumetric Flow

Amount Processed

Amount Scales with Batch Size

Get Amount from Operation Stream

Water Use

Operation: Use Water in Use Water

General Duration Scheduling Auxiliary Equipment Transfer Panels Staff Labor

Heating/Cooling Power/Duty Material Inputs Material Outputs

Empty Water Tank (Test) to 0.00 L

Duration depends on opening inventory.

Daily Activity Report by Staff Option

Report Options

Economic Report Options		Reorder Report Options		Inventory Report Options	
Send to Personal Calendars	Labor Report Options	Outage Report	Email Change Notifications	QC Reporting	
Schedule	Equipment Occupancy	Equipment Utilization	Staff	Materials	Daily Activity
Gantt					
Recipe					

Heading

Use Date Range in Title Show Report On Exit

Reporting Level

Project
 Campaign
 Batch
 Procedure
 Operation **By Staff**

Use Recipe Settings When Available

Report Format

Daily Days/row
 Weekly
 Month Calendar

Staff may be filtered with Contents and Ordering options.

Change From Baseline Reporting In Schedule Report

Schedule | Equipment Occupancy | Equipment Utilization | Staff | Materials | Daily Activity | Gantt | Recipe

General Details

Calendar Time Show Materials
 Relative Time Show SKUs
Time Units: Include Materials from BOMs
 Show Report On Exit Labor Requirements
 Labor Requirements (Clipped)

Level of Detail

Campaign
 Batch
 Procedure
 Operation

Level Dependent Details

Main Equipment
 Batch Size (if Available)
 Transfer Panel Usage
 Auxiliary Equipment
 Staff Requirements
 User Comments

Even Row Color

Show Changes from Baseline
 Show Changes Exclusively

The changed activities are shown in color and the pre-change values are shown in black.

Campaign: Product-A-1, Recipe: Product-A, Duration: 13.188 day

Batch	Procedure	Operation	Phase ID	Phase Entry ID	Start		End			Prev Start		Prev End	
Product-A-1-3	Seed Fermentation	Set Up			Thursday	9/19/2024 02:40	Thursday	9/19/2024 05:40	Thursday	9/19/2024 00:00	Thursday	9/19/2024	
Product-A-1-3	Seed Fermentation	Charge Media			Thursday	9/19/2024 05:40	Thursday	9/19/2024 06:40	Thursday	9/19/2024 03:00	Thursday	9/19/2024	
Product-A-1-3	Seed Fermentation	Sterilize Media			Thursday	9/19/2024 06:40	Thursday	9/19/2024 09:40	Thursday	9/19/2024 04:00	Thursday	9/19/2024	

Excel Report Has New Fields

The Excel Report contains the operation data specified in the Schedule Report options. The fields now include:

- Campaign
- Recipe
- Batch
- Procedure
- Operation
- Start/End
- Main Equipment
- Comments
- Auxiliary Equipment
- Staff
- Labor

Email Change Notifications

There is a new option to email change notifications. This feature works with the staff email address property and with the change tracking features. Staff who are assigned to or de-assigned from an operation that has changed from its last baseline will be sent notifications. These emails are sent on-demand. The VCalendar email feature now uses the SMTP email settings which are found under SQL Server Settings or Reports/Change Notifications/Email Notification Options.

Batch Color Option in Daily Activity Report

The Daily Activity Report now has a Use Batch Color option. Entries will be shown in the same batch color that is displayed in the Equipment Occupancy Chart. This option is exclusive with the Operation Colors option. If no option is chosen, shift colors are used.

Color by Shift

Shift	Start	Duration	Time Units	Color (Click to Change)
Shift 1	08:00	8.00	h	
Shift 2	16:00	8.00	h	
Shift 3	00:00	8.00	h	

Color for Highlighted (Key) Activities

Use Batch Colors

Use Operation Colors (Takes Priority over Other Color Schemes)

Inventory Report Single Table Option

The inventory report now has options to display as a single table as well as an option to exclude the storage unit totals.

Economic Report Options	Reorder Report Options	Inventory Report Options
Start 10/25/2024	End 10/25/2024	Reporting Time 12:00:00 AM
<input type="checkbox"/> Change	Frequency 1	Days
<input type="checkbox"/> Show Report On Exit	<input type="checkbox"/> Include Depositing/Withdrawing Events	<input type="checkbox"/> Include Equipment/SKU Information on Events
	<input type="checkbox"/> Single Table	<input checked="" type="checkbox"/> Include Storage Unit Totals