

BESTMIX[®] Feed Formulation. Producing highest quality at lowest cost.

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BESTMIX Feed Formulation. Release notes 3.33.

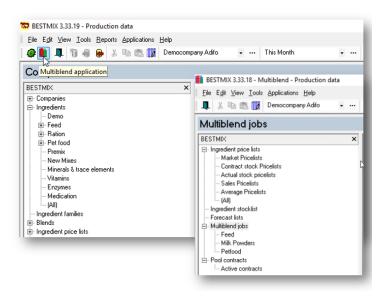
NEWEST FEATURES IN BESTMIX FEED FORMULATION

Adifo is known around the industry as a real innovator. We are constantly improving and developing upon our BESTMIX Software, with both the help of our consultants, and with the input of our users around the globe. This allows us to release 1 or 2 new versions of BESTMIX® each year. Every new release is jam-packed with a bunch of new features and benefits. Here a list of what's new in the latest release of BESTMIX, version 3.33:

MAKE USE OF THE NEW FUNCTIONALITIES IN MULTIBLEND TO INCREASE EFFICIENCY

With BESTMIX Multiblend, you can deal with different challenges. On one side, you have the formulation managers whose goal is to steer the mill and to drive production. Because there is an increasing amount of formulas and a continuously changing environment, the formulation manager wants to optimize the formulas in one go and wants to deliver a quick optimal solution. The second type of challenge is for the procurement manager whose goal is to manage the raw material planning. He or she needs to be able to quickly evaluate his or her buying opportunities and allocate the ingredients at the right time and the right place. If you want to learn more about the usage of Multiblend, I can refer to our Multiblend webinars that you can download from our website.

In BESTMIX version 3.33, we moved the Multiblend functionality to a separate application. All relevant Multiblend information such as forecast lists, ingredient stock lists and pool contracts were also moved to this application. The ingredient pricelists on the contrary are available in both applications. This change allows you to have the BESTMIX main application and the Multiblend environment open at the same time, allowing you to do a Multiblend optimisation for a certain plant and still adjust formulas in singleblend for formulas not used in that Multiblend job. Resulting in more efficiency.





The second fine-tuning in Multiblend has to do with identifying the new version as either an active version or an inactive one. When products are created during the Multiblend rounding it is not always desirable to make them active as well (which was until now the default behaviour). Therefore, we added a checkbox at the bottom of the Multiblend rounding window to enable/disable this option. Resulting in more flexibility.

Select compounds				2		- • •
Compound Feed						Q
Compound groups ×	F			Compounds		
⊟ General		Select	Code /	Description	Plant	
E Feed	•	M	0101	Pig Grower	Belgium	
(AI)		4	0102	Sows Gestation	Belgium	
		A	0106	Finisher Gilts	Belgium	
		되	0108	Weaning diet	Belgium	
		9	0111	Sows lactating	Belgium	
		되	0117	Pullets, phase 1	Belgium	
		9	0132	Lactating Super	Belgium	
		되	0141	>> Piglet Starter / BIO	Belgium	
1	1					
				🕻 Activate new products 🔽	Valid from	OK Cancel

GET INTRODUCED TO 'MULTIBLEND PREMIUM SERVICE'

Multiblend Premium Service offers a cloud based optimisation solution for big Multiblend jobs where the complexity in the usage of constraints is high, such as using priority rules, step values, minimal inclusion, combination rules and pool contracts. A first big benefit is that it is cloud based, so you do not need to invest in servers with high calculation capacities. A second big benefit is the ideal performance results you can achieve for those kind of jobs.

Below you will find a practical example, showing you the premium performance capabilities of Multiblend Premium Service. If you want to learn more about this offering, you can always contact us for more information.

<u>Case</u> 1500 compounds / 3 plants / 6 periods	MB job time	MB job time with MB Premium Service
Multiblend job with stock + priority rule	35 min	3 min
Multiblend job with stock + priority rule + minimal dosage	12 h	3 min

LOOK AT THE REAL PRODUCT COMPOSITION (TAKING INTO ACCOUNT DOSING PARAMETERS) DURING OPTIMISATION

When formulating and making changes to an existing formula, it is useful to be able to see what the current optimization result would look like if the compound was rounded,

- without creating a product
- without saving the compound

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Therefore, a new icon is now available in the compound toolbar, called virtual rounding. When clicking this button, a new window opens up where you can compare the optimization result, the virtual rounded result and the active product for the

Price

Ingredi
 Rejector

Composition

lingredien	ts	ual rounding [%]										
		🖙 Virtual rounding									F	
		Price										
		Compound	145,926 €/ton									
		Virtual rounding	145.910 €/ton									
		Product	143.181 €/ton									
		Product	143,181 etton									
			Composition					Analys	is (Per 1 ka pro	duct)		
		Code	Description	Compound	Virtual	Product	Code	Description	Unit	Compound	Virtual	Product
		▶ 11200	Maize	25,000	24,923	42,041	PA00	DM	%	89,017	89,015	89,284
		29820	Rapeseed meal >38% CP	14,757	14,757	18,000	PA01	Moist	%	10,983	10,985	10,716
		27220	Sunflower meal 16-20% CF	11,000	11,000	11,000	PA02	CP	%	20,000	20,004	20,042
		20700	Wheat bran	6,194	6,194	6,571	PA03	CFat	%	6,000	5,989	6,072
		15200	Rice bran, solv.extr.	5,000	5,000	5,000	PA04	CF	%	6,808	6,809	7,061
		11800	Maize bran	5,000	5,000	5,000	PA05	Ash	%	6,641	6,642	6,493
		44800	Animal fat, rendered	2,059	2,050	1,800	PA07	Starch-EW	%	33,000	33,001	32,997
		20100	Wheat	18,914	19,000		PA12	N/E	%	50,347	50,351	50,567
		AD-VLK01_C0	3 Broiler grower concentrate	12,077	12,077	10,588	EPIt00	AME-poultry	MJ	11,040	11,037	10,983
							EPit01	AME-broiler	MJ	8,419		11,081
							EPit03	AME-poultry (Kcal)	Kcal	2'012,212		
							AA00	LYS	%	1,337	1,337	1,304
							AA01	MET	%	0,365	0,365	0,381
							AA03	MET+CYS	%	0,753		0,779
							AA04	THR	%	0,743	0,743	0,773
							AA05	TRP	%	0,232		0,227
							DAAplt00	Dig.LYSpl	%	1,153		1,104
							UDAApit00	Un Dig LYSpl	%	0,184		0,200
		1.00					DAAplt01	Dig METol	96	0.306	0.306	0.318

WORK WITH THE NEW PREMIX MANAGEMENT EXTENSIONS TO HAVE A MORE ACCURATE & EASY RECIPE DESIGN

First of all, we optimised the UI when optimizing a premix. Before, you could select or unselect the "change values" check box when changing the inclusion rate of a premix. However, this description was sometimes confusing and not as easy to understand. Therefore, the "Change values" checkbox has been modified into a combo box with two options:

- Update premix constraints when the inclusion rate changes
- Update end-product constraints when the inclusion rate changes

This is much clearer and simpler to understand for the end-user, resulting in an easier recipe design.

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 Ingredients in composition (1) 	00.000 %)	Copy to s	inulation	View		Standard	*				Hide nutrier	nts without constrain	xts
C Rejected ingredients		@ Produc	tion data	Compo		in %					Weight basi	Per1 Kg p	roduc?
C All ingredients		C Simulat	ion data	Compo	skion	jn 4	-				On 🤅	Endproduct (C Pre
Inclusion rate 0.500	*								Update pre	mix constraints	when inclusion rate	changes	
Type Code Description		OVL Mix	Amount V	Product	Minimum	Maximum Type	Price	Nutrient	Unit	Value		Target Minimum	Ma
▶ · 584 Salt			41.600	41.400		Amount	6.000	▶ DM	g/kg	4.835	4.836		
 589 Limestone 			20.700	20.947		Amount	2.650	Na	g/kg	0.753	0.749	0.750	
618 Choline chloride			20.202	20.202		Amount	86.000	Fe	mg/kg	80.666	80.000	80.000	
626 Iron Sulphate mo			5.661	5.614		Amount	27.500	1	mg/kg	1.000	1.000	1.000	
628 Zinc Sulphate m			3.216	3.216		Amount	60.000	Mn	mg/kg	70.000	70.000	70.000	_
 630 Manganese oxid 			2.377	2.377		Amount	39.000	VIA	IU	12500.000	12500.000	12500.000	
 607 Vitamin E 50% at 	sorbate		2.105	2.105		Amount	360.000	Vit B1(thiamin)	mg/kg	2.000	2.000	2.000	_
621 Cu-Sulphate 25% 617 Vitamin B3 (Niac			1.263	1.263		Amount	79.500	Vit B12 (cvanocobalamin)	µa/ka	20.000	20.000	20.000	
605 Vitamin A (500 IL			0.816	0.816		Amount	395.000 2200.000	Vit D3	10	2500.000	2500.000	2500.000	-
605 Vitamin 8 (500 ic 615 Vitamin 812 (1%)	- UUI	<u> </u>	0.300	0.500		Amount	205.000	Vite	ma/ka	50.000	50.000	50.000	_
608 Vitamin K3 50%	00	-	0.400	0.408		Amount	695.000	Vit C	mg/kg	30.000	30.000	0.000	
616 Vitamin 85 (Calci		Ē	0.220	0.220		Amount	550.000	Se		0.200	0.200	0.200	
613 Vitamin B2 (80%)	in o r anosionaio,	D	0.191	0.191		Amount	1500.000	Zn	mg/kg	55.000	55.000	55.000	_
 606 Vitamin D3 (500) 	[/mg]	<u> </u>	0.105	0.105		Amount	650.000		mg/kg				
614 Vitamin B6 HCI		_	0.099	0.099		Amount	1250.000	Co	mg/kg	0.250	0.250	0.250	
629 Sodium Selenite	.5%		0.094	0.094		Amount	195.000	Cu	mg/kg	15.000	15.000	15.000	
 619 Vitamin B8 (Biotis 	2% S.D.1	F	0.051	0.051		Amount	850.000	Vit K3	mg/kg	3.000	3.000	3.000	
 612 Vitamin D3 (500 	/mg)	•	0.045	0.045		Amount	1250.000	Vit B2 (riboflavin)	mg/kg	7.500	7.500	7.500	
625 Potassium iodide	38%		0.031	0.031		Amount	1500.000	Vit B6 (pyridoxine)	mg/kg	4.000	4.000	4.000	
 620 Vitamin B9 (Folic 	\cid 80%)		0.025	0.025		Amount	2300.000	Vit B7 (Biotin)	µg/kg	50.000	50.000	50.000	
· 627 Cobalt Sulphate	ionohydr.33%		0.016	0.016		Amount	999.000	Vit B3 (Niacin)	mg/kg	40.000	40.000	40.000	
								Vit B5 (Pantothenic acid)	mg/kg	10.000	10.000	10.000	
								Vit B9 (Folic acid)	mg/kg	1.000	1.000	1.000	
								Choine	ma/ka	500.000	500.000	500.000	

Below you can find a practical example based upon the nutrient Density. Here you see that the value on premix level is 86. When we toggle to endproduct, you see that the value is the same. The other nutrients are on the contrary recalculated.

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		C N	Quantita Iutrient Iutrient		rient	Inve	recalculation rise nutrient ted nutrients		Calculated with compound of the compound of th		_			J		
Ingredients	in composition (100,000 %)	opy to substion	Vie	v	Standard	•		Show all nutri	ents	View	1	Standard	•		Show all	
Rejected in All ingredie	igredients C Proi	duction data rulation data	Cor	nposition	in %	•		Weight basis On C En	Per 1 kg product dproduct Premix	Com	position	in %	•	(On (*	Endproduct
dusion rate	1,000 %					Updat	e premix constrai	nts when inclusion r	ate changes				Update	premix constraint	ts when inclusi	on rate changes
Type Code		Amount	1.	Code	Nutrient	Unit	Value	Minimum M	sónum		Code	Nutrient	Unit	Value	Minimum	Maximum
- 619	Biotine 2% S.D.	0,025	- 11	VIT11	Folic acid	mg	100,000	100,000			VIT11	Folic acid	mg	1,000	1,000	
- 616	Calcium D-Pantothenate	0,110		VIT12	Vitamin C	mg		0,000			VIT12	Vitamin C	mg		0,000	
- 618	Choline chloride 50%	10,101		VIT13	CholineCl	mg	50'000,000	50'000,000			VIT13	CholineCl	mg	500,000	500,000	
- 627	Cobalt Sulphate monohydr.33%	0,008	1	OT00	Density	gL	85,724				OT00	Density	g/L	86,724		
- 621	Cu-Sulphate 25%	0,632	- F	PA00	DM	%	95,437		_	Ľ.	PA00	DM	%	0,954		
-		-			1.0					1.0			-			0.00

BENEFIT FROM THE PERFORMANCE IMPROVEMENTS

In the new version, we have achieved some nice performance improvements. First of all, Multiblend optimisations will now go about 30% quicker than before. We have downgraded this improvement towards version 3.31. So starting from version 3.31, you can benefit from this change.

The second performance improvement is at the level of report generation when doing a Singleblend rounding. When finishing the rounding process, the generation & saving of reports such as cost reports or blend orders will take 25-50% less time per report. To give you a practical example, we have tested a case at Adifo where the generation of the cost report went from 3,5 s towards 1,9 s

USE EXTENSIONS ON PUSH/PULL FUNCTIONALITY TO HAVE A MORE AUTOMATED MODELLING SOLUTION

With compound modelling it is possible to define certain compounds as models useable for other compounds. The model compound can be legislation like for example in pet food the Fediaf regulation, but can also be a template or framework from Product Management that you wish to use when creating a new diet. There a lot of business cases applicable. More information about these cases can be found in a previous webinar thatyou can download from our website.

Now, in BESTMIX 3.33, we have fine-tuned this modelling concept leaning more towards an automated modelling solution. When BESTMIX updates a model, the push process can be automatically started when this checkbox is activated. You will get a notification when saving the changes in the model. When you use Multi-push and as a result other compound models are also effected, the program prompts you to continue immediately with the Multi-Push, as you can see here:

Select models	Compounds	Configuration												
These are the cor	mpounds that will	be updated with	the model co	onstraints										
Local form	nulas													
Folder Items	×						C	ompounds						
- Local formula	\$	Selec Coo		Description			Plant							
				>> Broiler Grov			Beijin		Broiler					
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	41 C0P/10	Vew	Standard			Show all nutrier	8	2 cr	ompounds selec	ted		Push [Show all	nutrients	
composition (100,000 %	6) Copy to simulation 6 Production data	Commenter		*		Weight basis	Per 1 kg product		Standard			Show all	nutrients	kg product
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camposition (100.000 % clients 1.000 % Description / Bother 2% S.D.	4) Copy to Copy to Consultation dat Consultation dat Consultation dat Anno able 0,1 10,1	Composition	In % Nutrient Folic acid	Update prem Unit mg mg	nix constraints wt Value 100,000	Weight basis On C Endp hen inclusion rat Minimum Max 100,000	Per 1 kg product roduct Premix	View Compositio	Standard n in % Nutrient Folic acid Vitamin C CholineCi	Update	Value	Show all On (* nts when inclus Minimum 1,000	nutrients voic Par Endproduction rate chai	kg product D ∩ Prem

