Starter Base Mix Specification – Page 1 of 2

Last updated December, 2025

Name:_____ Product name: Starter Base Mix

Address:_____ _____ _____

Quantity, lb Package size, lb

_____

Use level, lb/ton Sow diets:_____

Phone:_____ Nursery diets: 65 lb

Grower diets:_____

Fax:_____ Finisher diets:_____

Date:_____ Price desired (circle one) $/ton FOB

Date Needed:_____ $/ton Delivered

Amino acids	**Units**	**Guaranteed Potency per Lb of Base Mix**	**Sources**
Lysine	%	7.25	Lysine HCl
Methionine	%	5.2	DL-Methionine
Threonine	%	4.3	L-Threonine
Vitamins	**Units**	**Guaranteed Potency per Lb of Base Mix**	**Sources**
Vitamin A	IU	57,690	Vitamin A acetate (retinyl acetate) supplied by cross-linked beadlet
Vitamin D	IU	23,070	Vitamin D_3 (cholecalciferol) with at least 50% supplied by a vitamin A/D_3 cross-linked beadlet
Vitamin E (Pick one source and provide source with quotation)	IU	615	dl-α-tocophorol acetate
	IU	307	d-α-tocophorol acetate (Natural vitamin E)
Vitamin K (menadione)	mg	46	MPB (menadione dimethylpyrimidinol bisulfite), MNB (menadione nicotinamide busulfite), or MSBC (menadione sodium bisulfite complex)
Vitamin B_{12}	mg	0.46	Cyanocobalamin
Niacin	mg	692	Niacinamide, Nicotinic acid
Pantothenic acid	mg	380	d-calcium pantothenate
Riboflavin	mg	115	Crystalline riboflavin
Minerals	**Units**	**Guaranteed Potency of Base Mix** mg/lb / ppm	**Sources**
Copper		230 / 500	Copper sulfate
Iodine		4.10 / 9.1	Ca iodate, Ethylenediamine dihydriodide (EDDI)
Iron		1,535 / 3,380	Ferrous sulfate
Manganese		460 / 1,015	Manganese sulfate, manganese oxide
Selenium		4.10 / 9.1	Sodium selenite
Zinc		1,535 / 3,380	Zinc sulfate, zinc oxide
Calcium (Minimum)	%	15.8	Calcium carbonate, monocalcium phosphate, or dicalcium phosphate
(Maximum)	%	17.0	
Available phosphorus	%	6.6	Monocalcium or dicalcium phosphate
NaCl (Minimum)	%	10.0	Feed or food-grade salt
(Maximum)	%	11.5	

Starter Base Mix Specification – Page 2 of 2

Other	Units	Guaranteed Potency per Lb of Base Mix	Sources
Phytase (Pick one source and provide source with quotation) – Must use guaranteed phytase level provided by the phytase manufacturer.	FTU of FYT	34,000	Allzyme Swine HC (Alltech)
		16,800	Axtra PHY GOLD (iff)
		40,600	Empirical (ADM)
		75,700	Grainzyme (Agrivida)
		22,300	HiPhorius (Novonesis)
		87,100	Microtech (Guangdong VTR Bio-Tech)
		23,300	Natuphos E 5,000 G (BASF)
		20,500	OptiPhos Plus (Huevepharma)
		20,400	Quantum Blue G (AB Vista)
		62,700	Smizyme Thermostable (Origination)
		70,500	Sunphase HT (Wuhan Sunhy Biology Co.)
		24,600	SuperPhy (Hanley International)
Carrier			
Oil	%		Mineral or vegetable

The following points must be followed unless approval for changes have been made:

a) Guaranteed to stay free-flowing, lump free, and non-dusty.
b) The final moisture level will be less than 10% and 98% product will flow through #20 U.S./Canadian screen.
c) When bagged, all bags must be labeled with tags. Tags should include date of manufacture, lot number, guaranteed analysis, inclusion rate, and proposed use of the product.
d) Formulate using the guaranteed analysis from the supplier for the nutrient. We can request label copies of your ingredients and copies of your mixing records to show quantities of ingredients per batch.
e) Permission must be obtained before using an alternative source for any ingredient.
f) Phytase specifications are based on an equivalent of 5 lb/ton inclusion of KSU Vitamin premix with phytase.

Sow Base Mix Specification – Page 1 of 2

Last updated December, 2025

Name:_____ Product name: Sow Base Mix with phytase

Address:_____ _____ _____

Quantity, lb Package size, lb

_____

Use level, lb/ton Sow diets: 75

Phone:_____ Nursery diets:_____

Grower diets:_____

Fax:_____ Finisher diets:_____

Date:_____ Price desired (circle one) $/ton FOB

Date Needed:_____ $/ton Delivered

Vitamins	Units	Guaranteed Potency per Lb of Base Mix	Sources
Vitamin A	IU	100,000	Vitamin A acetate (retinyl acetate) supplied by cross-linked beadlet
Vitamin D (See note e)	IU	20,000	Vitamin D_3 (cholecalciferol) with at least 50% supplied by a vitamin A/D_3 cross-linked beadlet
	mg	0.60	25-OH D_3
Vitamin E (Pick one source and provide source with quotation)	IU	800	dl-α-tocophorol acetate
	IU	400	d-α-tocophorol acetate (Natural vitamin E)
Vitamin K (menadione)	mg	40	MPB (menadione dimethylpyrimidinol bisulfite), MNB (menadione nicotinamide busulfite), or MSBC (menadione sodium bisulfite complex)
Vitamin B_{12}	mg	0.40	Cyanocobalamin
Niacin	mg	600	Niacinamide, Nicotinic acid
Pantothenic acid	mg	333	d-calcium pantothenate
Riboflavin	mg	100	Crystalline riboflavin
Choline	mg	6,660	Choline chloride
Biotin	mg	2.66	Spray dried biotin
Folacin	mg	26	Folic acid
Pyridoxine	mg	12	Pyridoxine HCl
Carnitine	mg	600	L-carnitine
Chromium	mg	2.40	Chromium picolinate

Minerals	Units	Guaranteed Potency of Base Mix		Sources
		mg/lb	ppm	
Copper		200	440	Copper sulfate, Copper chloride
Iodine		3.60	7.9	Ca iodate, Ethylenediamine dihydriodide (EDDI)
Iron		1,330	2,930	Ferrous sulfate
Manganese		400	880	Manganese sulfate, manganese oxide
Selenium		3.60	7.9	Sodium selenite
Zinc		1,330	2,930	Zinc sulfate, zinc oxide
Calcium (Minimum)	%	19.5		Calcium carbonate, monocalcium phosphate, or dicalcium phosphate
(Maximum)	%	21.5		
Available phosphorus	%	9.2		Monocalcium or dicalcium phosphate
NaCl (Minimum)	%	13.3		Feed or food-grade salt

(Maximum)	%	14.0	

Sow Base Mix Specification – Page 2 of 2

Other	Units	Guaranteed Potency per Lb of Base Mix	Sources
Phytase (Pick one source and provide source with quotation) – Must use guaranteed phytase level provided by the phytase manufacturer.	FTU of FYT	17,700	Allzyme Swine HC (Alltech)
		8,700	Axtra PHY GOLD (iff)
		21,100	Empirical (ADM)
		39,400	Grainzyme (Agrivida)
		11,600	HiPhorius (Novonesis)
		45,300	Microtech (Guangdong VTR Bio-Tech)
		12,100	Natuphos E 5,000 G (BASF)
		10,600	OptiPhos Plus (Huevepharma)
		10,600	Quantum Blue G (AB Vista)
		32,600	Smizyme Thermostable (Origination)
		36,700	Sunphase HT (Wuhan Sunhy Biology Co.)
		12,800	SuperPhy (Hanley International)
Carrier			
Oil	%		Mineral or vegetable

The following points must be followed unless approval for changes have been made:

a) Guaranteed to stay free-flowing, lump free, and non-dusty.
b) The final moisture level will be less than 10% and 98% product will flow through #20 U.S./Canadian screen.
c) When bagged, all bags must be labeled with tags. Tags should include date of manufacture, lot number, guaranteed analysis, inclusion rate, and proposed use of the product.
d) Formulate using the guaranteed analysis from the supplier for the nutrient. We can request label copies of your ingredients and copies of your mixing records to show quantities of ingredients per batch.
e) Portion of vitamin D_3 may be replaced with 25(OH)D_3. For example, if desiring 50% of vitamin D coming from 25(OH)D_3, would specify 10,000 IU D_3 and 0.30 mg 25(OH)D_3. Must provide source(s) and level(s) with quotation.
f) Chelated or hydroxy trace minerals can replace a portion or all of the listed inorganic sources listed for improved stability of the vitamins in the premix and for reproduction. Replacement should be on an equal mg basis. Permission must be obtained before using other alternative sources for any ingredient.

Grow-Finish Base Mix Specification – Page 1 of 2

Last updated December, 2025

Name:_____ Product name: GF Base Mix with lysine & phytase

Address:_____ _____ _____

Quantity, lb Package size, lb

_____

Use level, lb/ton Sow diets:_____

Phone:_____ Nursery diets:_____

Grower diets: 45-50

Fax:_____ Finisher diets: 35-40

Date:_____ Price desired (circle one) $/ton FOB

Date Needed:_____ $/ton Delivered

Amino acids	Units	Guaranteed Potency per Lb of Base Mix	Sources
Lysine	%	5.24	Lysine HCl
Vitamins	**Units**	**Guaranteed Potency per Lb of Base Mix**	**Sources**
Vitamin A	IU	45,000	Vitamin A acetate (retinyl acetate) supplied by cross-linked beadlet
Vitamin D	IU	18,000	Vitamin D_3 (cholecalciferol) with at least 50% supplied by a vitamin A/D_3 cross-linked beadlet
Vitamin E (Pick one source and provide source with quotation)	IU	480	dl-α-tocophorol acetate
	IU	240	d-α-tocophorol acetate (Natural vitamin E)
Vitamin K (menadione)	mg	36	MPB (menadione dimethylpyrimidinol bisulfite), MNB (menadione nicotinamide busulfite), or MSBC (menadione sodium bisulfite complex)
Vitamin B_{12}	mg	0.36	Cyanocobalamin
Niacin	mg	540	Niacinamide, Nicotinic acid
Pantothenic acid	mg	300	d-calcium pantothenate
Riboflavin	mg	90	Crystalline riboflavin
Minerals	**Units**	**Guaranteed Potency of Base Mix** mg/lb / ppm	**Sources**
Copper		300 / 660	Copper sulfate
Iodine		5.4 / 11.9	Ca iodate, Ethylenediamine dihydriodide (EDDI)
Iron		2,000 / 4,400	Ferrous sulfate
Manganese		600 / 1,320	Manganese sulfate, manganese oxide
Selenium		5.4 / 11.9	Sodium selenite
Zinc		2,000 / 4,400	Zinc sulfate, zinc oxide
Calcium (Minimum)	%	20.0	Calcium carbonate, monocalcium phosphate, or dicalcium phosphate
(Maximum)	%	21.5	
Available phosphorus	%	4.8	Monocalcium or dicalcium phosphate
NaCl (Minimum)	%	17.0	Feed or food-grade salt
(Maximum)	%	20.0	

Grow-Finish Base Mix Specification – Page 2 of 2

	Units	Guaranteed Potency per Lb of Base Mix	Sources
Phytase (Pick one source and provide source with quotation) – Must use guaranteed phytase level provided by the phytase manufacturer.	FTU or FYT	26,500	Allzyme Swine HC (Alltech)
		13,100	Axtra PHY GOLD (iff)
		31,700	Empirical (ADM)
		59,000	Grainzyme (Agrivida)
		17,400	HiPhorius (Novonesis)
		67,900	Microtech (Guangdong VTR Bio-Tech)
		18,200	Natuphos E 5,000 G (BASF)
		16,000	OptiPhos Plus (Huevepharma)
		15,900	Quantum Blue G (AB Vista)
		48,900	Smizyme Thermostable (Origination)
		55,000	Sunphase HT (Wuhan Sunhy Biology Co.)
		19,200	SuperPhy (Hanley International)
Carrier			
Oil	%		Mineral or vegetable

The following points must be followed unless approval for changes have been made:

a) Guaranteed to stay free-flowing, lump free, and non-dusty.
b) The final moisture level will be less than 10% and 98% product will flow through #20 U.S./Canadian screen.
c) When bagged, all bags must be labeled with tags. Tags should include date of manufacture, lot number, guaranteed analysis, inclusion rate, and proposed use of the product.
d) Formulate using the guaranteed analysis from the supplier for the nutrient. We can request label copies of your ingredients and copies of your mixing records to show quantities of ingredients per batch.
e) Permission must be obtained before using an alternative source for any ingredient.
f) Phytase specifications are based on an equivalent of 3 lb/ton inclusion of KSU Vitamin premix with phytase.

Grow-Finish DDGS Base Mix Specification – Page 1 of 2

Last updated December, 2025

Name _____
Address_____
_____
_____
Phone_____
Fax_____
Email_____

Product name: GF DDGS Base Mix

_____ _____
Quantity, lb Package size, lb

Use level, lb/ton Sow diets:_____
Nursery diets:_____
Grower diets: 40 to 45 lb
Finisher diets: 35

Price desired (circle one) $/ton FOB

$/ton Delivered

Amino acids	**Units**	**Guaranteed Potency per Lb of Base Mix**	**Sources**
Lysine	%	11.8	Lysine HCl
Vitamins	**Units**	**Guaranteed Potency per Lb of Base Mix**	**Sources**
Vitamin A	IU	45,000	Vitamin A acetate (retinyl acetate) supplied by cross-linked beadlet
Vitamin D	IU	18,000	Vitamin D_3 (cholecalciferol) with at least 50% supplied by a vitamin A/D_3 cross-linked beadlet
Vitamin E (Pick one source and provide source with quotation)	IU	480	dl-α-tocophorol acetate
	IU	240	d-α-tocophorol acetate (Natural vitamin E)
Vitamin K (menadione)	mg	36	MPB (menadione dimethylpyrimidinol bisulfite), MNB (menadione nicotinamide busulfite), or MSBC (menadione sodium bisulfite complex)
Vitamin B_{12}	mg	0.36	Cyanocobalamin
Niacin	mg	540	Niacinamide, Nicotinic acid
Pantothenic acid	mg	300	d-calcium pantothenate
Riboflavin	mg	90	Crystalline riboflavin
		Guaranteed Potency of Base Mix	
Minerals	**Units**	**mg/lb** / **ppm**	**Sources**
Copper		300 / 660	Copper sulfate
Iodine		5.4 / 11.9	Ca iodate, Ethylenediamine dihydriodide (EDDI)
Iron		2,000 / 4,400	Ferrous sulfate
Manganese		600 / 1,320	Manganese sulfate, manganese oxide
Selenium		5.4 / 11.9	Sodium selenite
Zinc		2,000 / 4,400	Zinc sulfate, zinc oxide
Calcium (Minimum)	%	20.0	Calcium carbonate, monocalcium phosphate, or dicalcium phosphate
(Maximum)	%	23.0	
Available phosphorus	%	0.2	Monocalcium or dicalcium phosphate
NaCl (Minimum)	%	17.0	Feed or food-grade salt
(Maximum)	%	20.0	

Grow-Finish DDGS Base Mix Specification – Page 2 of 2

	Units	Guaranteed Potency per Lb of Base Mix	Sources
Phytase (Pick one source and provide source with quotation) – Must use guaranteed phytase level provided by the phytase manufacturer.	FTU or FYT	26,500	Allzyme Swine HC (Alltech)
		13,100	Axtra PHY GOLD (iff)
		31,700	Empirical (ADM)
		59,000	Grainzyme (Agrivida)
		17,400	HiPhorius (Novonesis)
		67,900	Microtech (Guangdong VTR Bio-Tech)
		18,200	Natuphos E 5,000 G (BASF)
		16,000	OptiPhos Plus (Huevepharma)
		15,900	Quantum Blue G (AB Vista)
		48,900	Smizyme Thermostable (Origination)
		55,000	Sunphase HT (Wuhan Sunhy Biology Co.)
		19,200	SuperPhy (Hanley International)
Carrier			
Oil	%		Mineral or vegetable

The following points must be followed unless approval for changes have been made:

a) Guaranteed to stay free-flowing, lump free, and non-dusty.
b) The final moisture level will be less than 10% and 98% product will flow through #20 U.S./Canadian screen.
c) When bagged, all bags must be labeled with tags. Tags should include date of manufacture, lot number, guaranteed analysis, inclusion rate, and proposed use of the product.
d) Formulate using the guaranteed analysis from the supplier for the nutrient. We can request label copies of your ingredients and copies of your mixing records to show quantities of ingredients per batch.
e) Permission must be obtained before using an alternative source for any ingredient.
f) Phytase specifications are based on an equivalent of 3 lb/ton inclusion of KSU Vitamin premix with phytase.