# Starter Base Mix Specification – Page 1 of 2

Last updated October, 2026

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-$\alpha$-tocophorol acetate |
| | IU | 307 | d-$\alpha$-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** | | **Sources** |
|---|---|---|---|---|
| | | **mg/lb** | **ppm** | |
| 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) |
| | | 20,200 | Bestzyme (Besta Ag) |
| | | 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 October, 2026

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-$\alpha$-tocophorol acetate |
| | IU | 400 | d-$\alpha$-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) |
| | | 10,500 | Bestzyme (Besta Ag) |
| | | 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 October, 2026

Name:_____

Address:_____

_____

Phone:_____

Fax:_____

Date:_____

Date Needed:_____

Product name: GF Base Mix with lysine & phytase

_____ _____

Quantity, lb Package size, lb

Use level, lb/ton Sow diets:_____

Nursery diets:_____

Grower diets: 45-50

Finisher diets: 35-40

Price desired (circle one) $/ton FOB

$/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-$\alpha$-tocophorol acetate |
| | IU | 240 | d-$\alpha$-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** | **Sources** |
| | | **mg/lb** / **ppm** | |
| 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) |
| | | 15,800 | Bestzyme (Besta Ag) |
| | | 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 October, 2026

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-$\alpha$-tocophorol acetate |
| | IU | 240 | d-$\alpha$-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) |
| | | 15,800 | Bestzyme (Besta Ag) |
| | | 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.