

MSU Organic Farmer Training Program **Organic Amendments**

Name (origin): (P) plant (A) animal (M) mined	N-P-K, high values given	Other Benefits	A-Approved R-Restricted for organic	Application SD=Sidedress BC=Broadcast	Application Rate per 1000 sq ft*
Alfalfa Meal (P)	5-1-2	Veganic (Plant-based)	A	SD, BC	25-50 lb*
Blood Meal (A)	15-0-0	Mammal deterrent	A	SD, BC	10 – 30 lb*
Bone Meal (A)	4-21-0	Calcium	A	SD, BC	10 – 30 lb*
Chilean Nitrate (M)	15-0-2	Only organic nitrate source; quick-release N	R – 20% of N	SD, BC	10 – 35 lb.*
Feather Meal (A)	15-0-0	Long-term N, even in sand; 60% available in year 1	A	SD, BC	10 – 25 lb.*
Fish Emulsion (A)	2-2-0	Quick-acting, easy to use	A	Fertigation; Transplant water	½ cup*
Fish Meal (A)	7-7-0	Lower cost than fish emulsion	A	SD, BC	
Greensand (M)	0-1.5-5	Trace minerals	A	SD, BC	25 – 100 lb*
Guano (A)	10-3-1		A	Sprinkle	
Hoof & horn meal (A)	Up to 16-0-0		A		
Kelp Liquid (P)	0-0-1	Cytokinin; Veganic (Plant Based)	A	Fertigation; Transplant water	¼ cup*
Kelp Meal (P)	2-1-6	Lower cost than liquid; Veganic (Plant Based)	A	SD, BC	5 – 20 lb*
Manure – Beef cow	0.3-0.3-0.2	Microbes, water retention, soil organic matter, incorporate ASAP to lower N loss; Poultry alkaline, Swine/sheep acid	A	Manure spreader, injector	100 to 1500 lb.* Low rate if fresh and no straw
Manure – Dairy Cow	0.5-0.3-0.3		A		
Manure – Chicken	1.6-1.5-0.8		A		
Manure – Hog	0.6-0.4-0.4		A		

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Manure Compost (A)	up to 3.5-1-2	Microbes, water retention, soil organic matter, pH buffer, humates	R – Compost temp/rules or 90/120 day rule	Manure spreader; Lime truck	varies* Use less than plant-based
Municipal Compost, aka Leaf & Grass Compost (P)	Low! 1.5-0.5-1	Microbes, water retention, soil organic matter, pH buffer, humates	A – get letter from composter (or records) of 100% plant ingredients	Manure spreader; Lime truck; compost tea	Up to 3 cubic yards*
Re-Vita Pro (A)	5-4-5 + 9% Calcium; 1% humic acid	Mix (Chicken Manure, Feather Meal, Bone, Leonardite, Kelp)	A	SD, BC	10 – 50 lb*
Rock Phosphate (P)	0-3-0	32% phosphate; 32% Ca	A	SD, BC	10 – 60 lb.*
Soy Hydrolysate	10-0-0	Fertrell Explorer 10-0-0	P	Fertigation; Transplant water	
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Safe Green Lawn (Morgan Compost)	10-0-4 + S	Ingredients – Vegan doo, feather meal, potash, blood meal, humate, zeolite, sulfur bentonite clay	A	SD, BC	
Worm Castings (A)	0.5-0.5-0.3	Microbes, humates	A	SD, BC, compost tea	50 – 250 lb.*
High-Calcium Lime	NA	Raise pH to amend acidity	A	Lime truck	Calculate
Elemental Sulfur (M)	NA	Lower pH to amend alkaline soils	A (other S sources not allowed)	BC	Apply 50% rate over 2 to 3 years
Gypsum (Calcium sulfate) (M)	NA	Calcium source if don't need lime; may loosen <u>heavy</u> clay soils	A (if NOT from superphosphate production)	BC; Manure spreader	

* Application Rates - calculate by crop needs with soil test results

Sources: Becker's Farm http://www.beckersfarm.com/fertilizer_chart-2/

Larkin Hanson, A (2010) The Organic Farming Manual

Magdoff, F and H. Van Es (2009) Building Soil for Better Crops