



Fertilizer: The Many Forms You Can Use

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Poultry Litter

- Poultry litter is a substance found on the floor of poultry houses that is comprised of a base bedding material, such as wood shavings, pine bark, rice hulls, peanut hulls, or ground warm season grasses, and is then mixed with water, feed, feathers, additives (such as alum) and poultry manure as the chicken or turkey matures.
- Relative low nutrient analysis of N-P-K (Table 1).



Poultry Litter Ash (Co-Products)

- After combustion or gasification, the resulting product is poultry litter ash (PLA), with a reduction in the original feedstock material by 90% by weight. The PLA is sterile, and is a powder like material with high concentrations of nutrients (Table 1).
- Ash can be granulated into prills similar to commercial fertilizer.



Inorganic Fertilizers

- Known and consistent concentrations of nitrogen, phosphorus, potassium, and sulfur presented in a standard format of N-P₂O₅-K₂O-S.
- Typical sources include urea and liquid urea-ammonium nitrate (UAN) for nitrogen and triple super phosphate and diammonium phosphate for phosphorus.



Table 1. Average moisture, total nitrogen (N), phosphate (P₂O₅), potash (K₂O), and sulfur (S) for various poultry manure sources and inorganic fertilizer reported on an “as-is” basis for the mid-Atlantic.

Fertilizer Source	Moisture	N	P ₂ O ₅	K ₂ O	S
	%	%	%	%	%
Poultry Litter	28.7	2.5	2.5	1.8	0.4
Poultry Litter Ash	0.3	0.3	18.6	13.9	2.4
Urea	0.5	46	0	0	0
Potassium Chloride	0.0	0	0	60	0
Triple Super Phosphate	0.0	0	46	0	2

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