



Natural Resources Conservation Service
U.S. DEPARTMENT OF AGRICULTURE

Feed Management and Conservation Practices



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FARM PRODUCTION AND CONSERVATION
FSA | NRCS | RMA | Business Center

Feed Management Plans

- Common Uses
 - Reduce excreted nutrients
 - Reduce Greenhouse Gases
- Focus on the Whole Picture



Feed Management Potentials

- Utilize feed additives to reduce enteric methane in ruminants
- Reduce nutrients being excreted in manure and urine
- Improve feed and nutrient efficiency
 - Improves profitability
 - Monitor Income over Feed Costs (IOFC)
- Reduce volumes of manure generated
- Improved nutrient composition of manure
 - Matches nutrient application with crop requirements



FE and Manure Nutrient Excreted

Nitrogen

							Potentially	
Milk	BW	DMI	Ration CP	N Excreted	Lactating Cows	Annual N Excreted	Less N Excreted	Feed Efficiency
lbs	lbs	lbs	%	lbs/cow	Number	lbs		ECM/DMI
80	1350	54	16	0.98	100	35,721		1.49
80	1350	52	16	0.96	100	34,902	819	1.55
80	1350	50	16	0.93	100	34,083	1,638	1.61

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PSU, retired

FE and Manure Nutrients Excreted

Phosphorus

Milk	DMI	Ration P	P Excreted	Lactating Cows	Annual P Excreted	Potentially Less P excreted	Feed Efficiency
lbs	lbs	%	lbs/cow	Number	lbs	lbs	ECM/DMI
80	54	0.36	0.12	100	4,468		1.49
80	52	0.36	0.12	100	4,205	263	1.55
80	50	0.36	0.11	100	3,942	526	1.61

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Feed Efficiency

								Potential
Milk	Fat	Protein	3.5% FCM	ECM	Dry matter intake	Feed Efficiency	IOFC	Improved IOFC
lbs	%	%	lbs	lbs	lbs		\$/cow/day	\$/cow/day
60.0	4.60	3.20	71	68	52	1.32	3.69	
60.0	4.60	3.20	71	68	50	1.37	4.00	0.31
60.0	4.60	3.20	71	68	48	1.43	4.33	0.64
60.0	4.60	3.20	71	68	46	1.49	4.63	0.94
A real farm situation where cows are consuming 52 pounds of dry matter and averaging 60 pounds of milk. Improving FE has the potential to increase income by \$0.31 to \$0.94/cow/day. Assumed a milk price of \$20.00/cwt. and used feed prices from the July 2011 feed price list.								

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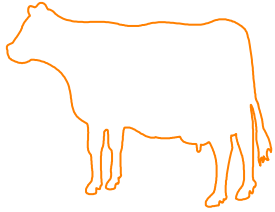
FE and Manure Production

							Potentially	
Milk	DMI	Fat	True Protein	Total Manure	Lactating Cows	Annual Manure Production	Less manure produced	Feed Efficiency
lbs	lbs	%	%	lbs/cow	Number	lbs	lbs	ECM/DMI
80	54.0	3.6	3.1	163	100	5,950,780		1.49
80	52.0	3.6	3.1	159	100	5,789,669	161,111	1.55
80	50.0	3.6	3.1	154	100	5,628,558	322,222	1.61

ASAE D384.2 Mar2005 Manure Production and Characteristics

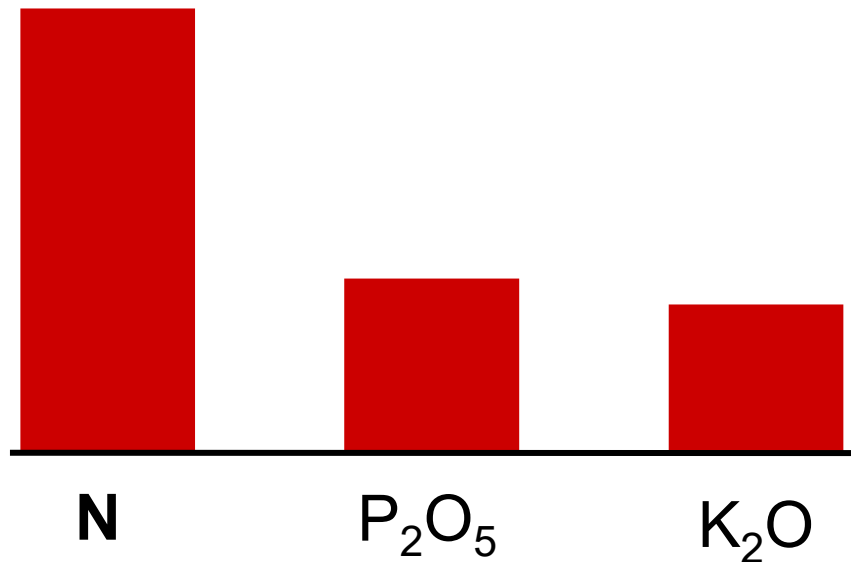
Total Manure is calculated from total solids and assumed moisture (87%)

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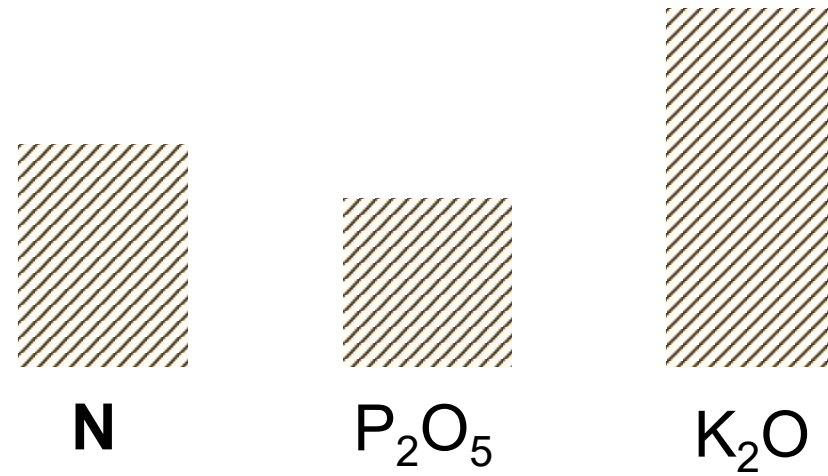


Farm Nutrient Imbalances

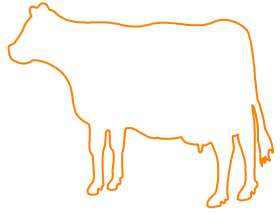
Corn Crop Requirement



Nutrients in Dairy Manure

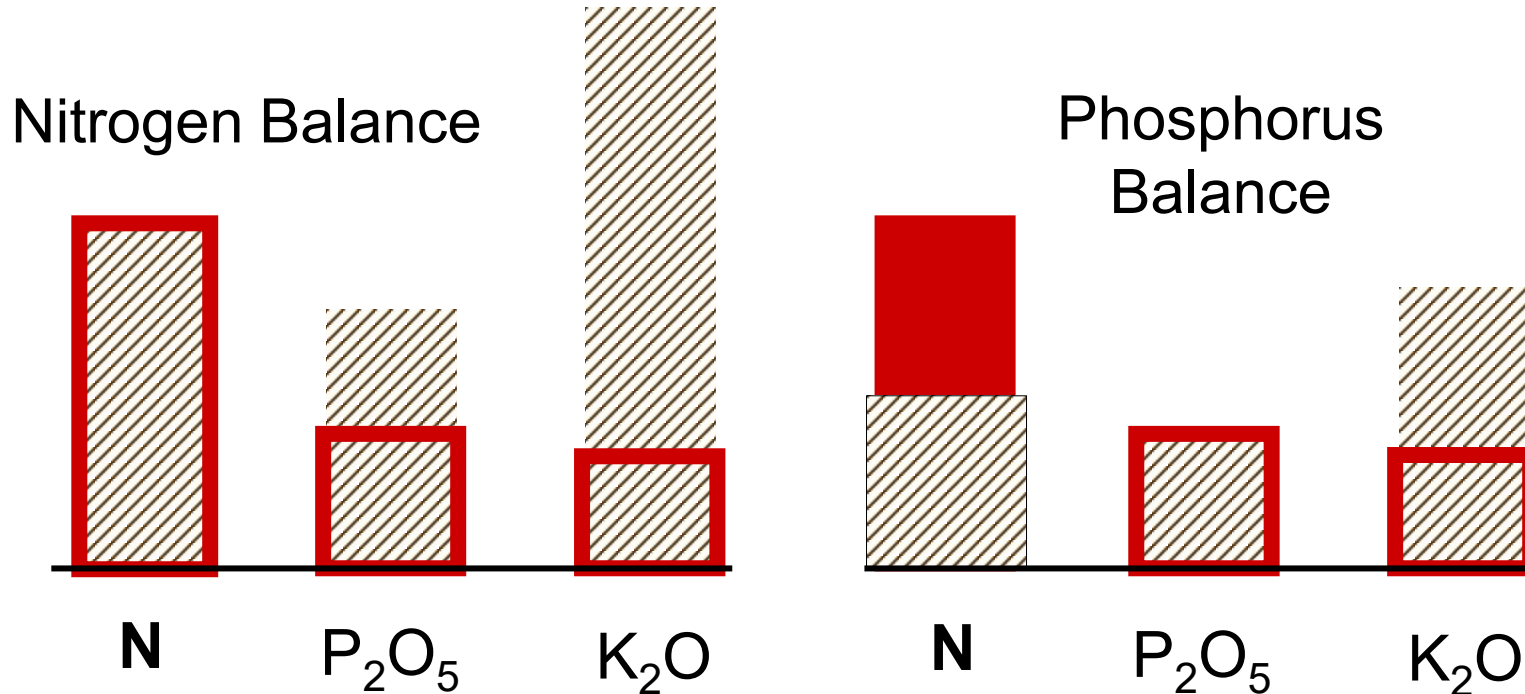


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Farm Nutrient Imbalances

Mismatch between manure nutrients and crop requirements



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Relationship to Conservation Practices

- Waste Storage Systems
 - 313- Waste Storage Facility
- Nutrient Application
 - 590- Nutrient Management
- Cropping Systems
 - 328- Conservation Crop Rotation
 - 340- Cover Crop
 - 511- Forage Harvest Management
 - 810- Annual Forages for Grazing Systems