

Fertilizer Use			
Nitrogen	g/bu	420	
<i>NH3</i>			
Production Efficiency		82.4%	
Shares in Nitrogen Production		70.7%	
Transport by ocean tanker	miles	3,000	48 Btu/mile-ton for O-D and 43 Btu/mile-ton reverse
by rail	miles	750	370 Btu/mile-ton
by barge	miles	400	403 Btu/mile-ton
from plant to bulk center	miles		
from bulk center to mixer	miles	50	
from mixer to farm	miles	30	
<i>Urea</i>			
Feedstock input	tons	0.567	
Production Efficiency		46.7%	
Shares in Nitrogen Production		21.1%	
Transport by ocean tanker	miles	5,200	48 Btu/mile-ton for O-D and 43 Btu/mile-ton reverse
by rail	miles	750	
by barge	miles	400	
from plant to bulk center	miles		by barge and ocean tanker
from bulk center to mixer	miles	50	1,142 Btu/mile-ton by truck
from mixer to farm	miles	30	2,199 Btu/mile-ton by truck
<i>Amonium Nitrate</i>			
Production Efficiency		35%	
Shares in Nitrogen Production		8%	
Transport by ocean tanker	miles	3,700	Energy Intensity 27 Btu/mile-ton O-D, and 24 reverse
by barge	miles	400	Energy Intensity 403 Btu/mile-ton
by rail	miles	750	Energy Intensity 370 Btu/mile-ton
from plant to bulk center	miles		
from bulk center to mixer	miles	50	
from mixer to farm	miles	30	
P₂O₅	g/bu	149	
<i>H₃PO₄</i>			
Feedstock input	tons	n/a	
<i>H₂SO₄</i>			
Feedstock input	tons	2.674	
<i>P Rock</i>			
Feedstock input	tons	3.525	
<i>P2O5 Transportation</i>			
By Barge	miles	400	
Bye Ocean Tanker	miles	3,000	
By Rail	miles	750	
K₂O	g/bu	174	
Transport by ocean tanker	miles	3,900	same Energy Intensity as above
by barge	miles	400	same Energy Intensity as above
by rail	miles	750	same Energy Intensity as above
from plant to bulk center	miles		
from bulk center to mixer	miles	50	
from mixer to farm	miles	30	
CaCO₃	g/bu	1,202	
Transport by Truck	miles	50	
Herbicide			
Transport by ocean tanker	miles	4,000	
by barge	miles	400	
by rail	miles	750	
from plant to bulk center	miles		
from bulk center to mixer	miles	50	
from mixer to farm	miles	30	
Pesticide			
Transport by ocean tanker	miles	4,000	
by barge	miles	400	
by rail	miles	750	
from plant to bulk center	miles		
from bulk center to mixer	miles	50	
from mixer to farm	miles	30	

Fuel use for fertilizer production			
Diesel fuel		38.3%	
Gasoline		12.3%	
Natural gas		21.5%	
LPG		18.8%	
Electricity		9%	
Feed loss			
Land Use			
EtOH Production			
Dry mill (shares of total)		80%	
Dry EtOH Yield	gal/bushel	2.72	
Energy use for Dry EtOH	Btu/gal	36,000	
Coal used for dry mill		9%	
NG used for dry mill		81.5%	
Electricity used for dry mill		9.5%	
Wet mill (shares of total)		20%	
Wet EtOH Yield	gal/bushel	2.62	
Energy use for Wet EtOH		45,970	
Coal used for wet mill		40%	
NG used for wet mill		60%	
Transportation and Distribution			
EtOH transp. by truck		70%	
Distance	miles	40	
EtOH distr. by truck		100%	
Distance	miles	50	
Fuels Properties			
Fuels Specifications	LHV (Btu/gal)	Density (g/gal)	
Crude	129,670	3,205	
RO	140,353	3,752	
Conv Diesel	128,450	3,167	
Conv Gasoline	116,090	2,819	
CaRFG	111,289	2,828	
CARBOB	113,300	2,767	
NG	111,520	2,651	
EtOH	76,330	2,988	
Still Gas	128,590		
CaRFG Energy Content		%	
CARBOB	96.4%		
EtOH	3.6%		