Handy Conversion Factors for CNMP's

Multiply	By	To Get
P (phos.)	2.288	P_2O_5
K (Potass.)	1.205	K_2O
ppm	0.2269	lb/acre-in
lb/acre-in	4.408	ppm
ppm	0.00835	lb/1,000 gal
lb/1,000 gal	119.76	ppm
ppm	0.002	lb/ton
lb/ton	500	ppm
lb/acre-in	0.0368	lb/1,000 gal
lb/1,000 gal	27.17	lb/acre-in

1 acre-inch = 3,630 ft^3 = 27,156 gal

- Soil tests for cool-season crops should be collected after summer harvest, or in late summer for unharvested crops
- Soil tests for warm-season crops should be sampled after fall harvest or prior to next Spring's planting.

$\frac{4 \text{ lbs}}{\text{ac-ft}}$ increases by 1 ppm or $\frac{2 \text{ lbs}}{\text{ac-6in}}$ increases by 1 ppm

1 ft^3 = 7.48 gal

1% = 10,000 ppm

1 ac-ft = 325,851 gal

Conversion Factors

Multiply		BY		TO GET
acre	ac	0.4	ha	hectare
acre-inch	ac-in	27154	gal	gallon
cubic feet	ft^3	7.48	gal	gallon
cubic centimeter	cm3	0.000001	m^3	cubic meter
cubic feet	ft^3	0.028	m^3	cubic meter
cubic inch	in^3	16.39	cm^3	cubic centimeter
cubic yard	yd^3	0.76	m^3	cubic meter
feet	ft	0.3048	m	meter
gallon	gal	3.79	L	liter
gallon/acre	gal/ac	9.35	L/ha	liter/hectare
Hectare	ha	10,000	m^2	square meter
inch	In	2.54	cm	centimeter
mile	mi	1.61	km	kilometer
Ounce (weight)	oz	28.35	g	gram
Ounce (fluid)	oz	30	mL	milliliters
parts per million	mg/kg	0.002	lb/t	pound/ton
parts per million	mg/L	0.00835	lb/1000 gal	pound/1000 gallon
percent	%	10000	ppm	parts per million
pound	lb	0.454	kg	kilogram
pound/1000 gallon	lb/1000 gal	27.154	lb/ac-in	pound/acre-inch
pound/acre	lb/ac	1.12	kg/ha	kilogram/hectare
pound/cubic foot	lb/ft^3	16.02	kg/m^3	kilogram/cubic meter
pound/gallon	lb/gal	119826	mg/L	parts per million
square feet	ft^2	0.093	m^2	square meter
square mile	mi^2	2.59	km^2	square kilometer
square mile	mi^2	640	ac	acre
ton	t	2000	lb	pound
ton	t	0.907	Mg	metric ton
ton, metric	Mg	2205	lb	pound
ton, metric	Mg	1000	kg	kilogram
yard	yd	0.9144	m	meter
TO GET		BY		DIVIDE

Courtesy of NSCU – Dept. of Soil Science

Conversions and Volumes

To convert lbs/ac-in to lbs/1000gal
*Multiple lbs/ac-in by .03718 to get lbs/1000gal.

General

- lb P_2O_5 x 0.44 = lb P
- lb P x 2.29 = lb P_2O_5
- lb K_2O x 0.83 = lb K
- lb K x 1.2 = lb K_2O

Soil

- Parts per million (ppm) x 2 = lb/acre
- 5 lb P_2O_5 increases soil P test value by 1 ppm
- 1.75 lb K_2O increases soil K test value by 1 ppm

Manure - General

- Typical density of swine manure = 62 pounds per cubic foot
  Tons x 32.26 = cu ft
  Cu ft x 0.0310 = tons
  Tons x 242 = gallons
  Gallons x 0.00414 = tons
- Total available N (TAN) or Plant available N (PAN) = NH_4 + -N + mineralized organic N
- About 35% of the organic N is mineralized to inorganic N in year it is applied

Liquid Manure

1 mg/L = 0.008345404 45 lbs/1000 gallons

- ppm / 10,000 = %
- Lb/1000 gal= ppm/120
- lb/1000-gallons / 83 = %
- ppm P x 0.019 = lbs P_2O_5/1000 gallons
- ppm K/100 = K_2O/1000 gallons
- % P x 192 = lb P_2O_5/1000 gallons
- % K x 100 = lbs K_2O/1000 gallons

Solid Manure

$\frac{\text{Sq. ft}}{43{,}560}$ = acres

- lb/ton / 20 = %
- Lb/ton = ppm/500
- ppm P X 0.0046 = lb P_2O_5/ton
- ppm K x 0.0024 = lb K_2O/ton
- % P x 46 =lb P_2O_5/ton
- % K x 24 = lb K_2O/ton

Back to National Curriculum
PAMS Home Page