The Corn Nitrogen Needs Calculation Worksheet:
University of Nebraska Corn Nitrogen Recommendations

Farm name: **Agronomist:** **Date & time:**

Field information						Total	Five nitrogen credits						Fertilizer	N needed
A Field or management area	B Previous crop	C Soil test nitrate-N (#1 below) (ppm)	D Organic matter (#2 below) (%)	E Irrig. water nitrate-N If >=5 ppm (ppm)	F Expected yield (#3 below) (bu/ac)	G Total N. needed ('F'x1.2)+35 (lb/ac)	H Soil nitrate cr. 'C' x 8 (lb/ac)	I Organic N. release 'D'x'F'x0.14 (lb/ac)	J Irrigation water cr. (#4 below) (lb/ac)	K Legume credit (#5 below) (lb/ac)	L This year's manure credit (#6) (lb/ac)	M Past years manure credit (#6) (lb/ac)	N Fert. N applied since harvest (lb/ac)	O **Nitrogen to apply** (#7 below) (lb/ac)
Example A	*corn*	*14.2*	*2.0*	*11.2*	*193*	*267*	*114*	*54*	*15*			*25*	*0*	*59*
Example B	*soybean*	*(3)*	*1.8*		*130*	*191*	*24*	*32*	*---*	*45*			*11*	*79*

#1: Weighted average of pre-plant soil test nitrate-N in ppm in the root zone - a minimum of 24" deep. Use a default value of 3.0 ppm for all shallower samples, or where no samples were taken (e.g. after soybeans). If the effective root zone is less than 2 ft. deep, prorate the Nitrate-N credit on the basis of a full rooting depth.

#2: If organic matter is greater than 3.0%, use 3.0.

#3: Average of the last 5 years + 5%. (exclude years with unusual stress)

#4: Column E x 0.227 x ___ in. of irrig. water by milk stage (e.g. 6 in. in E. Nebr.; 9 in. in Central Nebr.; 12 in. in Western Nebr.; and 15 in. in the Panhandle)

#5: Previous legume credit in lb./ac.

	Med./Fine	Sandy
Soil Texture		
Soybean*	45	45
Alfalfa (70-100% stand, > 4 pl./sq.ft.)	150	100
Alfalfa (30-69% stand, 1.5 - 4 pl./sq.ft.)	120	70
Alfalfa (0-29% stand, < 1.5 pl./sq.ft.)	90	40
Sweetclover and Red clover:	80% of credit allowed for alfalfa	
Dry beans	25	25

* If yield is < 30 bu/ac due to season-long stress then use half (22 lb./ac).

#6: Use NebGuide G97-1335A "Determining Crop Available Nutrients from Manure". Example: 20 lb.N/T. beef dirt lot solid manure X 0.12 (appl.1 yr. ago) X 10 T./ac. = 25 lb N./ac.

#7: Column O = G - H - I - J - K - L- M - N; **Nitrogen rates may need to be increased if excess rain and/or irrigation occur early season.**

On very sandy soils it is desirable to apply most of the needed nitrogen as sidedress and/or with irrigation water after corn is one-foot tall and prior to tasseling.

This is on the "Crop Watch" web page: http://cropwatch.unl.edu/focusnitrogen.htm