

Section 12 Example: Annual Plan - Individual Field Expected Yields and Nutrient Requirements

Sample Calculations

Expected Yield (2007)

N Requirement (2007)

P₂O₅ Requirement (2007)

Field 1 – Pivot Reference: $[(163 + 158 + 166)/3] \times 1.05 = 170$
Strategic Plan (equation 5)

$35 + (1.2 \times \text{EY}) - (8 \times 5) - (0.14 \times 170 \times 2) = 191$
Strategic Plan (equation 1)

$0.31 \times 170 \times 1 \text{ yr} - 0 = 53$
Strategic Plan (equation 2)

Nitrogen Annual Field Plan

Field or Management Area: Field 1 – Pivot Soil Organic Matter: Yr.: 2006, 2.0 %. Yr.: , %.

a. Year	b. Previous Crop	c. Planned Crop	d. Actual Yield / Expected Yield bu./ac.	e. Soil Test Nitrate-N (average ppm)	f. Total Nitrogen Need or Removal (Ref. Table R-5 to R-17) (lbs./acre)	Nitrogen Credits (lbs./acre)			j. Fertilizer Nitrogen Credit (Starter, etc.) (lbs./ac.)	k. Net N Need Before Manure Application (Cols. f-g - h - i - j) (lbs./ac.)	l. Manure Applic. Option (write line no. from Form 17, Col. a)	m. Planned Manure Application Rate (Form 17, Col. c) (tons/ac, gal./ac, or in./ac.)	n. Rate of Manure Nitrogen Available (Form 17, Col. j) (lbs./ac.)	o. Extra Nitrogen Needed as Fertilizer (Cols. k-n) (lbs./ac.)
						g. Manure N from Past Years (Form 17, Col. k-m) (lbs./ac.)	h. Irrigation Water N (ppm x 0.227 x Ac.-in.) (lbs./ac.)	i. Legume / Green Man. N (Ref. Table R-4) (lbs./ac.)						
2004	soybean	corn	163											
2005	soybean	corn	158											
2006	corn	soybeans	166											
2007	soybean	corn	170	5	151	30	12	45	0	64	B	20 t/ac	73	0
2008	corn	soybeans												
2009														
2010														
2011														

If irrigated: Acre-inches / year (for Col. h): 6 NO₃-N conc. of irrigation water: Yr.: 2007, 9 ppm. Yr.: , ppm.

Phosphorus Annual Field Plan

a. Crop Year	Manure Phosphorus Availability					Crop Phosphorus Balance								
	b. Manure Handling System	c. Planned Manure Application Rate	d. Manure Phosphorus (P ₂ O ₅) Concentration from Analysis	e. Phos. Avail- ability Factor (0.7 or 1.0)	f. Phos- phorus Manure Credit (c x d x e) (lb./ac.)	Planned Crop		i. Soil Test Phos- phorus (ppm) & Method	j. Phos- phorus (P ₂ O ₅) Recom- menda- tion (lb./ac.)	k. P Fer- tilizer Applica- tion (P ₂ O ₅) (lbs./ac.)	Crop P (P ₂ O ₅) Removal (use only if no soil test is available)		n. P ₂ O ₅ Balance (Cols. f + k - m) (lbs./ac)	o. Potential Soil P ₂ O ₅ Increase or Decrease (n ÷ 20) (ppm)
						g. Name	h. Expect- ed Yield				l. Factor (See Table R- 1)	m. Total P Removed (h x l)		
2004		<input type="checkbox"/> Ton/ac <input type="checkbox"/> 1000 gal/ac <input type="checkbox"/> ac-in/ac	<input checked="" type="checkbox"/> lbs./ton <input type="checkbox"/> lbs./1000 gal <input type="checkbox"/> lbs./ac-in		lbs./acre					lbs./acre		lbs./acre	lbs./acre	
2005		<input type="checkbox"/> Ton/ac <input type="checkbox"/> 1000 gal/ac <input type="checkbox"/> ac-in/ac	<input type="checkbox"/> lbs./ton <input type="checkbox"/> lbs./1000 gal <input type="checkbox"/> lbs./ac-in		lbs./acre					lbs./acre		lbs./acre	lbs./acre	
2006		<input type="checkbox"/> Ton/ac <input type="checkbox"/> 1000 gal/ac <input type="checkbox"/> ac-in/ac	<input type="checkbox"/> lbs./ton <input type="checkbox"/> lbs./1000 gal <input type="checkbox"/> lbs./ac-in		lbs./acre					lbs./acre		lbs./acre	lbs./acre	
2007	Beef open lot	20 <input checked="" type="checkbox"/> Ton/ac <input type="checkbox"/> 1000 gal/ac <input type="checkbox"/> ac-in/ac	18.7 <input checked="" type="checkbox"/> lbs./ton <input type="checkbox"/> lbs./1000 gal <input type="checkbox"/> lbs./ac-in	0.7	262 lbs./acre	Corn	170	13	- lbs./acre	0	0.31	53 lbs./acre	- 117 lbs./acre	6
2008		<input type="checkbox"/> Ton/ac <input type="checkbox"/> 1000 gal/ac <input type="checkbox"/> ac-in/ac	<input type="checkbox"/> lbs./ton <input type="checkbox"/> lbs./1000 gal <input type="checkbox"/> lbs./ac-in		lbs./acre					lbs./acre		lbs./acre	lbs./acre	
2009		<input type="checkbox"/> Ton/ac <input type="checkbox"/> 1000 gal/ac <input type="checkbox"/> ac-in/ac	<input type="checkbox"/> lbs./ton <input type="checkbox"/> lbs./1000 gal <input type="checkbox"/> lbs./ac-in		lbs./acre					lbs./acre		lbs./acre	lbs./acre	
2010		<input type="checkbox"/> Ton/ac <input type="checkbox"/> 1000 gal/ac <input type="checkbox"/> ac-in/ac	<input type="checkbox"/> lbs./ton <input type="checkbox"/> lbs./1000 gal <input type="checkbox"/> lbs./ac-in		lbs./acre					lbs./acre		lbs./acre	lbs./acre	
2011		<input type="checkbox"/> Ton/ac <input type="checkbox"/> 1000 gal/ac <input type="checkbox"/> ac-in/ac	<input type="checkbox"/> lbs./ton <input type="checkbox"/> lbs./1000 gal <input type="checkbox"/> lbs./ac-in		lbs./acre					lbs./acre		lbs./acre	lbs./acre	