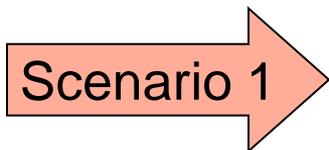


# EXAMPLE: Rotations and Annual Source PAN Management

## Realistic Yields for Na: *Nahunta loam* in Sampson County

Crop	Yield	Nitrogen Factor	Realistic Nitrogen Rate (lbs/acre)	Estimated P- Removal (lbs P <sub>2</sub> O <sub>5</sub> /acre)
Corn (Grain)	125 Bushels	1.06	133	55
Cotton	800 Pounds	0.066	53	23

Assume we need to utilize 1,750 lbs. PAN produced per year by our source. Our crop land needs to be in some type of corn & cotton rotation.



	Field 1 10 ac. Rotation= Corn/Cotton	Field 2 10 ac. Rotation= Corn/Cotton	Total PAN Applied
Year 1	<u>Corn</u>  PAN rate = 133 lbN/ac	<u>Corn</u>  PAN rate = 133 lbN/ac	<b>2,660</b>
Year 2	<u>Cotton</u>  PAN rate = 53 lbN/ac	<u>Cotton</u>  PAN rate = 53 lbN/ac	<b>*1,060</b>

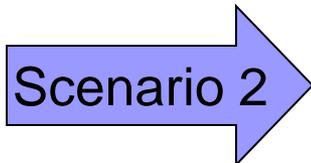
In Yr. 1 there will be a 910 lb. deficit of Source PAN = good

In Yr. 2 there will be a 690 lb. surplus of Source PAN = bad

\*1,060 < 1,750 We will not be able to utilize all of the Source in Year 2 under this rotation.

# EXAMPLE: Rotations and Annual Source PAN Management

We need to utilize 1,750 lbs. PAN produced per year by our source.



	Field 1 10 ac. Rotation= Corn/Cotton	Field 2 10 ac. Rotation= Cotton/Corn	Total PAN Applied
Year 1	<u>Corn</u>  PAN rate = 133	<u>Cotton</u>  PAN rate = 53	<b>1,860</b>
Year 2	<u>Cotton</u>  PAN rate = 53	<u>Corn</u>  PAN rate = 133	<b>1,860</b>

In Yr. 1 there will be a 110 lb. deficit of Source PAN = good

In Yr. 2 there will be a 110 lb. deficit of Source PAN = good

\*1,860 > 1,750 We will be able to utilize all of the Source in both years under this rotation.

## Realistic Yields for Ra: *Rains sandy loam* in Sampson County

When you are dealing with limited acreage, realistic N-rates are very important to consider. Corn, e.g. can utilize > twice as much N as cotton.

Crop	Yield	N-Factor	Realistic Nitrogen Rate (lbs/acre)	Estimated P- Removal (lbs P <sub>2</sub> O <sub>5</sub> /acre)
Barley (Grain)	74 Bushels	1.47	109	28
Corn (Grain)	125 Bushels	1.08	135	55
Cotton	800 Pounds	0.073	58	23
Oats (Grain)	94 Bushels	1.1	103	24
Rye (Grain)	55 Bushels	1.93	106	18
Sorghum (Grain)	60 CWT	1.67	100	45
Soybeans (Double Cropped - Manured)	37 Bushels	3.87	143	30
Soybeans (Full Season - Manured)	44 Bushels	3.87	170	35
Tobacco (Flue Cured)	2600 lbs	0.027	70	13
Triticale (Grain)	77 Bushels	1.5	116	26
Wheat (Grain)	55 Bushels	1.93	106	28
Common Bermudagrass (Hay)	3.4 Tons	43	146	41
Fescue (Hay)	4.5 Tons	43	194	71
Hybrid Bermudagrass (Hay)	4.5 Tons	43	194	55
Hybrid Bermudagrass overseeded with Rescuegrass (Hay)	6 Tons	43	258	82
Pearl Millet (Hay)	3.8 Tons	48	182	51
Sorghum Sudan (Hay)	4.3 Tons	48	206	60
Common Bermudagrass (Pasture)	3.4 Tons	32	109	4
Fescue (Pasture)	4.5 Tons	32	144	7
Hybrid Bermudagrass overseeded with Rescuegrass (Pasture)	6 Tons	43	258	8
Hybrid Bermudagrass (Pasture)	4.5 Tons	32	144	5
Pearl Millet (Pasture)	3.8 Tons	36	137	5
Sorghum Sudan (Pasture)	4.3 Tons	36	155	6