Reducing Inputs in Your Pecan Operation

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How Do We Keep Pecans Profitable?

	2018	2019	2020
Stuart	$1.44	$1.55	$1.05-$1.30
Moneymaker	$0.8-$1.10	$1.00-1.10	$0.40-$0.70

- Manage Cost
- Fertility costs can be drastically reduced simply by using soil and leaf samples
  - As much as $80/acre
- Become More Efficient---Cut Costs Not Corners
  - More/Same volume for less money
- Varieties---Fungicides account for 12% of variable production cost

Soil Sample Results

	Desired Range (lbs/A)	Mean (lbs/A)	% Low	% High	Sample Range (lbs/A)
Soil P	30-60	98.3	0	90	48-183
Soil K	100-150	153	0	34	94-361
Soil Ca	400-900	988	3	48	192-2241
Soil Mg	90-100	184	7	90	35-436
Soil S	10-50	26.6	3	0	4-41
Soil Fe	12-25	22.6	3	24	8-76
Soil Zn	15-20	25	28	55	3.9-55.3
Soil B	0.5-1.0	0.99	41	14	0.22-6.0
Soil Cu	0.5-1.5	1.1	14	10	0.2-7.2
Soil Mn	15-40	31.9	28	7	13-45
Soil Ni[1]	?	1.26	N/A	N/A	1-7
pH	6.0-6.5	5.96	41	12	5.3-7.0

Cutting Costs and Not Corners

- **Phosphorus:**
  - If soil P is less than 30 lbs per acre, broadcast P (usually at a rate of 40 lbs P/acre).
  - If soil P is more than 30 lbs/acre and leaf P<0.12, make a narrow band application of P over the drip emitters or in the wet zone of your irrigation.
  - Otherwise you don't need to make an application of P.
- This will save approximately $21/acre

Cutting Costs and Not Corners

- **Potassium**
  - If soil K drops below 100 lbs/acre: broadcast K. Otherwise you don't need to make a broadcast application of K.
  - If soil K is more than 100 lbs/acre and leaf K is less than 1.1, band K as described for P above.
  - If soil K is more than 100 lbs N and leaf K is 1.1 or more, no K is needed.

- This will save approximately $23/acre

Cutting Costs and Not Corners

- Broadcast Zn to orchard soil at 5-10 lbs/acre during years 1-4
- IN MATURE ORCHARDS: Broadcast Zinc Sulfate ONLY when soil Zn is <15 lbs/acre in mature orchards.
- Can save $18/acre
- If your soil levels are 15 lbs per acre or more but you see visible symptoms of Zinc deficiency or leaf Zn concentrations are below 50 ppm, inject Zn EDTA through the irrigation system.

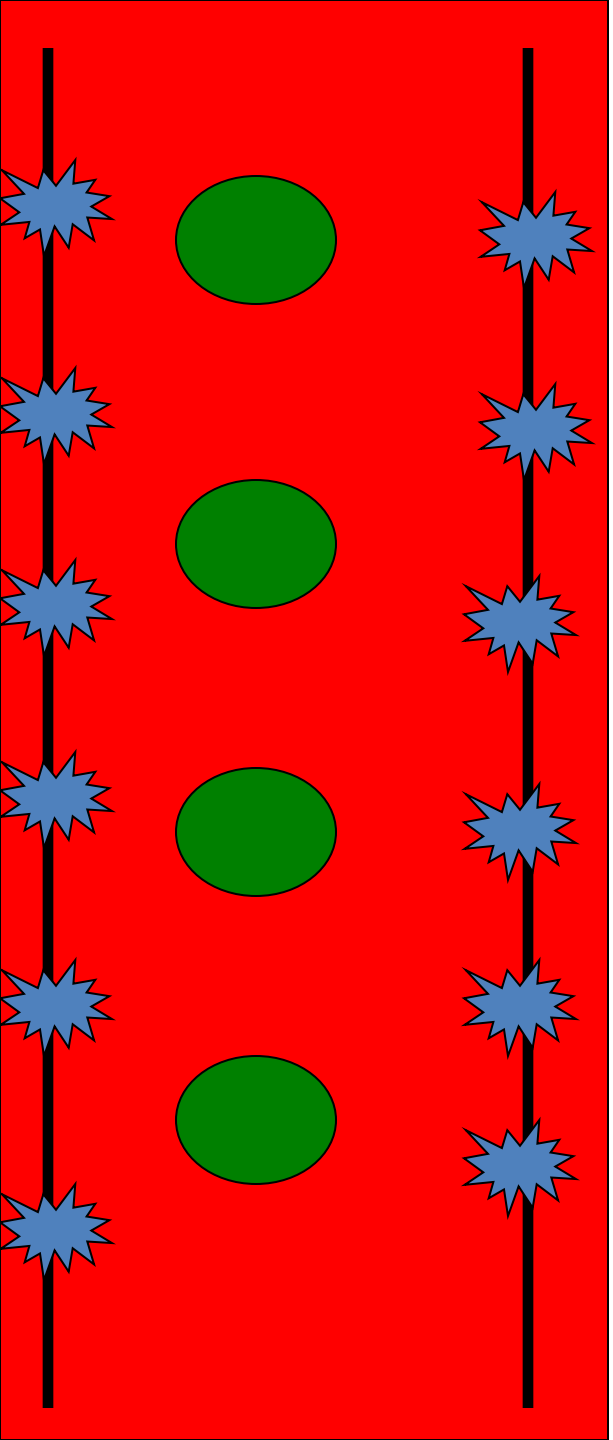
Nitrogen Form

- No difference in pecan response to AN, AS, and Urea
- AN= expensive and hard to find
- AS = $63.09/acre @ 100 lbs N/A
- Urea = $34.56/acre @100 lbs N/A

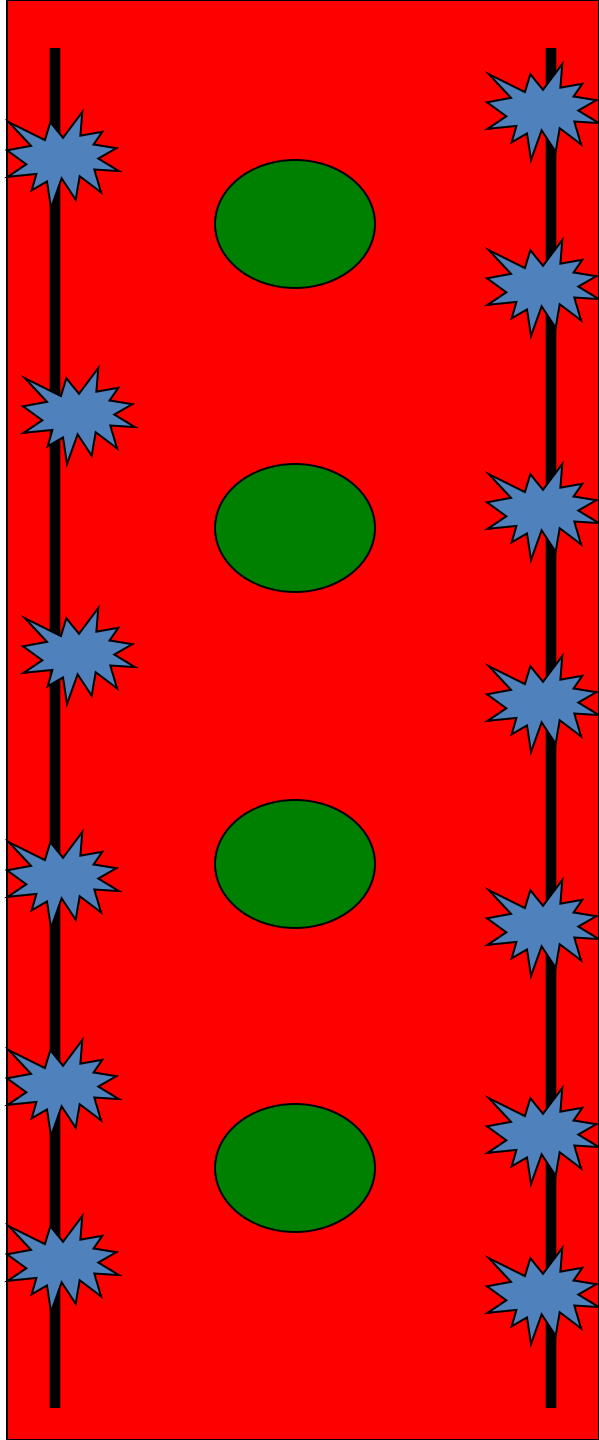
Split N applications (75% in April)

On year = additional in June/late August

Fertilizer Placement



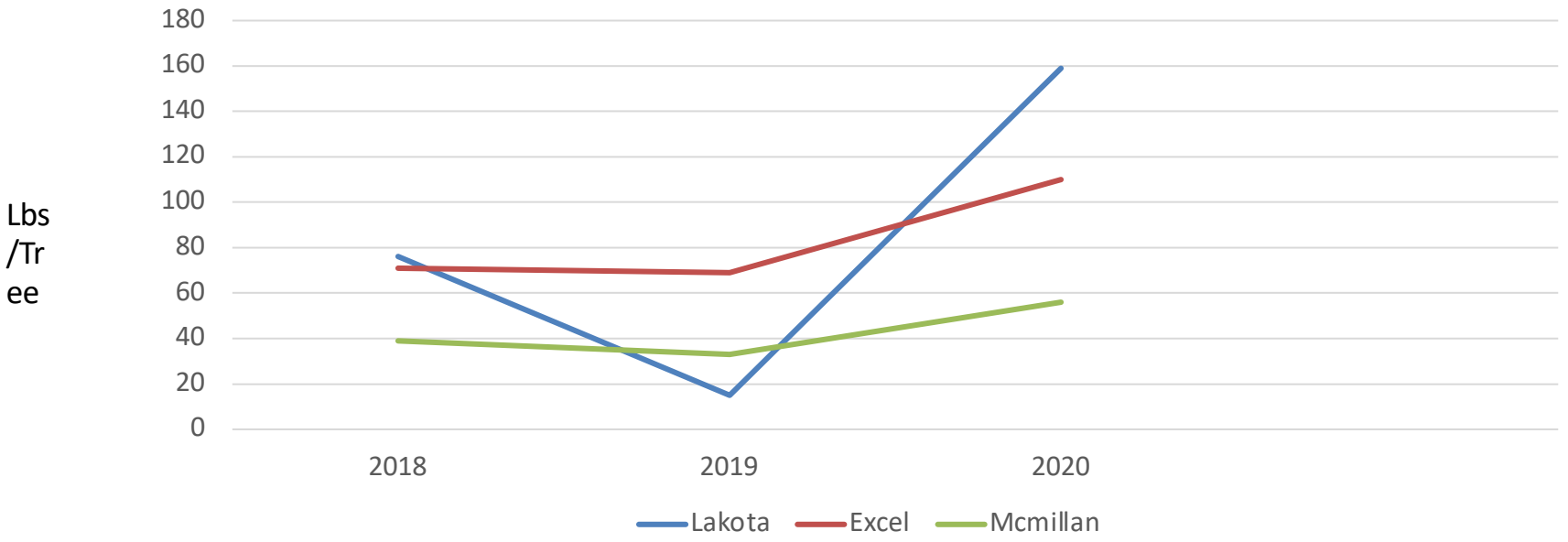
- 40 X 40
- 12 foot wide herbicide strip:
- 12/40 = 30%
- Can reduce area that you apply fertilizer to by 70% with broadcast- band application



Lakota in Low Input Trial

No fungicide sprays

Low Input Yields



Low Input Test
3-Year Average

	Yield	Count	% kernel	Cost/A	Price ($)	Gross ($)	Net ($)
Desirable	1490	43	53	1467.98	2.03	3024.70	1556.72
Pawnee*	1068	46	57	1439.98	2.55	2723.4	1283.42
Lakota	**2249**	**48**	**57**	**1154.19**	**1.86**	**4183.14**	**3028.95**
Excel	2260	46	49	1154.19	1.76	3941.60	2787.41
McMillan*	1162	56	53	1154.19	1.77	2056.74	902.55

---Lakota has to be fruit thinned for consistent yields

*Pawnee numbers from commercial orchard
*McMillan trees approx. 1-2 yrs younger than Excel & Lakota

Lakota Issues

Fruit-Thinning Lakota

	2020 Yield/tree (lbs)	2020 Nuts/lb	2020 % Kernel	% Bearing Terminals May 2021
Thinned	110b	63a	56b	61.6b
Non-Thinned	159a	62a	54a	11.6a

Fungicide Sprays based on Scab Potential

	Low Susceptibility $36	Medium Susceptibility $87.50	High Susceptibility $130+
Early April			Phosphite
Mid April	Phosphite	Phosphite	Group 3 + Group 11
Early May			Phosphite
Mid May	Group 3 + Group 11	Group 3 + Group 11	Phosphite
Early June		Elast/Tin or Tin/Phosphite	Miravis Top
Mid June	Phosphite	Miravis Top	Elast/Tin
Early July		Elast/Tin or Tin	Miravis Top
Mid July		Miravis Top	Elast/Tin
Early August		Elast/Tin or Tin	Miravis Top
Mid-August			Elast/TIn

Questions