

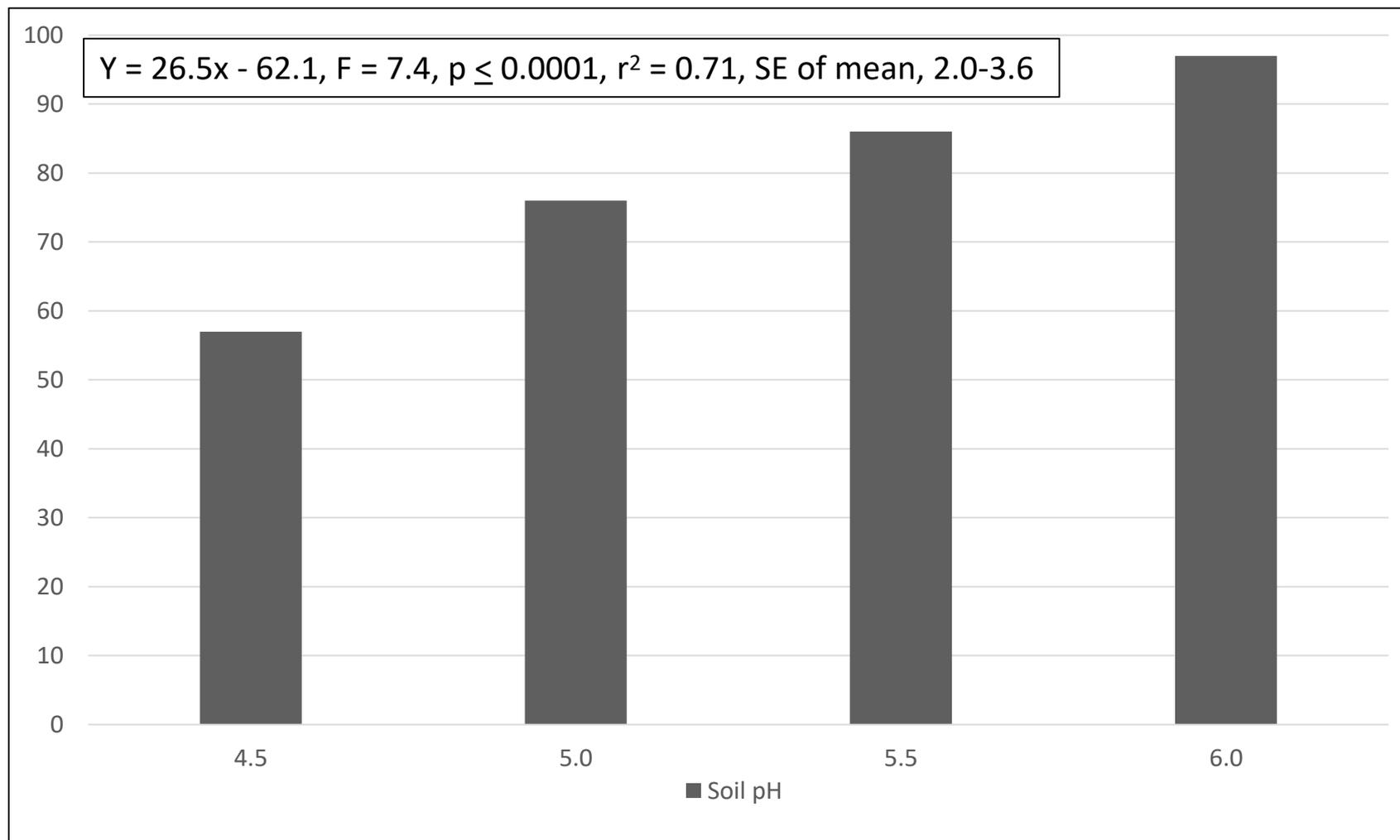
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The following preliminary calculations show the value of liming on a traditional peanut soil in North Carolina (Lewiston-Woodville). This experiment was originally established by Dr. Fred Cox and has been maintained over many years. Yield data for peanut are from 6 years of research. pH varied somewhat but was approximately the value presented in the figure and table. David, Carl and I most likely will use these data to determine the potential economic value from liming across North Carolina for peanut using soil test data NCDA&CS has on file.

In many ways there is nothing new in the data. However, with many of our practices we need to be diligent and not lose sight of their economic value. pH is one of those inputs. Note that there is significant economic value in raising pH from 5.6 to 6.0, even when yield is 3,000 lbs/acre and peanut price is \$0.23/lb (\$460/ton). Both of these parameters are relatively low by our current production standards.

**Table 1. Influence of soil pH on peanut yield presented as percent of maximum yield. Data are pooled over 6 years.**



**Table 2. Peanut yield response to pH and estimated economic return on investment in lime for peanut in a single season.**

pH	Regression fraction for yield	Yield estimate category (lbs/acre)					
		3000	3500	4000	4500	5000	5500
<i>Average field pH</i>		<i>Percent of yield estimate based on regression fraction</i>					
4.5	0.57	1710	1995	2280	2565	2850	3135
5.0	0.76	2280	2660	3040	3420	3800	4180
5.5	0.86	2580	3010	3440	3870	4300	4730
6.0	0.97	2910	3395	3880	4365	4850	5335
<i>Adjustment with lime</i>		<i>Economic return on lime investment (\$/acre)</i>					
4.5 to 6		131.1	164.45	197.8	231.15	264.5	297.85
5.2 to 6		98.9	123.05	147.2	171.35	195.5	219.65
5.6 to 6		52.9	65.55	78.2	90.85	103.5	116.15

Calcitic lime cost of \$46/ton

Peanut price of \$0.23/lb

Lime required to raise pH approximately 0.5 pH units set at 0.5 tons/acre