

SOLVITA COLOR INTERPRETATION



TECH MEMO 0019-#12-1

COLOR RANGE ADJUSTMENT FOR CO₂-RESPIRATION

Solvita makes possible a colorimetric measurement of soil biological activity by the ability of microbes to produce CO₂ which is captured, producing a color wavelength change. This can be estimated visually (Solvita Color Chart) or measured more accurately by Solvita DCR or the new IRTH. The original Solvita Color Scale relates to exponential increases in concentration of CO₂ as indicated in **Chart #1**

The **Solvita Color Scale** is a biological “fertility index” or the capacity of the soil to produce microbial carbon dioxide over the range of about 0 – 250 mg / kg (ppm)/day.

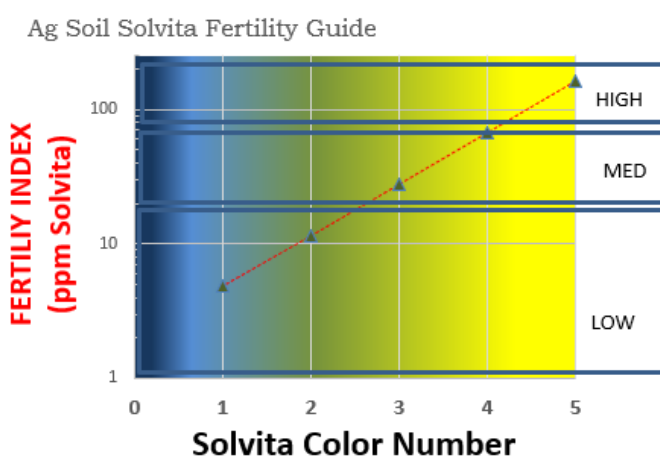


Chart #2 indicates the shift in interpretation from the 2016 Solvita protocol to the new SOLVITA 2019 system¹ released in November 2018.

COLOR	CO ₂ -C Range	2019	2016
0	0 - 3		
1	4 - 9	LOW	LOW
2	10 - 14		
2.5	15 - 22		
3	23 - 34	MED LOW	
3.5	35 - 55		MED
4	56 - 85	MED HIGH	
4.5	86 - 125		
5	126 - 195	HIGH	HIGH
5.5	> 196 -	Excessive	

¹ [Soil CO₂-Respiration – Official Solvita Instructions, SOP 2019](#)