

**Determination of Soil Moisture and Bulk Density (dry)  
 Using Eley Volumeter and Carbide Moisture Tester**

Farm \_\_\_\_\_ Location \_\_\_\_\_ SWCD \_\_\_\_\_  
 Crop \_\_\_\_\_ Soil type \_\_\_\_\_ Date \_\_\_\_\_ Tested by \_\_\_\_\_

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	
Texture	Thickness of layer	Volumeter							Bulk density (g/cc)	Soil-water content (in)	Soil-water content at field capacity	Soil-water deficit (in)	
		Reading before (cc)	Reading after (cc)	Volume (cc)	% Wet wt.	% Dry wt.	% Wilting point	% Soil-water					
	d			V	W <sub>p</sub>	P <sub>d</sub>	P <sub>w</sub>	SWC <sub>p</sub>	Db <sub>d</sub>	SWC	AWC	SWD	
Wet weight of all samples in grams unless otherwise shown.										Totals			

$$Db_d = \frac{26}{\frac{V(1 + P_d)}{100}}$$

$$SWC = \frac{Db_d \times SWC_p \times d}{100 \times 1}$$

$$SWC_p = P_d - P_w$$