## **10% Biochar Applications Calculations**

## Calculation for grassland soil:

10% at 2" deep. This will need to be doubled for the Biochar / Compost Mix.

To achieve 10% biochar for one acre at a depth of 2 inches, you would need approximately 26.89 cubic yards of biochar.

## **Explanation**:

1 acre = 43,560 square feet 2 inches = 0.167 feet

Step 1: Calculate the volume of soil in one acre at 2 inches depth:  $43,560 \text{ sq ft} \times 0.167 \text{ ft} = 7,270.2$  cubic feet of soil

Step 2: Find 10% of this volume:  $10\% \times 7,270.2$  cubic feet = 727.02 cubic feet

Step 3: Convert cubic feet to cubic yards: 727.02 cubic feet ÷ 27 cubic feet per cubic yard = 26.89 cubic yards

Thus, 27 cubic yards of biochar are needed to achieve 10% biochar at a 2" depth.

## **Quantity for crop or garden soil:**

**10% at 6" deep. This would need to be doubled for the Biochar / Compost Mix.** To achieve 10% biochar for one acre at a depth of 6", you would need approximately **81 cubic yards** of biochar.

**Explanation**:

1 acre = 43,560 square feet 6 inches = 0.5 feet

Step 1: Calculate the volume of soil in one acre at 6 inches depth:

43,560sq ft×0.5ft=21,780cubic feet of soil **Step 2:** Find 10% of this volume:

10%×21,780cubic feet=2,178cubic feet **Step 3:** Convert cubic feet to cubic yards:

27cubic feet per cubic yard2,178cubic feet=80.67cubic yards

Thus, **81 cubic yards** of biochar are needed to achieve 10% biochar at a 6" depth.