

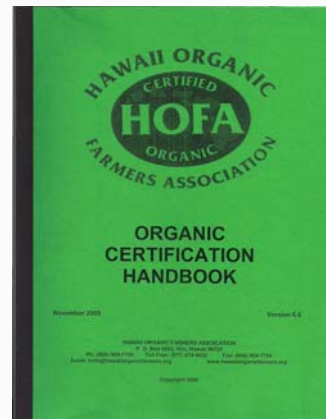


# Organic Fertilizers

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- Verify they are approved for use in organic systems
- Organic fertilizers slowly release nutrients
  - Organic material must be decomposed by microbial activity
  - Unbroken material may not be readily available to plants
- Organic fertilizer formulations

- Made of natural products
- Not man-made products
- Fertility based on:
  - Manure
  - Compost
  - Cover cropping systems
  - Micro-organisms
  - Mycorrhizae fungi
  - Nitrogen fixing bacteria
  - Vermicompost & tea
  - Nitrogen fixing plants
  - Seaweed
  - Commercial OMRI approved fertilizer products
  - Etc.



- Understand nutrient composition of fertilizers
  - NPK is not in abundance in certain soil systems
    - Most frequently applied nutrients
    - Applied in larger quantities than other crop nutrients
  - Minor elements are essential for plant growth



- Understand crop needs
- Calculating fertilizer rates

- Example:
- If you want to apply 50 pounds of N /acre using bone meal (9-3-0)
- $X (\text{amount of bone meal}) \times 9\% = 50 \text{ pounds of N}$
- $X = 50 \text{ pounds of N} / 9\%$
- Solution: 555 pounds of bone meal to apply 50 pounds of N / acre

