## FERTILIZERS

What, Why, How?



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Boron (B), Copper (Cu), Iron (Fe), Manganese (Mn), Molybdenum (Mo), Nickel (Ni), Zinc (Zn), Chlorine (Cl) **Micronutrients** 

Sulfur (S), Calcium (Ca), Magnesium (Mg)

> Secondary macronutrients

Nitrogen (N), Phosphorus (P), Potassium (K)

**Primary macronutrients** 

Carbon (C), Hydrogen (H), Oxygen (O) Obtained from air and water



# PH Scale

Acidic  $\leftarrow$ 

 $\rightarrow$  Alkaline



#### **Fertilizer Basics**



#### Ν

#### Nitrogen

- Component in chlorophyll
- Promotes shoot and leaf growth



#### Ρ

#### Phosphorus

- Promotes cell division and new plant tissue growth
- Promotes rooting, flowering, and fruiting



#### Κ

#### Potassium

 Promotes overall heartiness and vigor



\*This is a massive generalization\*

#### Fertilizer Basics

## 10 - 10 - 10

The numbers given on the label are the percentage of the total volume of each of the three macronutrients

If you had a 100 lb. bag of fertilizer that was 10 – 10 – 10, that would mean that there is 10 lbs. of nitrogen, 10 lbs. of phosphorus, and 10 lbs. of potash in the volume. The other 70 lbs. is other material



### Forms of Fertilizer

#### Soluble

- Dissolves in water
- Fast acting
- Short lived
  - Recommended weekly in containers
- Can burn plants if allowed to stay on leaves and stems



#### Granular

- Slow acting
- Long lasting
  - 2-3 months



- Safer around plant materials
  - Can still burn if caught in crotches of branches or packed against the roots in a planting hole





### Safe use of Fertilizers

- Wear gloves
- Keep away from eyes
- Don't inhale dust
- Don't eat it
- Keep bags/containers sealed when not in use



Туре	Form	Use	Tips
All Purpose Granular (Perennial, Shrub, & Tree; Flower & Vegetable; Osmocote Indoor& Outdoor, etc)	Sprinkles Slow release	In the planting hole of new or transplanted perennials	Mix into compost in planting hole
All Purpose Soluble (Bloom Enhancer, Annual Boost, Bloom Boost, Etc)	Blue Powder Fast Acting	Containers and in-ground annuals, perennials that need a boost NOW	Water into soil
Acidic Granular (Acid-Loving, Evergreen, Camella, Rhododendron & Evergreen, Etc)	Sprinkles Slow Release	Around the base of established plants or in the planting hole of new Azaleas & Rhododendrons Hydrangea mac. Evergreens (Except arbs and boxwood)	Mix into compost in planting hole
Acidic Soluble	Blue Powder Fast Acting	Certain annuals in containers or in ground	Water into soil
Rose Granular	Sprinkles Slow release	Around the base of established plants or in the planting hole of new roses	Mix into compost in planting hole
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- All Purpose Granular
  - Long-term food for longterm growth
    - Perennial or annual planting
    - Perennial maintenance
  - All purpose, so safe to use on pretty much everything







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- All Purpose Soluble
  - Short-term food for fast results, it will wash away in a few days to weeks.
    - For the maintenance of annuals in ground or containers.
  - All purpose, so safe to use on pretty much everything
- MUST be watered in or it can burn plant roots, leaves, and stems.



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- Acidic Granular
  - Lowers Ph, increasing acid content of soil
  - Specific for certain acidloving plants
    - Azalea
    - Rhododendron
    - Evergreens (except Arbs and Boxwoods)
    - Turning Hydrangea macrophylla blue







- Acidic Soluble
  - Lowers Ph, increasing acid content of soil
  - Quick release, dissolves in water immediately.
    - Annuals that need acid to support blooming
  - Short-term food for fast results, it will wash away in a few days to weeks.

MUST be watered in or it can burn plant roots, leaves, and stems.







- Rose Fertilizer
  - Roses need a LOT of energy to grow and bloom well, so regular feeding is important.
  - Apply around the base of each rose from May through September.
    - Why should we stop in September?
  - Refer to package for volume to feed each plant as it is based on size of plant.





#### 14-12-11

Designed to Provide the Right Nutrients to Produce Green Leaves and Essential New Growth on Which New Blooms Develop

KEEP OUT OF REACH OF CHILDRE

NET WEIGHT & LBS (1.8 KG

- Bulb Food or Bone Meal
- Use when planting bulbs
- Apply when the foliage of spring blooming bulbs has died back to fortify them for the next season



51154



#### Which Fertilizer Should I Use?

- All Purpose
  - Soluble
  - Granular
- Acidic
  - Soluble
  - Granular
- Rose Food
- Bulb Food



### Which Fertilizer Should

- All Purpose
  - Soluble
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  - Granular
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HOME SOWN GARDENS

#### Which Fertilizer Should

- All Purpose
  - Soluble
  - Granular
- Acidic
  - Soluble
  - Granular
- Rose Food
- Bulb Food



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#### Which Fertilizer Should I U

- All Purpose
  - Soluble
  - Granular
- Acidic
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  - Granular
- Rose Food
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#### Which Fertilizer Should I Use?

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#### Which Fertilizer Should I Use?

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### Which Fertilizer Should

- All Purpose
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