

Agents of Disease – Abiotic Disorders

Deficient Moisture



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Lack or Excessive Light



UC Statewide IPM Program
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Damage done to avocado due
to lack of light (yellow fruit)



Excessive Light - Rhododendron

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Extremes in Temperature



Frost Damage on Azalea



Frost Damage on Zucchini



Heat Canker on Ash



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Wind Damage



Tulip trees and damage from
wind-blown salt



Monterrey Pine

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Mineral Deficiencies/Toxicities



Iron Chlorosis - Deficiency



Potassium Deficiency



Salt Burn - Toxicity

Symptoms produced by deficiencies are dependent upon the function of the element in the plant

Accumulations of minerals in a plant can lead to cell death and plant growth abnormalities

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Air Pollution



Ozone Pollution Damage
Note: damage scattered around leaf



Sulfur Dioxide Pollution Damage
Note: damage on outside, moving in

Accumulation of pollutants and their absorption into plants cause plant damage

The toxic accumulation of pollutants causes cell death and disruption – leading to symptoms

Stressed plants are more susceptible to other diseases, and pests

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Chemical Injury



2,4-D Damage on Almond

Herbicides do some weird things to plants
– if the plant looks abnormal – think
virus/herbicide



Simazine Damage on Almond



2,4-D Damage on Almond

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Mechanical Damage



Bradford Pear



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Mechanical Damage



Self-girdling or
“J-Root” caused
by improper
planting techniques



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“Act of God” Damage



Lightning Damage

Lightning, hail, heavy rain, etc.



Hail Damage to leaves



Cherry splitting
caused by rain