

Pre-harvest factors in leafy greens contamination

Immigration as single/few cells

Effect of indigenous microflora:

- Bacterial spp.
- Plant pathogen or epiphyte
- Fungi, protozoa, nema, insects, slugs

Growth

nutrients
free H₂O
warm T°

Effect of leaf age, guttation, fertilization
Nutrient utilization: major determinant of fitness?
Dew, guttation fluids, irrigation
Role in seasonality of outbreaks?

Competition against plant microflora

healthy
or damaged
plt. tissue

Localization on veins or trichomes - aggregates
Perhaps most important factor in amplification
Priming of human pathogens?
Effect of burial of crop residues?

Survival

Protected sites
Net outcome of pop. growth and decline
Enterics have high adaptation to stresses

Internalization

Roots, vascular tissue, stomata, hydathodes, trichomes, lesions
How much of our effort devoted to this part of the cycle?