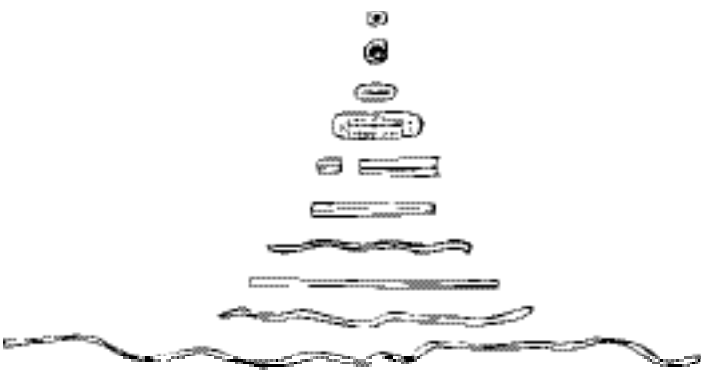









VIRUSES AND VIRUSLIKE PATHOGENS

T. ALLEN, PROFESSOR *EMERITUS* OF PLANT PATHOLOGY, OSU

VIRUSES Nucleic acid (usually RNA only) +protein coat		
Size (nm)*	Shape	Example
23 nm		Prunus Necrotic Ringspot
30		Cucumber Mosaic
18 x 58		Alfalfa Mosaic
66 x 227		Lettuce Necrotic Yellows
20 x 106, 190		Tobacco Rattle
18 x 300		Tobacco Mosaic
13 x 475		Cymbidium Mosaic
18 x 640		Lily Symptomless
14 x 740		Tulip Breaking
12.5 x 1540		Lilac Chlorotic Leaf Spot
PHYTOPLASMAS (FORMERLY MYCOPLASMALIKE ORGANISMS, OR MLOs) RNA+DNA strands Ribosomes and unit membrane Usually spherical in form (0.1–1 μ)* Actually pleiomorphic		 Aster Yellows
SPIROPLASMAS Similar to MLOs but spiral in form (0.25 x 12 μ) Grown in artificial media		 Cross-section: Corn Stunt
RICKETTSIALIKE BACTERIA Similar to phytoplasmas but bacilliform (0.4 x 3.2 μ) Partial cell wall		 Cross-section: Pierce's Disease
VIROIDS RNA strand only		Chrysanthemum Stunt

* nm = 1/25,000,000 inch; 1,000 nm = 1 μ, Bacilliform bacteria are 0.3–1 x 0.6–3.5 μ