

A VEB is multiple-row planting of suitable trees, shrubs and grasses around poultry and livestock houses to accomplish specific goals.



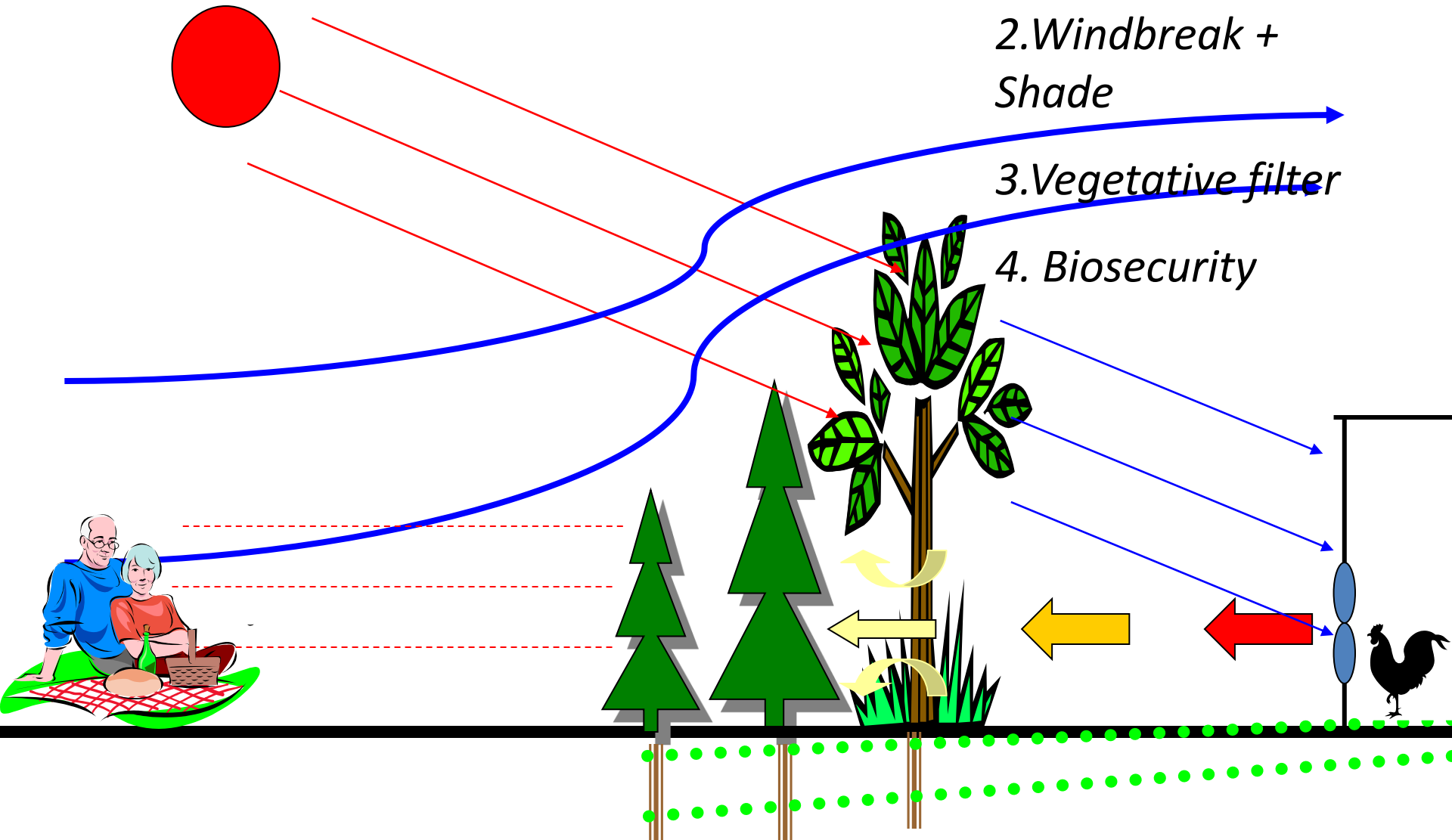
Goals of Vegetative Environmental Buffer (VEB)

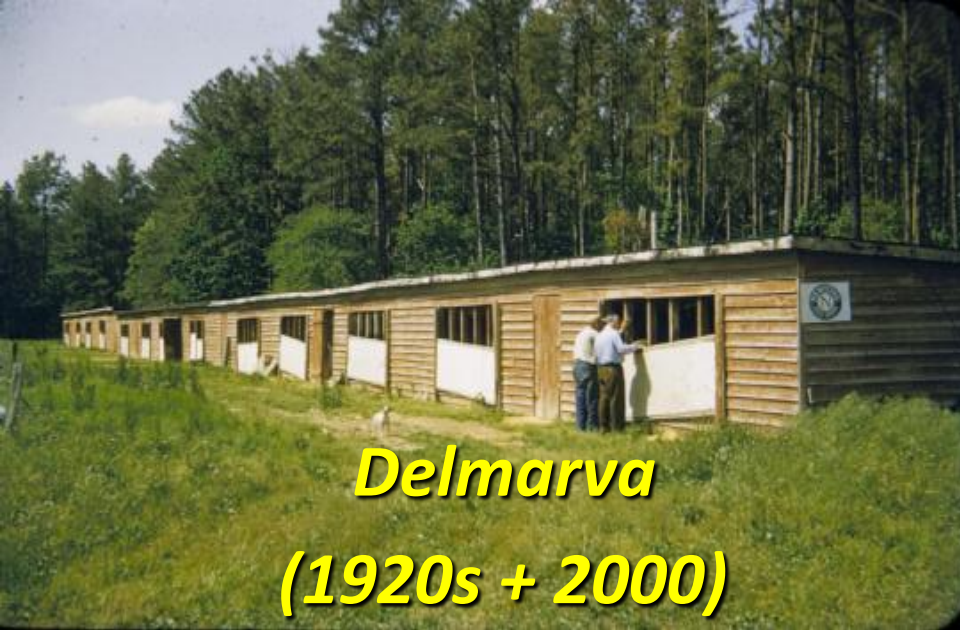
1. Visual screen

2. Windbreak +
Shade

3. Vegetative filter

4. Biosecurity





Delmarva
(1920s + 2000)



Brazil

Using Trees as Vegetative Buffers Is Not New



Europe



Australia

UD/PSU VEB Research Past 10 Years



- Dust = 56/67%
- Ammonia = 54/40%
- Odor = 27/ 34-54%



Continue to improve design as an emission abatement strategy –alternative to biofilter

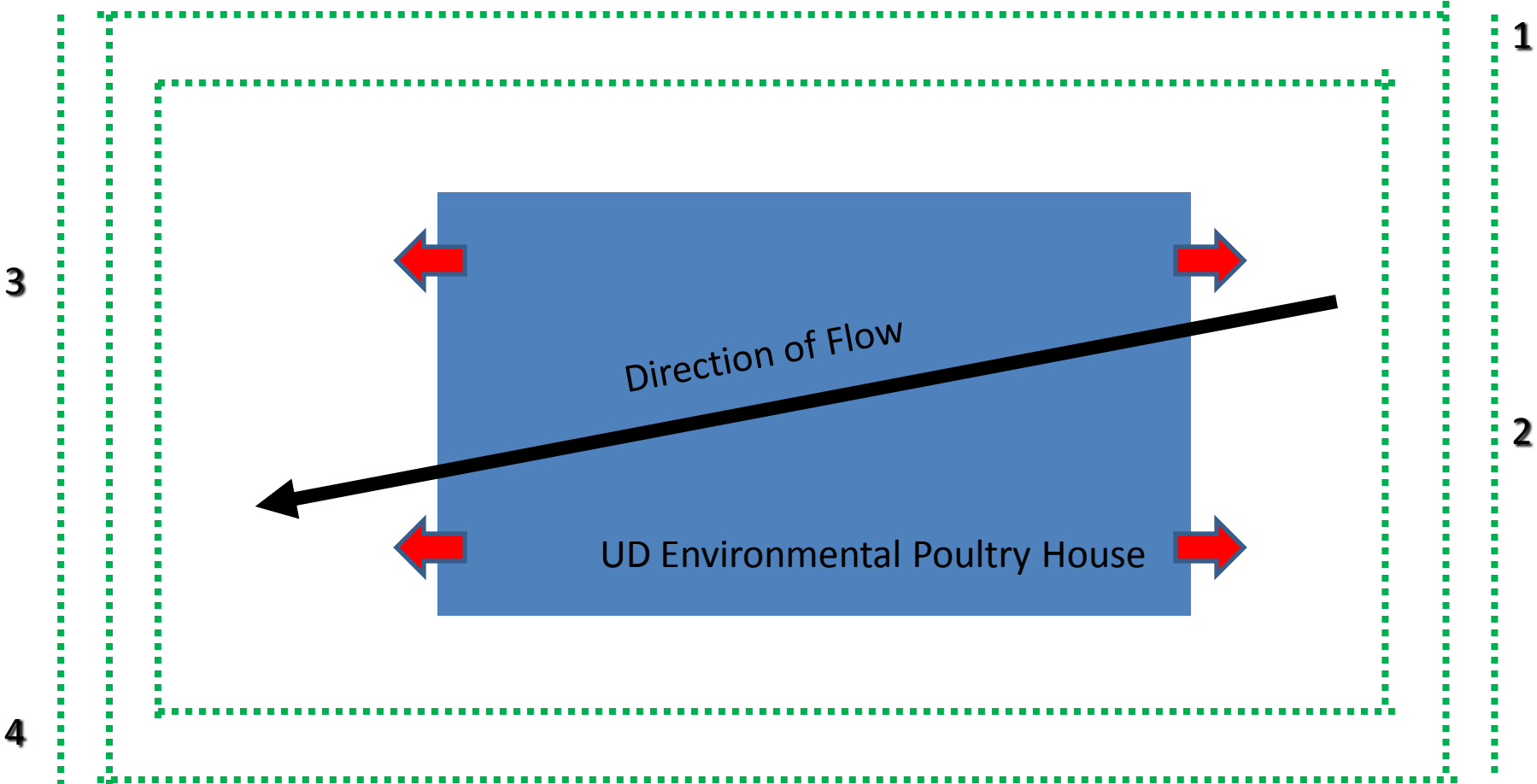


VEBs and Water Quality???



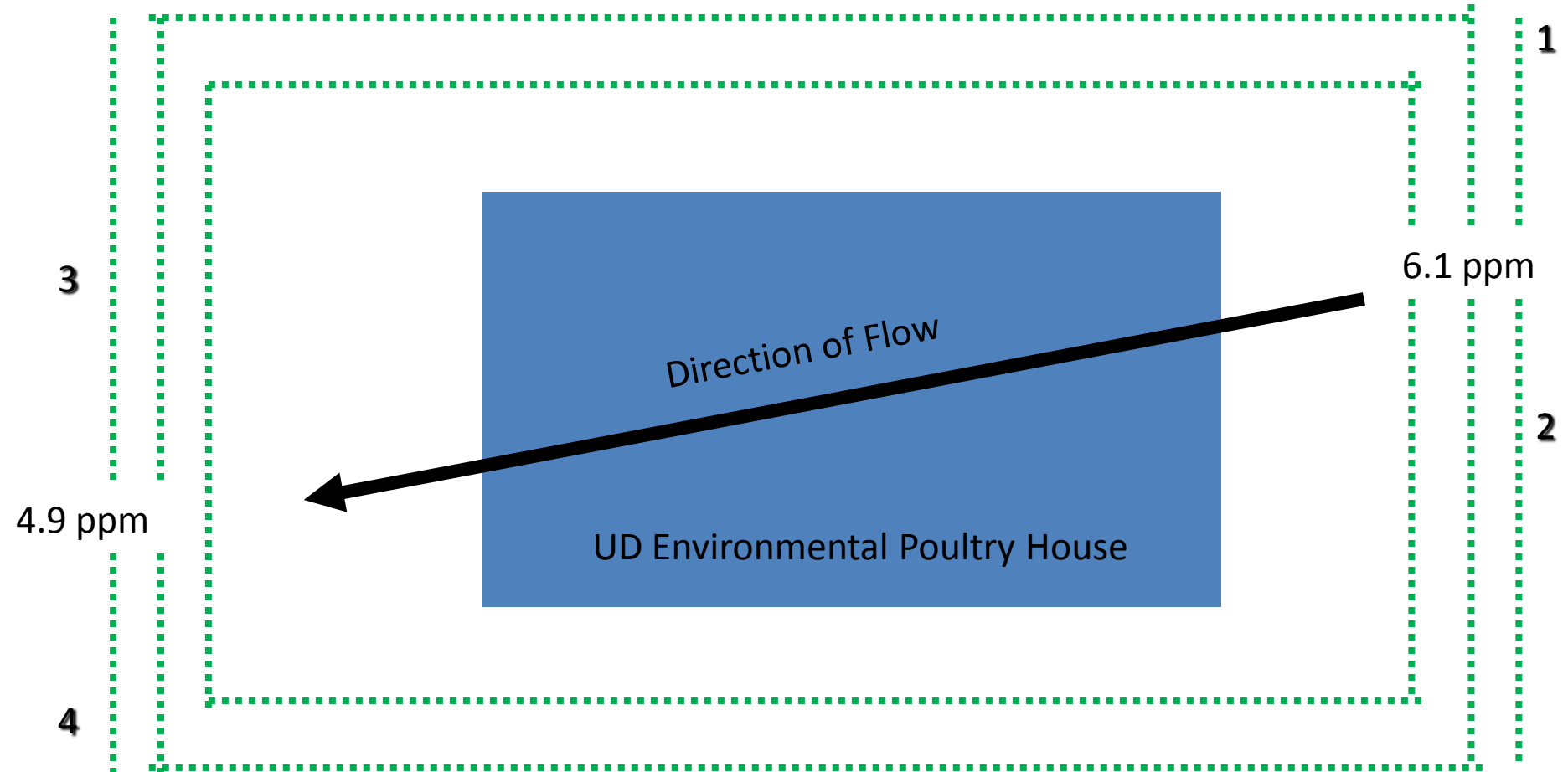
- Reduce surface runoff
- Reduce groundwater nitrates

Effect of VEB on Ground Water Quality



Four wells sampled spring and fall from 2004 to 2007

Effect of VEB on Nitrate-N in Ground Water Quality



Suggest a 20% reduction with VEB

VEBs a Required BMP for new CAFOs in MD and some Farms in PA.



Additional Opportunities???

- Nutrient recovery
- Carbon credits
- Fuel and bedding



Is This A Model Farm???



A Model Farm !



Implementation Status/Challenges

- VEBs are approved NRCS BMP and has been cost shared.
- ~ 1/3 of Delmarva poultry farms have installed VEB.
- Poultry industry hired a VEB coordinator in 2006 to promote, develop literature and facilitate implementation of VEBs.
- Growers need technical assistance in designing, implementing and maintenance of VEB. Retrofitting a VEB on existing farm can be a challenge.
- Funding!!!!

Summary

- ❖ *Emission reductions* encouraging, water quality data specific to VEB is limited.
- ❖ Provides a long-term, low-cost, *partial* solution to emerging industry issues, has other production benefits.
- ❖ Neighbor relations drove initial interest but emissions and water quality has become new focus.
- ❖ Continue to define the optimal VEB program.