LEAD AG TEACHER | SOUTH AUSTRALIA

SA SHEEP INDUSTRY FUND agcommunicators. ATASA

Ideas for SACE Stage One and Two Agriculture practical investigations from Hart Field Day

Theme	Independent variable
Impact of frost on crop yield/biomass across a paddock (damp soil is "warmer")	Paddock frost zone/topography or soil moisture zones
Impact of frost on yield/biomass in different crops NB frost can be simulated	crop variety or crop type
Impact of frost at different growth stages of wheat	Growth stage
Role of ice-nucleating bacteria in frost damage to wheat (using simulated heavy rainfall to wash bacteria from wheat leaves compared with light rainfall)	Washed leaves versus unwashed
Maximising emergence in non wetting soils	Sowing depth
Impact of seed quality on wheat emergence when sown at depth	Seed weights
Impact of growing conditions on coleoptile length (with implications for seeding depth in different seasonal conditions)	temperature
Impact of seed quality on coleoptile length (with implications for seeding depth)	Seed weights
Snail surveys across zones of a paddock	Paddock zone
Impact of crop rotation on snail numbers (DV could be as simple as counting number of snails on droppers)	Paddock history (crop rotation)
Impact of snail baiting on snail populations	Snail pellet rates or timing
Impact of different weed types on snail numbers	Weed type or weed density
Impact of time of sowing (TOS) on grain yield or biomass	Sowing date
Impact of grazing on pasture biomass NB grazing can be simulated by mowing/slashing	Different growth stages
Impact of grazing on pasture biomass	Pasture type (including blends) or varieties
Impact of grazing pressure on pasture biomass	Length of grazing or number of grazing events