

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

| Theme | Independent variable |
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| 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 |

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