



ECB Surface Research

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ECB Surface Research

- **Rolling**
- **Aeration**
- **Soil Stabilisation**
- **Indoor surfaces**
- **Climate Change**
- **Future challenges**

Rolling

- **4 year doctoral research project at Cranfield University**
- **Outcome: Guidelines produced in 2009 available at www.ecb.co.uk/facilities**
- **Key features:**
 - **Optimum moisture content identified**
 - **Role of drying in successful compaction proven**
 - **Importance of thatch control highlighted**
 - **Recommendations on roller design/selection including minimum diameter and benefits of weight**
 - **Guidance on rolling practice identified that optimum number of passes was significantly less than the surveyed mean**
 - **Potential saving of 766,000 hours of rolling (393 tonnes of CO₂) per annum**

Aeration

- **4 year research project at Cranfield University 2008-2012**
- **To identify whether aeration is beneficial and, if so, what machines should be used for best effect, when and how often**
- **Short and long term effects considered**
- **Different soil structures and types of machine compared**
- **Considering effect of aeration on soil physical parameters, soil atmosphere, soil biological communities**
- **Guidelines to be produced for 2012**

Soil Stabilisation

- **Enzyme based solutions tested within constructions**
- **Range of glue applications to surface structures**
- **Results over 2 year period:**
 - **Enzyme solutions have general lasting effect on performance relatively consistent with natural properties of clay.**
 - **Useful in structures with low clay content, negligible in higher clay content**
 - **Glue have temporary stabilisation effect but capped performance of pitches at level at time of application and temporal effects were short lived**
- **Possible application for enzyme solutions in synthetic surfaces with dynamic bases – may be future research project**

Indoor surfaces

- **Development of angled ball bounce cannon**
- **Ongoing trials at 1st class indoor sites**
 - Angled cannon
 - Bowling machine
 - Live player feedback
- **Examining contrast between polymer and piled carpet surfaces**
- **Outdoor trials in 2010**
- **Results may influence netting, cage, helmet design etc**
- **Evidencing the difference between cricket and other sports**

Climate Change

- **2 Year research project due to start in 2010 (subject to contract)**
- **Recent events highlighted potential risks to cricket – drought in 2006, floods in 2007 and 2009**
- **Study to engage with regulators, service providers and cricket stakeholders at all levels**
- **To provide the basis for a strategy for cricket incorporating:**
 - **Geographical identification of clubs at risk from drought and floods**
 - **Resource footprint for cricket clubs (carbon, water, fuel and soil)**
 - **Recommendations for mitigating flood risk**
 - **Recommendations for improving water supply security**
 - **Recommendations for more efficient use of water**
 - **Recommendations for reducing resource footprints**



Future Challenges

- **Making qualitative differences to pitch preparation, volunteer man hours, safety and technical practice**
- **Maintaining the importance of research at ECB**
- **Funding**
 - **Post 2012**
 - **Change of government?**
 - **TV Listings debate**