Sustainable Intensification — A Key to Linking Knowledge-based Agriculture to Global Climate Discussions

Presented By:
Rob Janzen, Ph.D. P.Ag.
VP, Western Operations
ClimateCHECK

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ClimateCHECK
(www.climate-check.com)

• Innovator with established track-record in climate change and clean tech markets.
• Develop end-to-end business and market infrastructure solutions.
• Help clients develop tools, people, strategies and solutions (GHG management handbooks, GHG training, carbon revenues, sustainability assessment, standards development, etc.).
• Enable clients to identify returns, develop executable plans, gain strategic advantage, lead the sector.
• Benefits for business and environment — Double Dividend.
Interactive Standards
(www.interactivestandards.com)

• Contextual collaborative development and intelligent templates (structure, requirements, guidance, tasks, process).
• Tracking/auditing (text, comments, questions, surveys, votes, checklists, members, resources).
• Project management (tasks, process, checklists).
• Management reporting (Gantt charts, comment summaries).
• Three levels of interaction:
  • EXPERT/PROCESS: highly configurable, contextual collaborative authoring, process control, transparency;
  • STANDARDS LIFE CYCLE: integrated system from planning to applications/transactions to continuous improvement;
  • SYSTEM/FRAMEWORK: scalable frameworks to accommodate expansion, support interoperability and harmonization to gain synergies among standards.
Agriculture and Climate Change

• Involves ‘sustainable intensification’ — more food per unit land to achieve economic, environmental, and social objectives.
  • Balancing food production and economic development and environmental quality to:
    – Achieve increased yield at lower costs, while
    – Greatly reducing or eliminating environmental degradation, by
    – Harmonizing with biogeochemical processes of Earth.

• Sustainable intensification is a challenge shared by agriculture practitioners in developed and developing regions.
  • A metric to assess progress to meet challenge?
  • Minimize GHG emissions per unit food.
Agriculture and Climate Change

• Sustainable intensification, to promote climate change and food security, is knowledge-intensive instead of input-intensive.
  • Build capacity of farmers to manage cropland and livestock for higher productivity, but with greater efficiency of use of water and nutrients.
  • Use knowledge of biology and genetics to enable improved crop varieties and better farming practices, and enhanced livestock management.

• A key element of knowledge-intensive agriculture is appropriate decision-support.
  • Planning with professional advisors, or with well-trained coaches;
  • Implementation according to rigorous standards, with sufficient testing and record-keeping to document practices are effective.
Vision 2050 (WBCSD)

outlines a pathway to reach a sustainable global society by 2050, in which 9 billion people live well and within the limits of the planet.

• A 21st century version of the Green Revolution.
  • Improved agricultural practices, new crop varieties and new technologies, including biotechnologies, have allowed a doubling of agricultural output without associated increases in the amount of land or water used.
  • Productivity gains allow agriculture to contribute to energy supply without jeopardizing food supplies or biodiversity.
  • Research and development investments made decades earlier have resulted in new biofuels that make better use of plant material. Biofuels contribute 30% of transport energy needs, of which half come from agriculture and the remaining half from forests and other forms of biomass.

“Humanity has largely had an exploitative relationship with our planet; we can, and should, aim to make this a symbiotic one.”

Michael Mack, CEO Syngenta (Vision 2050 Co-Chair)
How can C-AGG help?

• The discussions at ARDD in Cancun demonstrate science-based and knowledge-intensive agriculture is under-represented in global discussion of agriculture with respect to climate change.

• Some C-AGG members have capacity to add the science-based perspective to global discussion.

• C-AGG could help representatives of global agribusiness to build bridges with current participants in global discussions.
Rob Janzen, Ph.D., P.Ag.
VP, Western Operations
ClimateCHECK
403 332 0115
rj@climate-check.com

888 241 8003 toll free