Topic 1: ICT Value-Added Strategy in the Traditional CBD-Central Business Districts

Observations

- ***Diversity of traditional business***
  - Micro business (<5 people)
  - Small business (<200 people)
  - Locality, unique, market niche
- ***Multiple ICT opportunities***
  - Connecting with tours
  - Joint product marketing
  - Collective purchasing
  - Shared services
- ***Opportunity to create new consumer purchasing services***
  - Connection to local cultural assets
  - Entertainment and adventure
  - Trust and continued contact after the sale
  - Emersion in Taiwan's communities
- ***Appropriate Government Roles***
  - Incubating Business Districts applications
  - Catalyst funding for development
  - Providing credibility and trust in Business Districts networks
- ***Considerations for ICT platforms***
  - Sustainable business model
  - Unique aspect of Business Districts technology
  - Barriers to deployment and adoption
  - Consumer Desires-- mobility, relevant /accessible content; high quality service

Recommendations (I)

Establish Taiwan as a global leader in Business Districts ICT

Vision

Spin off a financially self-sustaining ASP company to:

- Support future profitability and vitality of Taiwan's traditional business districts; AND
- Create a new Taiwan value-added export service, deliver to emerging nations throughout the world.

ACTIONS

- **Identify Needs** of traditional businesses to guide ICT platform design.
- **Develop platform features** essential to traditional business.
  - Joint purchasing capability.
  - Multi-language content capability.
  - Provision for localized, credible and trusted content.
  - Community social networking.
- **Establish sustainable business model** for each Business District.
  - Monthly fee based approach.
  - Shared risk model, take a percentage of the cost savings.

Recommendations (II)

Build Through Strategic Partnerships and Proven Experiences

- Explore strategic partnerships with proven ICT platform leaders before building a new platform from the ground-up.
- Build to world standards ensuring technology to enable seamless interchange among users.
- Establish partnerships with proven Taiwanese Internet service providers.
- Learn from manufacturing sector experiences and success stories.
  - Fully integrated end to end customer-centered solution.
  - Value driven by relevant desired user content.
  - Capture and organize data to enhance both consumer and business knowledge.

- ***With global financial challenge, tradition business will continue to grow.***
- ***ICT can provide Taiwan with competitive advantage to capture global leadership***

Topic 2: ICT Value Added Strategy in the Traditional Manufacturing Sector

December 18, 2008

General Observation – The situation

- Traditional manufacturing is a major driving force of Taiwan Economy
- It is under severe pressure from low labor cost region. It has to move up the value chain

General Comments - Why ICT

- Major avenues to increase value added
  - New products and processes
  - Increase service content
  - Getting closer to customers
  - Leaner and greener
- Leverage on Taiwan's unique ICT technology and industry base

New roles for government support

- With financial tsunami, the transformation of traditional industry need to accelerate.
- Move bolder and faster.

- Leverage resources—
  - Multiple agencies
  - Industries
  - Universities
  - Advisors, students,

ICT Platform

To be an effective enabler, ICT platform includes

- process design,
- business model, operating policy,
- network
- branding
- trust and confidence

Specific Comments

- Understand to identify the service “gaps” of products and customer needs
- Government should develop a white paper to clarify the definition of ICT based Service Innovation

Recommendation—to build a common platform

- Take leadership to build a common platform
- Establish a demonstration system with specific applications
- Develop a series of training and promotion activities including service concept, business model, and innovation tools with case studies.
- License the common platform to various service providers for further customization

Topic 3: ICT Value-Added Strategy in Agriculture

Oberservation from Taiwan Agriculture

- Currently best management strategies for sustainable farming systems are not adopted due to short term vision vs a societal long term
- Environmental issues are not fully tackled
- Innovation in the food safety sectors are still lacking
- Farmers have not incentive to save environmental resources or to carry out proper agriculture due to thier low income
- New vision for cultivating specialized crop is missing (herbs, medicinal plants)
- Big gap between farmer and end users (price flucations)

THE CHALLENGE OF SUSTAINABILITY FOR TAIWAN AGRICULTURE

To increase the number of young farmers

To change the image of the farmer

Using Mobile Device on Agricultural Investigation

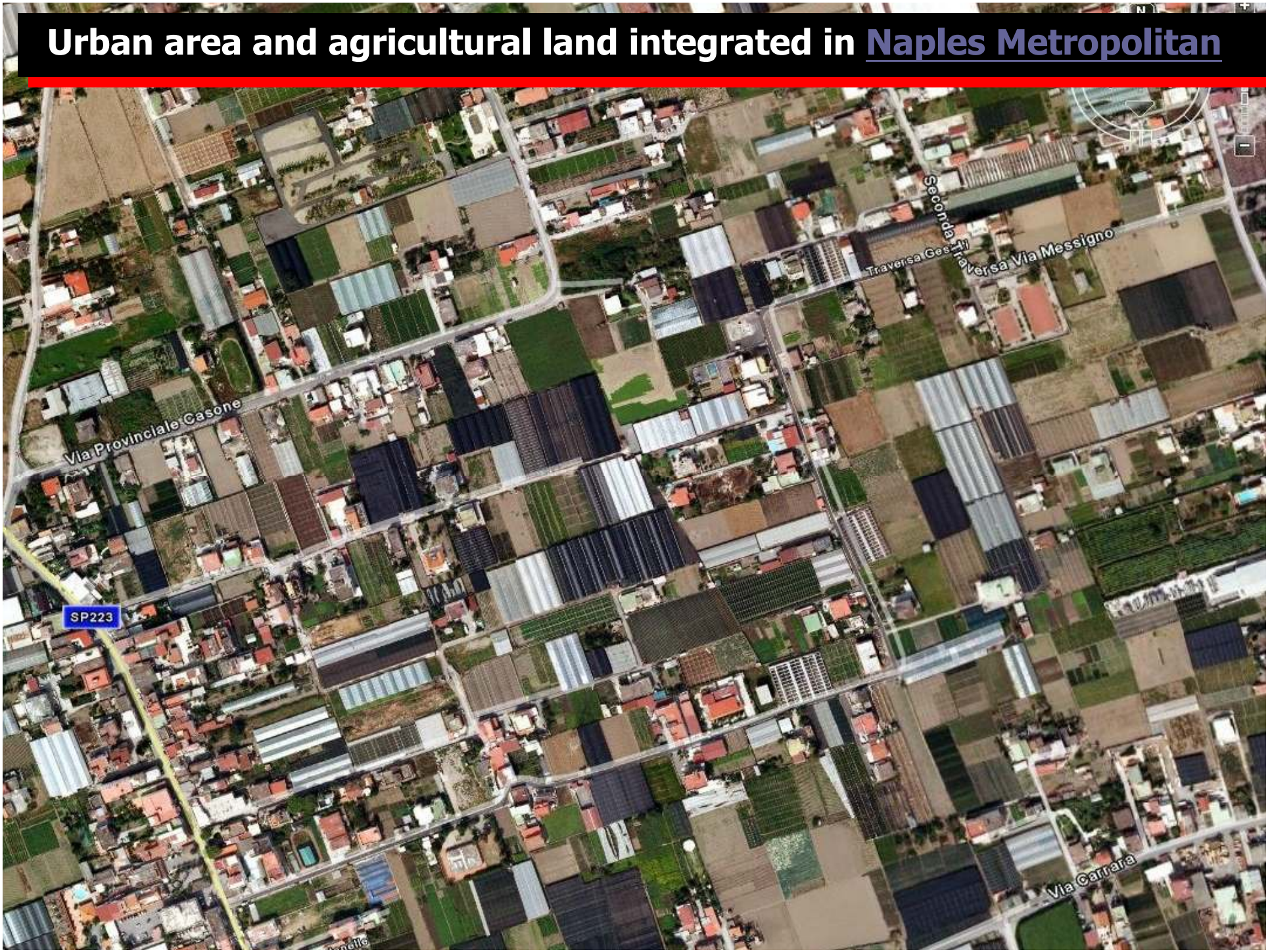
THE CHALLENGE OF SUSTAINABILITY FOR TAIWAN AGRICULTURE

To increase the number of young farmers

To change the image of the farmer

To increase farmers income by diversification and market access

Urban area and agricultural land integrated in Naples Metropolitan



THE CHALLENGE OF SUSTAINABILITY FOR TAIWAN AGRICULTURE

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To increase farmers income by diversification and market access

To innovate farm management and practices

Pest Management

THE CHALLENGE OF SUSTAINABILITY FOR TAIWAN AGRICULTURE

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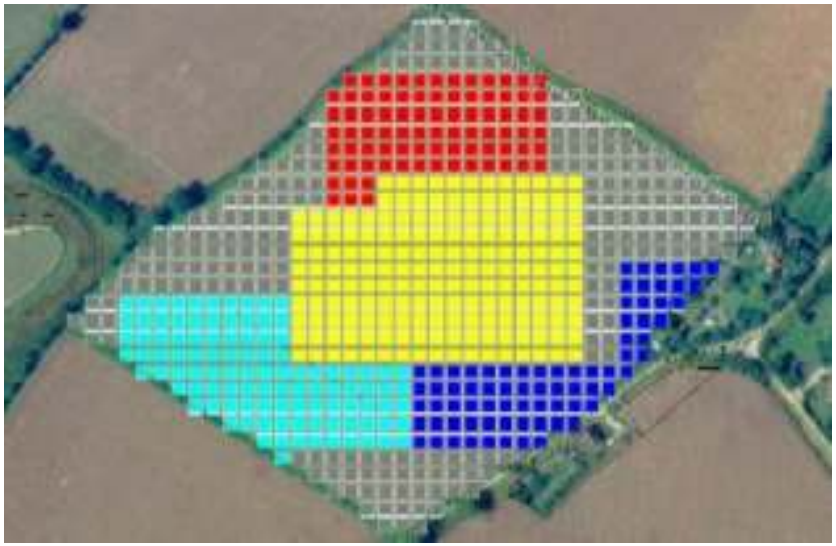
To increase farmers income by diversification and market access

To innovate farm management and practices

To guarantee food safety

Traceability



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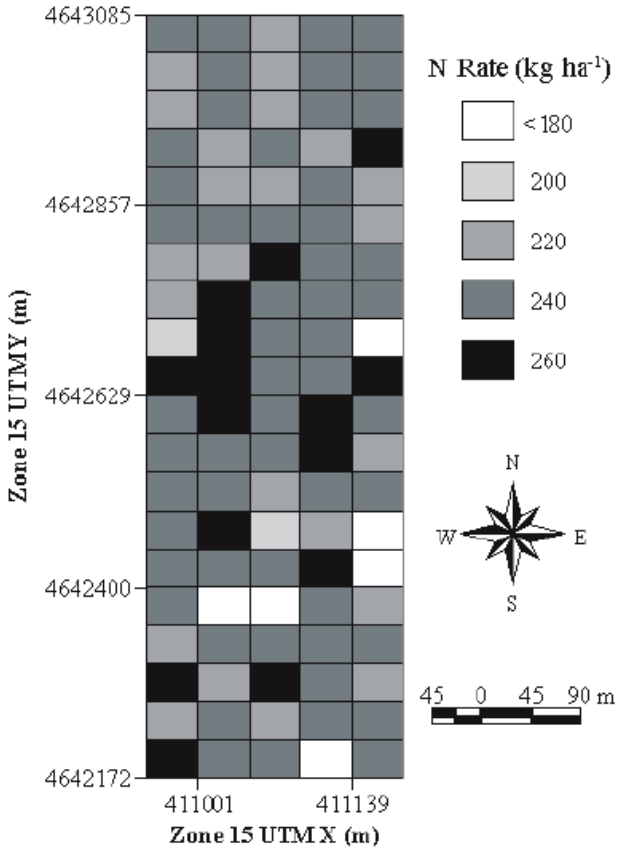
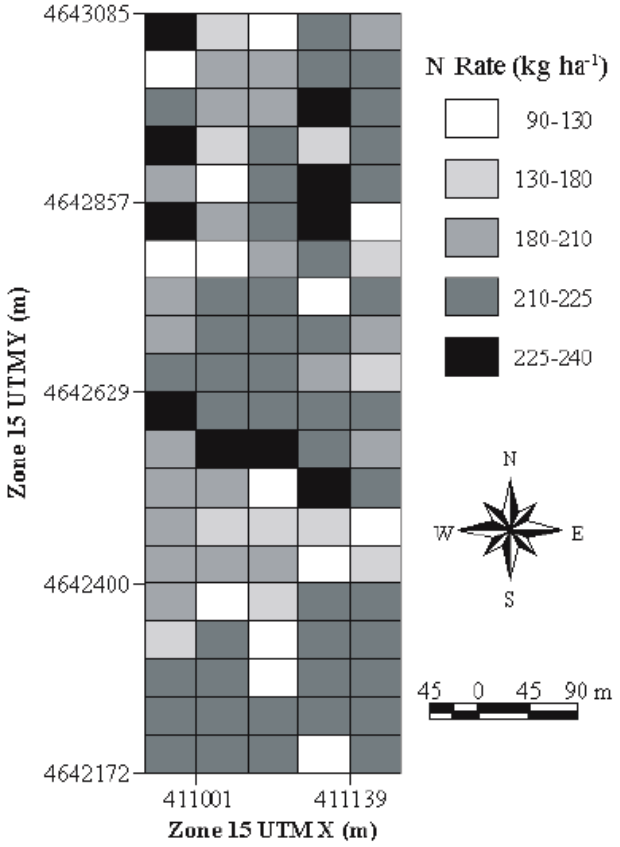
To optimize and reduce inputs (Nitrogen fertilizer application)

Nitrogen Management for optimum yield and environmental impact



9. Nitrogen prescription for optimizing marginal net return over 37 growing seaso



Nitrogen prescription for not exceeding 40 kg ha^{-1} of unused N in the soil at harvest in 80% of growing seasons

Cost for protecting the environment

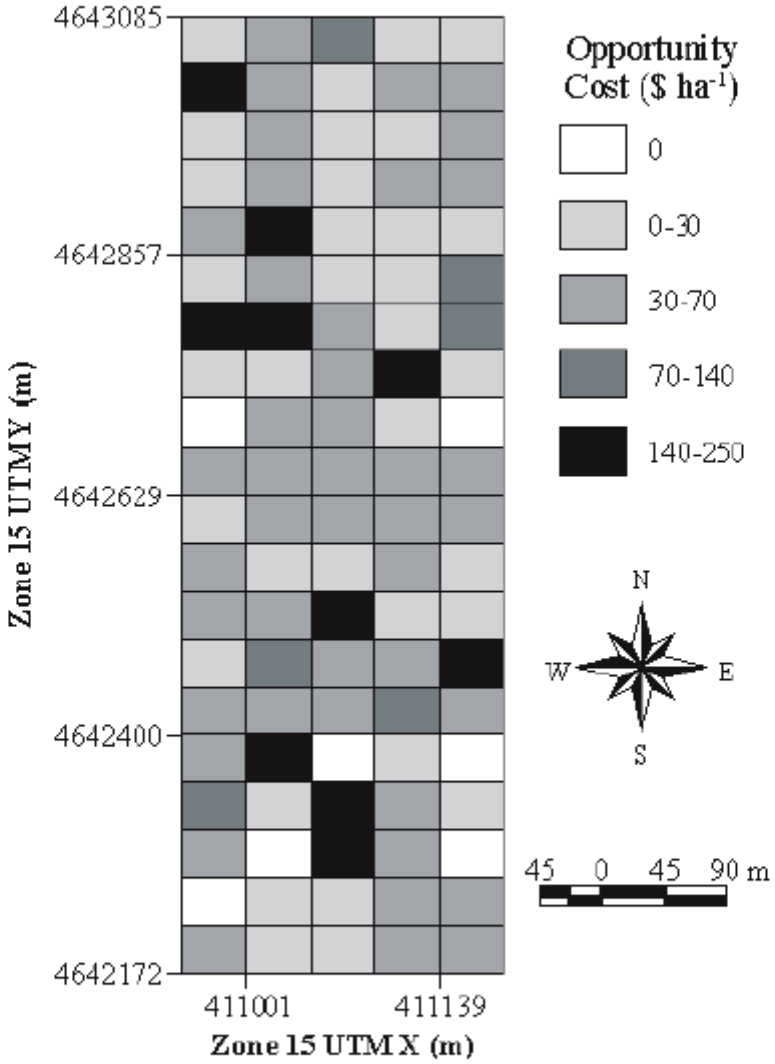


Figure 11. Producer's opportunity cost for leaving less than 40 kg ha^{-1} of unused N in the soil 80% of the time

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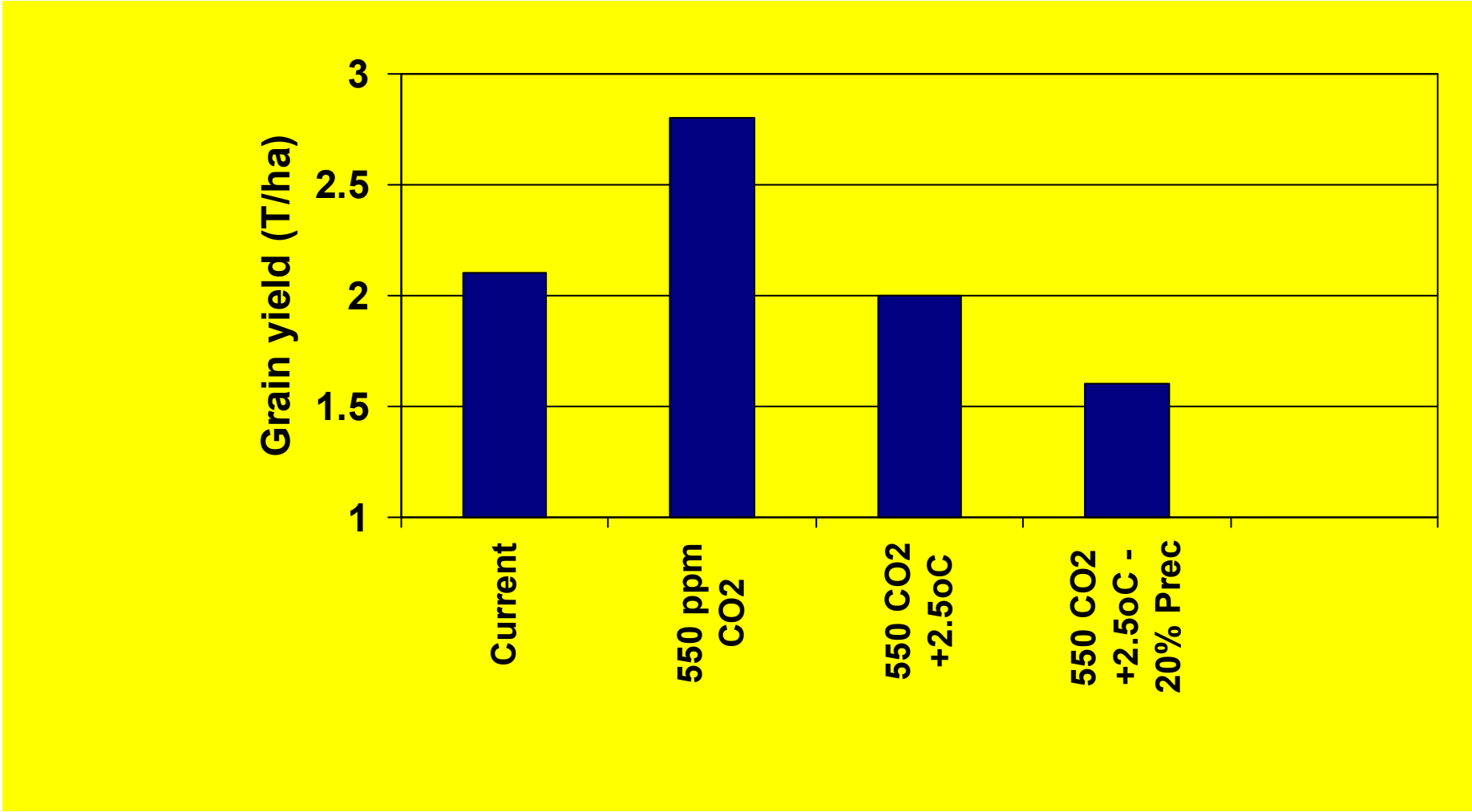
To optimize and reduce inputs (Nitrogen fertilizer application)

To adapt to the global change

Modeling Climate change effects on rice yield



Basso et al., 2008 *Simulated using Salus Model

THE CHALLENGE OF SUSTAINABILITY FOR TAIWAN AGRICULTURE

To increase the number of young farmers

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To innovate farm management and practices

To guarantee food safety

To optimize and reduce inputs (Nitrogen fertilizer application)

To adapt to the global change

To promote land consolidation with incentives

Example of Land consolidation scheme in the Netherlands

Before ...

… After

Recommendation for Taiwan Agriculture

- Create an up to date Geographical information system (available recent data and new remote sensing imagery to indentify demonstration areas and site specific constraints)
- Adopt a decision support system with spatial modeling to evaluate potential scenarios (best management strategies under new global treats - climate change, soil degradation)
- Promote appropriate land use – from high quality crops to rural turism activities (IPTV with useful content management help, weather predictions, tables of outcome
- Provide incentives for ecosystem services and environmental integrity
- Favourable loans for purchasing land or for investements in techonologies (ICT, robotics)
- Invest in multidisciplinary research projects

Conclusion

The choices we make today in how we use land and water resources will have enormous consequences on the future sustainability of earth's ecosystems and the services they provide.

Sustainable agriculture will require that society appropriately rewards farmers and other agriculturalists for the production of both food and ecosystem services.

To value and manage agricultural landscapes for multiple ecological services will require the integration of ecological and socioeconomic research, policy innovation, and public education

Mosaic in Pompeii

Mosaic landscape

Topic 4 ICT value added strategies for SMEs

General Observations

- Topic 4 (SME ICT) intersects with other three topics, resulting in commonality in ICT strategies.
- SMEs not only create wealth and provide employment, but also help stabilize the economy under fluctuating business conditions.
- ICT strategies are suitable for “Local innovation with a global vision” in order to elevate SMEs to benefit from the global value chain. E-business provides opportunities for SMEs to address international markets.
- A core area of support is for groups of firms around specialist clusters and trust is needed to be built between firms to ensure success. We congratulate you on the decision to focus on selected clusters, but suggest there may be scope for even more prioritisation to maximise the impact of the available funds.

General Observations 2

- ICT is a tool rather than a solution and interventions have to be linked with wider objectives and problems such as innovation, marketing or sales.
- Employment growth targets may be challenging given the global economic downturn and the concentration of SMEs in mature low growth sectors

Suggestions

- Micro and small enterprises may have different requirements for ICT solutions/services compared with medium-sized enterprises, so the programme needs flexibility in policy tools.
- SMEs provide channels for Taiwan investments in medium and large companies to “return” proportional wealth created overseas (e.g. mainland China) back to Taiwan. ICT platforms may be needed for SMEs clustered around such large companies or their associations, not just in terms of sectors or regions.
- The synergy between SME virtual communities and existing online community ICT tools should be observed for possible adoption.
- Common elements of ICT requirements of SMEs may be observed for developing common components of ICT service platforms.
- Expertise and technical support from universities should be energised through the programme. This could include skills development, consultancy projects and evaluation of impacts.

Overall cross-cutting conclusions

- It is desirable to look at the potential for the development of common platforms across the different industries and applications with shared modules and standards. This will ensure that firms operating across different supply chains do not have the problem of multiple standards
- It is important to ensure the promotion of learning from experience in different projects and sectors. Case studies should be prepared of good practices in projects and a conference to discuss the lessons should be organised.
- Government should commission socio-economic research on the success factors in the implementation of ICTs from these projects, and also on the consequences of ICT adoption for firms and communities. This should include the economic benefits and wider social consequences for communities.

- The wider skills needs required for the ubiquitous use of ICTs should be investigated further, and the training needs of different groups, and their barriers to ICT use should be studied as an input to new training programmes
- International benchmarking on ICT use within smaller firms, traditional sectors (industry, agriculture, tourism) and communities should be undertaken building for example of recent EU research on these issues. There are also lessons on the implementation of ICT adoption programmes that can be learned from elsewhere

- The ICT enabled services are an opportunity for economic growth in Taiwan. The speed of learning and execution should be the focus of Government effort on a cross sectoral basis.