

Issues of relevance for evaluation and certification of the sustainability of bioenergy development

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FAO BIOENERGY WORK PROGRAMME

(i) Technical assistance to member countries

- Project formulation and technical advisory services
- Support the design and implementation of bioenergy policy and programmes
- Country studies/projects: Argentina, Belarus, Chile, China, Costa Rica, Croatia, Dominican Republic, Myanmar, Peru and Slovenia
- Respond to requests for investment, feasibility and technical support

(ii) Cooperation with national, regional and international partners

- Secretariat of the Global Bioenergy Partnership (GBEP) at FAO
- FAO currently Vice-Chair of UN-Energy, with bioenergy one of the main programme elements of this interagency mechanism
- Increased requests and activity on bioenergy from FAO Reg Offices
- FAO partners with numerous intergovernmental organizations

Current and Future Activities

- FAO International Bioenergy Platform (IBEP) - reference framework for analysis of sustainable bioenergy and bioenergy/food security nexus
- Bioenergy and Food Security Project (FAO/Germany Trust Fund)
- State of Food and Agriculture (SOFA) 2008 on Bioenergy
- Multi-donor trust fund for country support under development
- FAO Technical Consultations
 - April 2007 - Focus: Food Security and Analytical Framework
 - July 2007 - Focus: Socio-Economic Impacts
 - October 2007 - Focus: Bioenergy and Food Security
- Broadening FAO knowledge base through bioenergy management system (April 2007) and the establishment of the International Bioenergy Information System (IBIS)
- Strengthening of public-private partnerships
- Monitoring and mapping of bioenergy activities globally

Project Overview

Bioenergy and Food Security (BEFS) Project

- Three-year - USD 3.7 million - 11 January 2007

- ❑ Guidance on potential effects of bioenergy production on food security in developing countries
- ❑ Mainstream food security and bioenergy potential
- ❑ Systematic approach for focus country identification
- ❑ Design and test analytical framework
- ❑ Capacity-building, policy formulation and technical guidance
- ❑ National Task Forces and Strategies
- ❑ Replicable project models/bankable projects



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- Some preliminary recommendations from 1st FAO technical consultation on bioenergy and food security – April 2007

General

Two main types of deliverables were distinguished: Deliverables that could more or less readily be delivered based on available data and information and Deliverables that need further analysis.

- Inventories of data and tools
- Data and databases
- Analytical framework
- Analysis/Guidelines/Information Products
- Training and capacity building
- Case studies
- Establishment of reference cases or typologies for bioenergy systems in different typical settings, around which all other activities and deliverables could be arranged;

Inventories

- **Policies.** Survey based on OECD or IEA surveys and building on the work of the FAO legal department. Could use FAO bioenergy webshore as interface to link with an open policy database. Includes taking stock of public spending and legislation. Must take stock of policies in the style of PSE measures (stocktaking tool). Must consider different trade regimes (which is integral part of PSEs).
- **Private sector activity/investments**
- **Who is doing what**, i.e. actual activities on analysis, country case studies and missions, capacity building, education materials, publications, events etc. Use 'bioenergy webshore'
- **Assessment of research on bioenergy** (from farm right up the chain) and how is it transferred. What is driving the research and the transfer?

Case Studies

- The main approach to follow an inventory of data and tools and identification of respective gaps, was seen as case studies.
- **BEFS project will carry out 3-6 case studies** based on three to four characteristic or reference systems (or bioenergy typologies), across business models/degrees of commercialisation, technologies, markets, scales;.
- Case studies as pragmatic and concrete **learning process** of organizing data, analysis and cooperation.
- Differentiation of the assessment between **actual and likely developments – and potential and alternative development opportunities**
- Specific case studies will be designed around **reference cases or typologies of characteristic bioenergy systems.**
- **Support countries to prepare/undertake case studies** in order to achieve maximum coverage of characteristic systems in different settings.
- Considering the large number of ongoing field activities, the role of a platform for information exchange was emphasised and the **Bioenergy Webshores, facilitated by FAO**, mentioned as one possible option to achieve effective information exchange and coordination among partners quickly.

Policies and Markets – drivers and objectives

Public C/B	Ethanol				Biodiesel				Alternative	Baseline	Private C/B		
Policy Objectives	Sugar		Maize		Soybean		Sunflower		SRC for Ethanol	agr ; LU energy;		Market Drivers	
1 CC	€t t €	+		0		-		--					A – profitability
2 CPS													B – food price
3 MA	-		++		+		+						C – energy price
4 EI													D – input prices
Non-policy													Market Effects
5 Food Sec													
6													
7													
8													

Assumptions for simplifications: market and non-market goods/services;

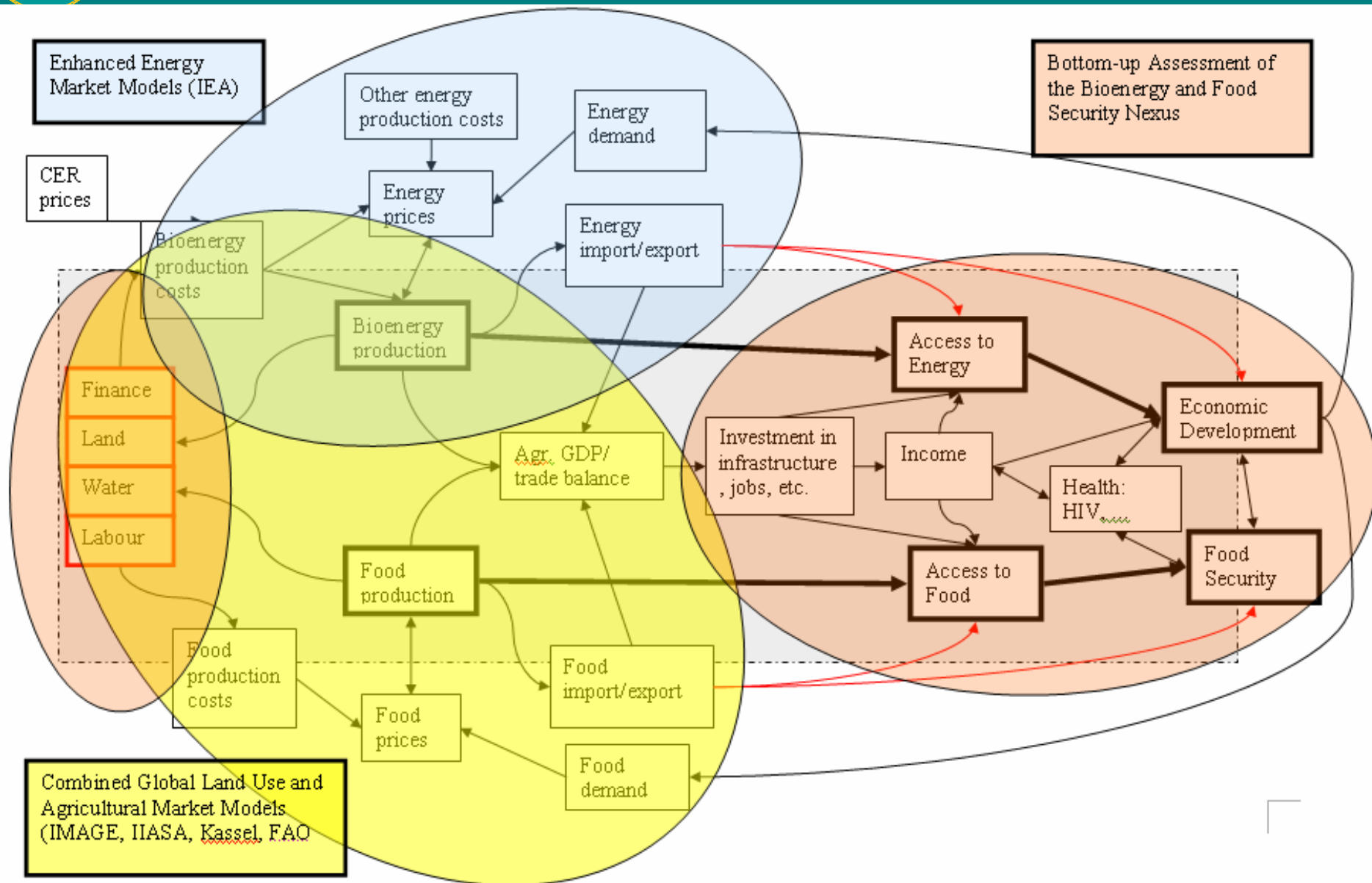
1) CC: Climate Change; 2) CPS: Commodity Price Support (for surplus disposal); 3) MA: Market access of small farmers; 4) EI: Independence from Energy Imports;

Evaluation and Certification

- Complexity
- Project by Project basis vs. aggregation in terms of characteristic production systems and value chains
- Analytical requirements and cost efficiency
- Participation of smallholders
- Consensus, highest common denominator, minimum requirements
- Regulatory (minimum standards) and voluntary schemes;
- Demand/market related and bottom-up/supply driven
- Politics: Matching standards with...
- Analysis: ... measurable indicators

Limits of project/production system level assessments – illustration:

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Good Agricultural Practice

- Example for long standing FAO work of relevance for certification
- Slides taken from Loretta Sonn, FAO

Developments in Ag. Sector

- Demand by consumers, retailers, processors
 - Food safety, quality, nutrition
 - Environmental impact of agriculture
- Response by farmers adopting practices/codes
 - Improve livelihoods
- Support by governments and institutions
 - Regulations
 - Sustainable agriculture policies
 - Research, extension, education, credit, infrastructure

GAP: evolution of concept

- For decades: extension and research guidelines on “good practices”
- More recent trend: GAP in food markets - growing number of “GAP” codes & standards - privatization of standards
- Renewed attention as entry point for food safety & quality in food chain

Can codes support sustainable ag.?

- **Private certification and standards (e.g.: EUREP, retail...)**
 - Competitive advantage - not all farmers can meet
 - Focus more on impact on product than on sustainability
- **Public legislation and policies (e.g. : int'l, extension, research)**
 - Society-driven – broader sustainability priorities
 - Int'l public good or local, small farmer-adapted
 - But lack financial resources
- **Fair trade, organic**
 - A mix of both
 - Provide capacity building. Environmental and social aspects
 - But market share may be limited in longer term

Micro level

Farmers incentives...

- **Economic:** price premium, market access; access to inputs; stabilize yield, increase productivity, reduce losses, increase farm asset value...
- **Regulatory/Legal:** ascertain property rights to scarce resources; reduce liability...
- **Human/social capital:** expand skill sets, reduce community tensions...

...and Micro level problems

- Too many standards and codes
- Opportunities, but hard for small farmers to meet standards (cost, investments, paperwork) & certification fees
- Not always a price premium
- Different scopes of GAP
- Are food safety/quality and food security/sustainability GAPs compatible or contradictory?

Macro level - Challenges Facing Developing Countries

- 'Traditional' competitiveness factors (macroeconomic stability, productivity, logistics, reliability) haven't gone away !
- ... they are frequently as/more important as standards in determining participation and outcomes
- Tightening/proliferation of standards coinciding with significant downward international price pressures
- Standards reinforce other strengths and weaknesses at production unit and supply chain levels

Macro level - Challenges Facing Developing Countries(2)

- Alignment/harmonization with int'l/EU/US official standards is only a preliminary part of the challenge
- Private safety, quality, and social requirements typically more demanding and more consistently enforced than public SPS standards (both int'l and domestic)

Country level assistance

- Support translation of principles into locally appropriate practices and indicators

- 1- Knowledge (policies, ag. practices, impacts)

- 2- Facilitate multistakeholder negotiations on GAPs for a commodity/farming system

- 3- Capacity building

3. Lessons learnt - Strategy

- *Be strategic:* some crops have more impacts and potential than others
- *Focus on improvement:* encourage innovation, not compliance
- *Focus on the most serious impacts:* 8-10 activities cause most environmental impacts
- *Be open:* not enough effort made to collect/adapt lessons from around the world

Lessons learnt - Stakeholders

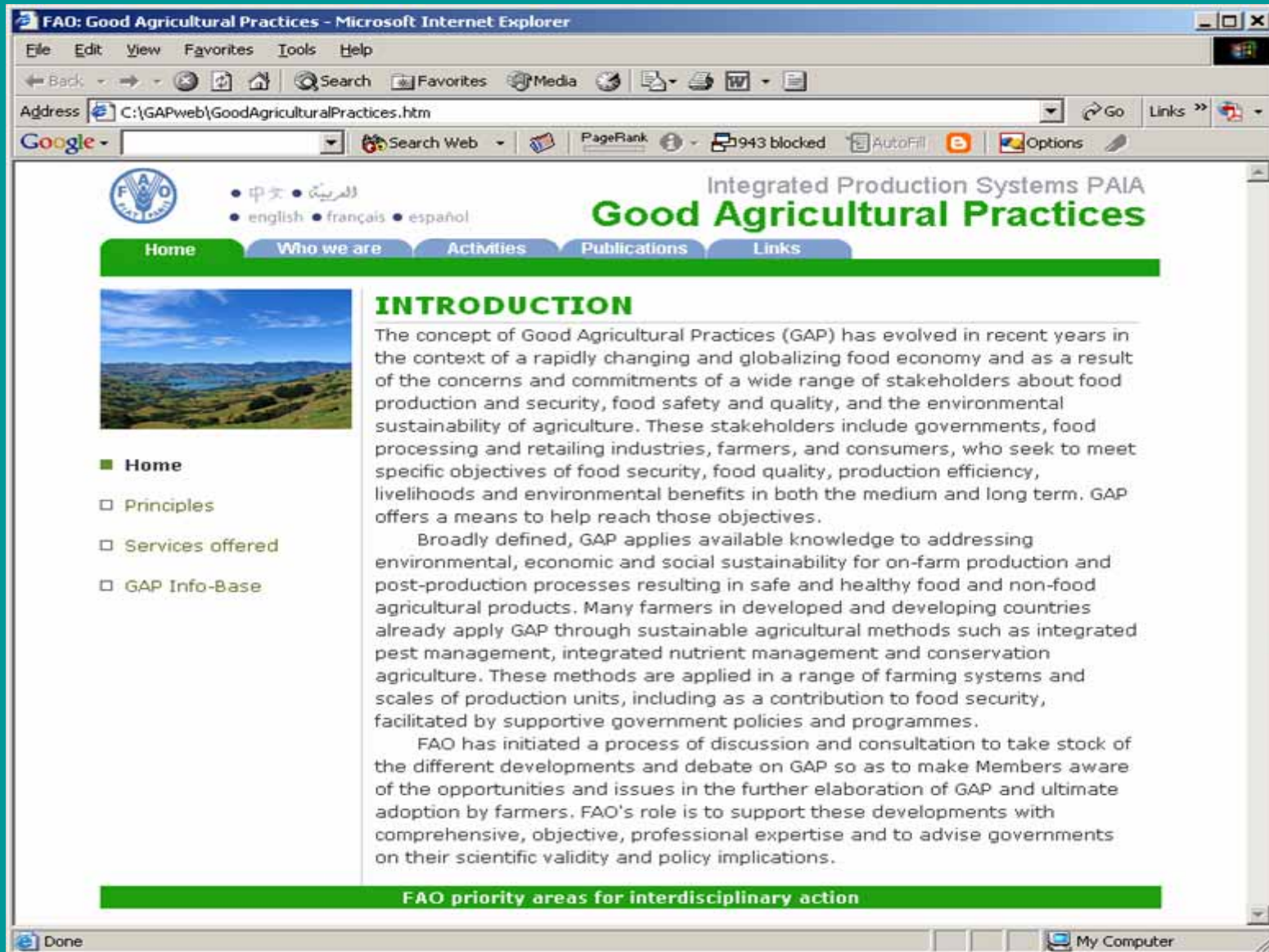
- Work with producers, consumers, markets and governments
- Work with drivers of change
- Farmers & communities create most GAPs
- 400 buyers are key: need to engage industry

Lessons learnt - Incentives

- Target farmer incentives and disincentives when designing GAP programmes
- GAPs increase product quality & reduce risk; GAP can work without market incentives
- Most GAP pay for themselves, though not all
- Different agro-ecologies, institutional and market contexts = different GAP priorities

FAO GAP Website

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The screenshot shows a Microsoft Internet Explorer browser window displaying the FAO Good Agricultural Practices website. The browser's address bar shows the local file path: C:\GAPweb\GoodAgriculturalPractices.htm. The website header includes the FAO logo, a language selection menu (Chinese, Arabic, English, French, Spanish), and the title "Integrated Production Systems PAIA Good Agricultural Practices". A navigation bar contains links for Home, Who we are, Activities, Publications, and Links. The main content area features a landscape image and an "INTRODUCTION" section. The introduction text discusses the evolution of Good Agricultural Practices (GAP) in response to a globalizing food economy and stakeholder concerns. It defines GAP as a means to help reach objectives of food security, quality, and sustainability. A paragraph explains that GAP applies available knowledge to environmental, economic, and social sustainability for on-farm production and post-production processes. Another paragraph notes that many farmers already apply GAP through sustainable methods like integrated pest management and nutrient management. The final paragraph states that FAO has initiated a process of discussion and consultation to take stock of different developments and debate on GAP to make members aware of opportunities and issues in its further elaboration and adoption by farmers. The browser's status bar at the bottom shows "Done" and "My Computer".

FAO: Good Agricultural Practices - Microsoft Internet Explorer

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Address C:\GAPweb\GoodAgriculturalPractices.htm Go Links

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Integrated Production Systems PAIA
Good Agricultural Practices

Home Who we are Activities Publications Links



INTRODUCTION

The concept of Good Agricultural Practices (GAP) has evolved in recent years in the context of a rapidly changing and globalizing food economy and as a result of the concerns and commitments of a wide range of stakeholders about food production and security, food safety and quality, and the environmental sustainability of agriculture. These stakeholders include governments, food processing and retailing industries, farmers, and consumers, who seek to meet specific objectives of food security, food quality, production efficiency, livelihoods and environmental benefits in both the medium and long term. GAP offers a means to help reach those objectives.

Broadly defined, GAP applies available knowledge to addressing environmental, economic and social sustainability for on-farm production and post-production processes resulting in safe and healthy food and non-food agricultural products. Many farmers in developed and developing countries already apply GAP through sustainable agricultural methods such as integrated pest management, integrated nutrient management and conservation agriculture. These methods are applied in a range of farming systems and scales of production units, including as a contribution to food security, facilitated by supportive government policies and programmes.

FAO has initiated a process of discussion and consultation to take stock of the different developments and debate on GAP so as to make Members aware of the opportunities and issues in the further elaboration of GAP and ultimate adoption by farmers. FAO's role is to support these developments with comprehensive, objective, professional expertise and to advise governments on their scientific validity and policy implications.

FAO priority areas for interdisciplinary action

Done My Computer

- Home
- Principles
- Services offered
- GAP Info-Base

FAO GAP Database – Use it !

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FAO: Good Agricultural Practices: GAP database - Microsoft Internet Explorer

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Address C:\GAPweb\GAPdatabase.htm

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Integrated Production Systems PAIA
Good Agricultural Practices

Home Who we are Activities Publications Links



GOOD AGRICULTURAL PRACTICES DATABASE

A metadata base of activities relating to Good Agricultural Practices has been developed in the Agriculture Department. This has drawn on information from FAO documents and websites within EIMS, the TECA database of SDRR, AGLL data from 1999 (MFCAL), the LEAD project of AGAL and external websites and publications. A total of 853 records have been classified under food safety, environmental protection and social equity, and as guidelines, projects, publications and field activities. Further data fields include country, region, farming system, and technological and institutional success factors. A number of examples are shown, including those from important external websites such as EurepGAP and the Sustainable Agriculture Initiative.

Some examples:

- Vegetables
- Cereals
- Fruit
- Organic systems
- Integrated systems
- Livestock
- Swine and pigs
- Poultry
- Animal Welfare
- Fair trade

Or Search the full database at:
<http://www.fao.org/prods/gap/database/index.html>

Home

- Principles
- Expert Consultation
- Workshop
- Projects
- Field activities
- Electronic discussion

Local intranet

FAO GAP Database

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FOOD AND AGRICULTURE ORGANIZATION (FAO) OF THE UNITED NATIONS



Integrated Production Systems (PROD)



Good Agricultural Practices (GAP)

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AGRIS
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Agriculture - General aspects
Agricultural research
History
Education
Extension

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Albania
Algeria
Amer Samoa
Angola

Regions

— not selected —
All
Central America & Mexico
Central Eastern Europe
Continental Southeast Asia
East Asia

Farming
Systems

— not selected —
[AFR]Agro-pastoral millet/sorghum
[AFR]Cereal-root crop mixed
[AFR]Coastal artisanal fishing
[AFR]Forest based
[AFR]Highland perennial

International Portal on Standards

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International Portal on Food Safety, Animal and Plant Health - Microsoft Internet Explorer

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Address <http://www.ipfsaph.org/En/default.jsp>

International Portal on Food Safety, Animal & Plant Health

| English | | Español | | Français |

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March 2005: Welcome to the International Portal on Food Safety, Animal & Plant Health (version 2.0).

Developed by FAO, in association with the organizations responsible for international standard setting in sanitary and phytosanitary matters, this portal provides a single access point for authorized official international and national information across the sectors of food safety, animal and plant health. [MORE...](#)

NEW in Version 2.0: the portal now includes up-to-date information on **maximum residue limits (MRL)** for veterinary drugs and pesticides, as well as **improved full-text searching** and navigating by **information type** (such as legislation, regulations, scientific evaluations including risk analyses, notifications, guidelines, reports and specifications).

SEARCH THE PORTAL: Search [HELP](#) [SEARCH TIPS](#)

Search: Title and description Full Text

More Search Tools: [Advanced Search](#) [Quick Query](#) [Keyword Finder](#) [How do they differ?](#)

Can't find what you are looking for? Contact the Help Desk.

This portal is pleased to announce the interagency partners involved in this initiative.
For more information on each international organization or standard setting body, click on the corresponding logo below.



Done Internet

Start I... H... C... G... C... M... F... I... n... S... 16:56

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Key Contacts

- International Bioenergy Platform (IBEP) http://www.fao.org/sd/en2_en.htm
- Chairman of the IDWG - Jeff.Tschirley@fao.org
- Senior Energy Coordinator - Gustavo.Best@fao.org
- BEFS Project Coordinator - Jennifer.Nyberg@fao.org
- Bioenergy Technical Advisor - Ingmar.Juergens@fao.org
- SOFA 2008 Bioenergy - Terri.Raney@fao.org
- Global Bioenergy Partnership - GBEP-Secretariat@fao.org
- Senior Wood Energy Officer - Miguel.Trossero@fao.org
- Additional contact information, publications and ongoing bioenergy initiatives online at www.fao.org