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FOOD IMPORT AND ITS SAFETY IN JAPAN

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ABSTRACT

Food importation in Japan has been increasing for the last decade. These have increasingly diversified, although it has been mainly fish and meat and a variety of processed foods. In recent years, China and the other Asian countries have become the major exporters to Japanese markets. Due to the remarkable increase of imported food, food self sufficiency ratios has significantly declined in terms of calories supply bases.

On the other hand, the consumer's awareness, for food safety has increased sharply, reflecting the increase in imported vegetables with residual agricultural chemicals from China and the incidence of BSE in Japan. The Japanese government is taking some political measures in ensuring food safety, including the establishment of a better food labeling system and enactment of laws on food safety management.

Keywords: food consumption, food labeling system, food safety, food self sufficiency ratios

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PUBLIC AWARENESS AND REGULATORY SYSTEMS FOR FOOD SAFETY IN THE PHILIPPINES

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ABSTRACT

Food safety is an important issue that concerns the health of every individual. Millions of people die from diarrheal illnesses, which are mainly due to the ingestion of contaminated food or water. At present, governments around the world are focused on genetic modification of food and food contamination.

In the Philippines, food safety is assured through proper control, food hygiene and sanitation. The government bodies, which are mainly responsible for food safety, are under the Departments of Health and Agriculture. To ensure food safety, basic food laws were established and are embodied in a number of legislative acts and presidential decrees. The Philippine regulatory agencies adopt the *Codex Alimentarius*. The Codex standards contain requirements for food aimed at ensuring for the consumer wholesome food products free from adulteration and correctly labeled.

The Philippine government supports biotechnology R & D. It is the policy of the state to promote the safe and responsible use of modern technology and its products in order to achieve food security, equitable access to health services, sustainable and safe environment for industry development. Several issues concerning GMOs are discussed in this paper. The discussions centered on the risks, morality of technology, accountability and public awareness and information.

The government has adequate controls when it comes to food safety. The dissemination and proper implementation of these policies and guidelines are vital in ensuring the safety of Filipinos in terms of food consumption.

Key words: biotechnology, Codex Alimentarius, GM food

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PRODUCTION OF SAFE FOOD IN CHINA

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ABSTRACT

China's agriculture made an enormous achievement in the 1980s by solving the problem of providing people with adequate food and clothing. The interests of the people have moved from quantity to quality, to safe and nutritious food. The Chinese government has made policies for providing food which are safe to human health and the environment. China has officially taken effective measures to improve food safety through the programs, such as "Green Food", "Organic Food" and "Pollution-free Food Promotion Program". Developing safe products such as green food, organic food and pollution-free food contribute not only to the promotion of sustainable development and the protection of human health, but also to increasing farmers' and entrepreneurs' incomes thus increasing the export of agricultural products. The Chinese systems aim to facilitate the production and trade of agricultural products and foods that meet the food safety requirements of developed countries in quite the near future.

Key words: green food, organic food, pollution, safety

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POST-HARVEST TECHNOLOGY FOR FOOD SAFETY IN TROPICAL ASIA: PROBLEMS IN AFLATOXIN CONTROL WITH MAIZE PRODUCTION IN ASIAN COUNTRIES

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ABSTRACT

Aflatoxin problems in agricultural products in Asian countries, especially with maize, were discussed and factors that prevent the resolution of these problems were studied.

Firstly, from the results of Japanese-Thai collaborative project on maize quality, several problems are pointed out concerning drying methods, newly developed hermetic storage, aflatoxin detection methods and farmer's incentives.

Secondly, the results of the survey made to Asian researchers from Vietnam, Thailand, Indonesia and India on aflatoxin control problems in their maize were summarized.

Key words: drying, hermetic storage, mycotoxin

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AGRICULTURAL PRACTICES FOR RECYCLING TROPICAL RESOURCES IN THAILAND: A CASE STUDY OF THE ROYAL PROJECT FOUNDATION

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INTRODUCTION

In the tropic proper where it is always hot and humid, frequent downpour of rain cause severe erosion in the highlands and heavy deposition of fine materials in the lowlands. High humidity and temperature induce bountiful activities of microorganism in the soils together with an abundance of insects and pathogens. As a result, most soils in the highlands and upland are chemically poor but physically good.
The lowlands however, remain rather rich in nutrient and younger in development.
The upland and highland in most cases are largely oxisols in tropical South America and Africa. In the tropics of South Asia and Southeast Asia these soils are mostly utisols. Most of these soils are red in color, severely leached with low activity clays (Brady and Weil, 1999).

The surge in world population, reaching up to 3000 million (UNFPA, 1992) after World War II, induced the so called "green revolution" which produced staple food of high yield like grain varieties for corn, rice and wheat which successfully fed the world. In the recent years, from 2000 onwards, the problem is even more difficult with many folds over in the world population and the deterioration of soil quality.

Important negative effects led to the reduction of soil quality in the world's arable land as well as in Asia reducing it down to 38% of the total (Asia 536 ha, world 1474 ha) (Olderman et al 1990). Soil degradation on agricultural lands has been most drastic in Africa and Central America, but the problems extend to all continents.
Since man is primarily responsible for the decline in soil quality, we need to be more aggressive in changing the people and somehow, reverse this trend as we look to the future.

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THE DETECTION OF YERSINIA ENTEROCOLITICA IN CHICKEN AND SWINE IN THAILAND

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ABSTRACT

The incidence of *Yersinia enterocolitica* in chicken, swine and the meat samples was investigated from September 2001 to February 2002. One hundred and twenty five meat samples were randomly collected from retail markets and supermarkets in Nakorn Pathom and Bangkok. Fecal samples, 50 each, were also collected from chicken and swine farms in Chonburi. A total of225 samples were specifically cultured and biochemically confirmed for *Y. enterocolitica.* It was shown that only 3 chicken meat samples were positive for *Y. enterocolitica* and all the isolates were found to be non-pathogenic using biochemical tests. The results revealed that the incidence of non-pathogenic *Yersinia enterocolitica* from meat samples was relatively low as 2.4 % (3 out of 125) in Thailand. This is the first report of *Y. enterocolitica* isolated from meat in Thailand.

Key words: bacterial contamination, chicken meat, fecal samples, pork, retail market

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CHEMICAL CHARACTERIZATION OF SOIL AND CONTROL OF POTATO COMMON SCAB BY SPECIAL FERTILIZATION METHOD IN VIETNAM

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ABSTRACT

Potato common scab, a serious disease caused by bacteria *Streptomyces scabies*, among the many diseases that attack potato. Its development is influenced by some chemical factors in the soil, such as soil pH, exchange acidity Yi and water soluble aluminum (Mizuno and Yoshida 1993, Mizuno et all 1998). Potato common scab can be controlled by decreasing soil pH, by a single high application of urea and maybe a large quantity of potassium (120- 180 kg N ha^{-1} and 80-120 kg K2O ha^{-1}).

Key words: soil pH, *Streptomyces scabies*, water-soluble aluminum.

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BACTERICIDAL ACTIVITY OF SPHAERANTHUS INDICUS EXTRACT AGAINST RALSTONIA SOLANA CEAR UMIN TOMATO

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ABSTRACT

Bactericidal activity of the *Sphaeranthus indicus* leaf extract against *Ralstonia solanacearum*, the causal agent of bacterial wilt disease in tomato was studied under laboratory and field conditions. Under in vitro test on potato dextrose agar, the crude extract of £ indicus, at a concentration of 0.5%, inhibited the growth of *R. solanacearum.*

Under field conditions, application of the plant leaf extract (0.5%) significantly reduced the disease incidence and the population of *R. solanacearum* in the soil. Disease incidence was reduced to about 50% compared to control (plot without extract treatment) at 88 days after transplanting. The population of *R. solanacearum* in the soil decreased from 36.8 x 105 CFU/g of soil without treatment to 0.18 x 105 CFU/g of soil when treated with 0.5% of the leaf extract. These results revealed that the plant extract of *S. indicus* inhibited the growth of *R. solanacearum* both under laboratory and field conditions and probably can be used as an alternative botanical bactericide to control bacterial wilt disease on tomato.

Key words: botanical pesticide, field assessment, leaf extract

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COMPARISON OF THE CITRUS SCAB FUNGI ORIGINATING FROM VIETNAM AND JAPAN

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ABSTRACT

Vietnamese and Japanese isolates of citrus scab fungus, *Elsinoe fawcetti*, were compared according to their morphological, physiological and biological characteristics. The shape and the size of conidia, the carbon and nitrogen sources utilized, and the optimal temperatures for their growth were similar among the isolates tested. Inoculation of surface-sterilized, young leaves of satsuma mandarin (*Citrus unshiu*) plants with mycelium of each isolate followed by incubation for several days at 25 °C under a high humidity condition caused formation of typical brown scab lesions on the inoculated leaves, from which fungi identical to those in the inoculum were isolated. SDS-PAGE protein profiles of each fungus were not distinguishable among the isolates. However, RAPD DNA patterns showed that Vietnamese isolates are different from Japanese isolates. A few diversities among Vietnamese isolates as well as among Japanese isolates may be affected by the lack of the perfect stage of this fungus and also due to their common origins.

Key words: diversity, comparison, *Elsinoe fawcetti, Elsinoe australis, Sphaceloma fawcetti* var. *scabiosa*,

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CULTURE OF CELLS FROM DIAMONDBACK MOTH, *PLUTELLA XYLOSTELLA* LINN., EMBRYOS

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ABSTRACT

The embryonic cells of the diamondback moth, *Plutella xylostella* Linn., were successfully cultured *in vitro*, and most cultures were maintained in good condition for six months. The eggs of the moths were collected, and surface sterilized by submersion in 70% ethyl alcohol for 3 min. The chorions were removed in the MGM-464 culture medium, and about 60 embryos were pooled to set up a culture in a 25 ml Falcon plastic culture flask. Soon after the initiation of culture, the explants attached to the bottom of the flask. The cell migration from the explants started within 24 hrs. The culture was maintained at 25°C under dark condition. During the cultivation, cells with various shapes migrated, and some of them multiplied by mitoses. The cells were susceptible to *Autographa californica* nuclear polyhedrosis virus.

Key words: cell culture, insect biotechnology, Lepidoptera

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FROM RICE TO CLEAN VEGETABLES: AGRICULTURAL TRANSFORMATION IN A SUBURBAN COMMUNE OF HANOI, VIETNAM

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ABSTRACT

This paper aims to trace the process of agricultural transformation in a commune near Hanoi, in order to evaluate the village-level responses to the policy and macroeconomic changes. The commune was traditionally rice growing but developed into clean vegetable growing area through the efforts of the people's committee as well as individual farmers. After the presentation of an overview of Vietnamese agricultural development and the position of the Red River Delta, this paper will describe agricultural development in the commune from the 1950s. This commune emerged as the main vegetable growing area from the 1980s, and clean vegetable cultivation became widely adopted in the 1990s.

Key words: cooperative, land law, reformation, vegetable marketing

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RESPONSE OF ISOGENIC LINES OF RICE (*ORYZA SATIVA* L.) WITH DIFFERENT SEMI-DWARFING ALLELES OF SD-1 LOCUS TO SOME GROWING CONDITIONS

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ABSTRACT

The semi-dwarfing genes, which are recessive and located at the *sd*-1 locus of the chromosome 1, have been effectively utilized to increase rice yield.

The authors succeeded in developing isogenic lines by nine repeated backcrosses with a Japanese cultivar Norin 29 as a recurrent parent in order to transfer semi-dwarfing genes in the *sd*-1 locus from different rice cultivars such as Taichung Native 1 (Taiwanese local), Reimei (artificially induced mutant) and Shiranui (Japanese local). These isogenic lines were designated as SC-TN1, SC-Reimei, and SC-Shiranui, respectively.

Using these isogenic lines, we revealed that semi-dwarfing genes of different origins had different shortening effects on lower internodes of mature plants and elongated seedlings. Expression of other characters was also investigated with those isogenic lines

Keywords: backcross, deep seeding, GA responsiveness, response to heavy N application

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THE EFFECT OF INSECTICIDES ON POPULATIONS OF DIAMONDBACK MOTH, PLUTELLA XYLOSTELLA (LEPIDOPTERA: YPONOMEUTIDAE) AND ITS PARASITOID , DIADEGMA SEMICLA USUM (HYMENOPTERA: ICHNEUMONIDAE) IN CABBAGE

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ABSTRACT

A field experiment was conducted at Candikuning, Tabanan Regency (1200 m a.s.l.) from June to September 2002 in order to find out the effect of insecticides on the population of the diamondback moth, *Plutella xylostella*, and its parasitoid in cabbage. The experiment was arranged by randomized block design with four treatments namely Biota-L (a formulation of *Alpinia galanga* L. and *Piper betle* L.
extracts), Regent 50 EC (fipronil 50 g/1), CuracronoOO EC (profenofos 500 g/1), and control replicated four times.

The results indicate that fipronil and profenofos insecticides reduced the *P. xylostella* population as well as yield loss, but both insecticides gave negative impact to the life and role of the parasitoid, *Diadegma semiclausum* in the field.

Key words: botanical insecticides, ecotogy, population dynamics

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HEDONIC ANALYSIS OF OFFERED PRICE OF MANGO: IMPLICATIONS FOR THAI MANGO IN KUNMING MARKET

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AB STRACT

Like those of various fruits, the price of mango has drastically declined over the past five years. Export has become one of the key solutions to absorbing huge excess supply. Although Thailand has exported mango for a decade, the amount of export accounted for only 1 percent of its total production.

China is a potential market regarding both its proximity to Thailand and its enormous demand. This paper aims at investigating Chinese consumers' preferences and willingness to pay for Thai mango. The survey was carried out by interviewing local consumers, after product tasting. A hedonic price model was employed to measure the value that each mango characteristic contributed to the price offered by the respondents.

The physical appearance of Choke Anan (sample product) is distinctive from other varieties available in Kunming market. Color and thickness of peel, taste and medium size are significant product characteristics. The average price offered was slightly lower than market prices of existing varieties. However, it was sufficient for traders to import mango from Northern Thailand.

Key words: China, export potential, hedonic price model,