

## **REGULATORY FRAMEWORK OF RICE FERTILISER SUBSIDY MANAGEMENT TO ATTAIN SUSTAINABLE DEVELOPMENT GOALS: MALAYSIA'S PERSPECTIVE**

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**Abstract:** This study identifies the regulations concerning fertilisers produced for the development of paddy and the rice industry. It looks into the issue of mismanagement of the government's fertiliser subsidy scheme from the legal perspective. It also focuses on the roles played by manufacturers, distributors, sellers, service providers and farmers when dealing with fertiliser, and whether such dealings are parallel to the law. The mismanagement of the rice fertiliser subsidy puts the country's financial security at risk and preventing farmers from successfully achieving food sovereignty through the increase in productivity of rice yields as well as increase in income for paddy farmers' survival. There are several regulations governing fertiliser subsidy and its management such as the Control of Paddy and Rice Act 1994, Plant Quarantine Act 1976, Pesticide Act 1974, Malaysian Quarantine and Inspection Services Act 2011 and Environmental Quality Act 1974. However, most mismanagement cases involve big commercial farms, which are associated with the fertiliser industry rather than the subsidy for fertiliser in the government rice sector. The cases involved graft, fraud, bribery and smuggling of fertiliser. This paper also reviews the roles of Farmers Association and Farmers Board in regulating fertiliser subsidy.

**Keywords:** Food security regulatory mechanism, agricultural planting management and rules, agricultural subsidy law and regulation.

### **Introduction**

Fertilisers are a plant protection product, which helps to boost harvest and preserve high-value, crops such as paddy. The Global Food Security Index 2020 conducted by the Economist Intelligence Unit placed Malaysia at 43<sup>th</sup> out of 113 countries. Based on the study, Malaysia has an advantage in terms of food affordability safety net programmes but is less promising on food security and policy commitments, nutritional standard and sensitivity of natural resources resilience such as exposure to fertiliser waste management. Fertilisers with good practice promote soil fertility. Fertilisers are subject to food safety and nutritional standards in the production of high quality and nutritious food. Hence, proper fertilisation and adherence to international standards should be monitored on an on-going basis.

However, commercial fertilisers have to be differentiated from farm manure. Fertilisers

are substances that are designed to provide nutrients to crop plants so that they can grow and have their quality enhanced. Farm manure is fertilisers made from animal waste, plant by-products or vegetable compost. Hence, the handling of such manure leads to the production of organic fertilisers.

Agricultural subsidy is the government's method of helping farmers improve the resilience of rice crops so that rice yields are of quality and can meet the requirements of further manufacturing processes. Accurate use of paddy fertilisers depends on factors such period of cultivations, fertilisation schedules and the amount of land necessary for a paddy field or hill paddy. Paddy fertiliser subsidy is one of the government's assistance schemes under its annual budget to address the economy's resilience. The paddy and rice sectors face challenges in enhancing the nation's food security due to the mismanagement of funds

for fertiliser subsidy which results in farmers having to bear some costs to participate in the fertilisation programme or else they would have to depend on supplies of fertilisers or fertiliser inputs through ventures with landlords, contract farmers and farming cooperative farmers. Without the use of fertilisers, farmers face low yields of paddy harvests.

Fertiliser assistance should not cover each and every plant cultivated by farmers in Malaysia. Fertilisers are also required by other agricultural productions such as oil palm, rubber, vegetables, fruits and flowers (horticulture). Hence, fertiliser assistance should be limited to the planting of paddy. This article will only discuss paddy fertiliser subsidy.

As a member of the World Trade Organisation (WTO) and the Food and Agriculture Organisation (FAO), Malaysia is always willing to comply with obligations related to subsidies in the production of national food. Among them, the treaty “Agreement Establishing a Food and Fertiliser Technology Centre for the Asian and Pacific Region” between FAO member states which established guidelines on fertilisers in a sustainable action plan (hence, drawing upon Sustainable Development Goals), including regulations on organic fertilisers. However, in Malaysia, the Fertiliser Act has yet to be finalised which is planned by the Ministry of Agriculture and Food Industries since 2020 with the proposed draft Fertiliser Bill to be debated in Parliament soon.

### ***Some Important Legal Definitions***

According to Article 2 (1) of the FAO legislation guide, “fertiliser” means a substance applied to the ground for the purpose of bringing about a chemical change in the soil to provide plants with nutrition or contribute to their cultivation, or a substance applied to a plant for the purpose of providing it with nutrition.

The Department of Agriculture (DoA) is the custodian of the Plant Quarantine Act 1976. The act aims to improve and strengthen laws relating to the control, prevention and eradication of

agricultural pests, noxious plants and plant diseases and to broaden cooperation in reigning over the movement of pests in international trade and for anything related thereto.

The Director-General of Agriculture shall be responsible for implementing and enforcing the provisions of this act and shall have the power to appoint inspecting officers whose powers and duties are outlined in the text. Diseased plants that might endanger other plants shall be destroyed, removed or treated by the owner. The director-general may also place any land under isolation when any of the plants on it are diseased. Provisions as to compensation are specified in the Plant Quarantine Act 1976. Furthermore, the act prohibits the importation or possession of noxious plants and pests. Penal provisions are given in the text.

The Plant Quarantine Regulations 1981 (amended 2005) underscores the registration of permit for fertiliser as a plant protection product. In order to stop the entry and spread of noxious plants and pests into Malaysia, the regulations outline the conditions that must be followed for the importation of plants, plant products, growing media or rooting compost, beneficial organisms, plant pests and carriers of plant pests. Any plant must be brought into the country with a phytosanitary certificate and a permit given by the director. The regulations further outline fines, the importation, eradication, and control of harmful pests as well as requirements for the inspection, quarantine, treatment, or destruction of plants brought into a certain area. They also outline the authority of plant quarantine inspectors. For the purpose of WTO commitment, with regard to the notification on phytosanitary certification before it is issued, the consignment will require inspection and if needed, be treated for disinfestation against pests. If the consignment is found to be satisfactory, a phytosanitary certificate is issued immediately after inspection or treatment, if required. Applications must be filed at least two working days prior to the intended date of inspection on a form that can be obtained from any Plant Quarantine office (Crop and Plant

Quarantine Division of the DoA). To satisfy the phytosanitary requirements of the importing country, a certified true copy of the import permit from the importing country would be needed. It will be necessary to provide the appropriate permissions for other restricted goods such as coconut and plants protected by the Convention on International Trade in Endangered Species. Besides, the DoA which is the custodian of the Pesticide Act 1974 has implemented the Pesticide (Labelling) Regulations 1984. It is important to note Section 2 of the Pesticide Act 1974 defines “pesticide” as any substance that contains an active ingredient or any preparation, mixture or material that contains any one or more of the active ingredients as one of its constituents but does not include contaminated food. There is a Control of Pesticide and Fertilizer Division under the DoA which was not assigned to handle matters related to fertilisers. However, the enforcement functions of plant quarantine were then merged with the establishment of the Malaysian Quarantine and Inspection Services (MAQIS) Act 2011.

In accordance with Section 2 of the 1952 Poison Act, “poison” refers to any substance listed by name in the first column of the Poison List, as well as any preparation, solution, compound, mixture or natural substance that is not an exempt preparation or an item or preparation that is temporarily listed in the Second Schedule. The 1952 act governs the importation, ownership, production, compounding, storage, conveyance, sale and application of poisons. Fertilizers are not poison but chemicals obtained through fertiliser production can turn into poisons when not properly maintained. Poisons are also used in the breeding of organisms to dispose of diseased animals and sanitation but the production of organic fertilisers from decomposed animal faeces can cause problems to public health and the environment. In the previous years, the DoA did not have proper guidelines on the quality of organic fertilisers to determine the terms and information on the labels for use of such fertilisers. This would lessen the confusion caused by the many definitions of the term

“organic” in relation to organic fertilisers (Kala *et al.*, 2011).

### ***What is the Fertiliser Subsidy Scheme?***

The Paddy Fertiliser Assistance Scheme is a federal government programme that was introduced in 1979 through the Ministry of Agriculture and Agro-based Industry. Since 1991, state governments have also established a similar scheme to assist poor farmers who did not receive fertiliser subsidies from any federal government agency. The programme aims to reduce the input cost of paddy production, modernise paddy crop activities, increase paddy production, increase the income of paddy growers and provide incentive to paddy farmers who cultivate paddy crops.

According to the Auditor General’s Report Series 3 of 2018, the government has spent RM4.19 billion from 2016 to 2018 on subsidy schemes and incentives to farmers. Subsidies and incentives to farmers have been provided since 1979 to reduce the cost of paddy cultivation. Besides that, it also encourages farmers to continue their paddy cultivation activities as an effort to increase the production of local paddy and rice. Paddy subsidies do not only have high financial implications for the government, but also for the government’s policy of ensuring the continuity of local rice supply and reducing dependence on imported rice (LKAN 2, 2018).

For example, based on the Auditor General’s Report Series 2 of 2012, the State Development Office in Kelantan is responsible for coordinating the fertiliser subsidy programme with the assistance of the Land and Territory Office. The report stated that there had been significant delays in the implementation of the programme over the past 30 years and there has been no recorded conviction in the prosecution of corruption cases against the officers involved. The subsidy of fertilisers exceeded the eligibility and the provision of fertilisers not in accordance with the rice crop seasons. In a 2017 case at the Sessions Court, the former director of the Kelantan branch of the Paddy and Rice Control agency was charged with receiving a bribe of

RM3,500 to facilitate the obtaining of a rice transfer permit. The charge against him was brought under Section 17(a) the Malaysian Anti-Corruption Commission Act (MACC) 2009 and can be punished under Section 24 of the same act. The legal violation was not related to the Control of Paddy and Rice Act 1994 which regulates the paddy and rice-related industries, but related to the issues of governance of fertiliser subsidy schemes (LKAN 2, 2012).

### ***The Stakeholders Involved***

The Malaysian rice industry has undergone structure changes to increase its competitiveness in a dynamic environment driven by political, technological, economic and international trade concerns. One of the sustainability standards for crop plantations in agriculture includes good agricultural practice, such as soil development using organic fertiliser so that the production of rice will last longer. The fertiliser industry in Malaysia is dependent on the supply of raw materials imported from other countries.

The International Fertiliser Association (IFA) has reported that the worth of the global fertiliser industry in 2018 was US\$60.1 billion in terms of exports with Russia remaining as one of the main players (IFA, 2018). In Malaysia which is a member of IFA, there is the Fertiliser Industry Association Malaysia (FIAM) to represent the industry. FIAM was founded in 1987 with the goal of promoting and developing the fertiliser industry in terms of imports, manufacturing, production, processing and distribution of fertilisers; cooperating with and advising government authorities on matters relating to the fertiliser industry, informing members of existing or proposed legislation and reports from government or scientific committees that affect the fertiliser industry and encouraging the responsible and effective handling and usage of fertilisers (FIAM Annual Report).

FIAM members can import either raw materials or semi-finished fertiliser formulas from IFA members. FIAM members must also apply for all the licences required in the use

of the raw materials for the manufacturing, packaging and distribution of the products. The National Farmer Association (NAFAS) also is a member of FIAM.

There are no rules within FIAM that mandates the termination of membership if they are unable to meet the standard of quality fertiliser required for the development of the industry. However, an industry joint committee was established to ensure that players followed the IFA Safety Handbook to keep up with the SDGs and Sustainable Fertiliser Production 2030.

The stakeholders involved need to be addressed in the context of the legislative history of the fertiliser industry in Malaysia since the rice industry has attracted much interest among politicians, including parliamentarians as the government has signified its desire to safeguard the development of the rice industry as can be seen from the following excerpts of a minister statement:

*“Industri baja adalah sangat penting kepada sektor pertanian khususnya kepada kaum petani. Sejak tahun 1973, beberapa kilang baja yang dalam peringkat pengeluaran dan yang membekalkan sebahagian besar dari keperluan-keperluan dalam negeri. Tiga dari Syarikat-syarikat ini iaitu The Chemical Co. of Malaysia, Syarikat Federal Fertilizer Sdn. Bhd. dan Wee Kheng Chiang mengeluarkan baja “nitrogenous straight” dan baja-baja komponen untuk sektor pertanian. Selain itu, beberapa kilang-kilang campuran adalah dalam peringkat pengeluaran di merata negeri dan membekalkan keperluan-keperluan tempatan bagi baja-baja campuran. Kesemua projek ini adalah kepunyaan sektor swasta”.*

*“Permintaan tempatan bagi baja-baja telah menunjukkan arah-aliran yang bertambah dalam tahun-tahun lalu. Untuk menampung penggunaan yang bertambah ini, kerajaan baru-baru ini*

*telah meluluskan dua lagi projek yang ditaja oleh badan-badan kerajaan. Projek-projek ini dalam beberapa peringkat pelaksanaan dan apabila dalam peringkat keluaran penuh kelak, akan dapat menampung permintaan tempatan yang bertambah itu. Memandangkan kepada faktor-faktor di atas, pihak kerajaan setakat ini tidak membenarkan pengusaha-pengusaha persendirian untuk mendirikan kilang baja. Walau bagaimanapun, sekiranya ada pengusaha-pengusaha kilang baja untuk keperluan eksept, pihak kerajaan sedia menimbangkan mengeluarkan baja nitrogenous straight dan baja-baja component untuk sektor pertanian "nitrogenous straight". Mutu keluaran kilang-kilang baja di dalam negara ini ialah mutu yang diterima oleh pihak pertanian".*

*"Logiknya apabila petani-petani mengimpot baja dari luar negeri, logiknya ialah kerana baja kurang, oleh sebab kurangnya maka kita telah bersetuju menubuhkan dua buah kilang lagi. Jadi sementara kurang, terpaksa diimport, ini menjadi kebiasaan di dalam negara kita ini. Kebimbangan yang disuarakan ketika itu ialah campur tangan dalam penubuhan kilang baja diikuti penubuhan Lembaga Pertubuhan Peladang untuk mengawal selia aktiviti berkaitan kilang baja tempatan".*

(Musa Hitam, Primary Industries Minister)

The English translation of the speech is as follows: "The fertiliser industry is very important to the agriculture sector especially to farmers. Since 1973, several fertiliser factories have produced and supplied most of the domestic requirements. Three of these companies are the Chemical Company of Malaysia, Federal Fertiliser Sdn. Bhd. and Wee Kheng Chiang's manufacture of nitrogenous straight fertilisers and component fertilisers for the agricultural sector. In addition, several mixed mills are in

the production stages in several states and they are responsible for meeting the local needs for mixed fertilizers. All these projects belong to the private sector".

"Local demand for fertilisers has shown an increasing trend in recent years. To accommodate this increase in usage, the government recently approved two more projects sponsored by government bodies. These projects are in several stages of implementation and when they are in full production, they will be able to accommodate the increased local demand. Given the above factors, the government has so far not allowed private operators to set up fertiliser factories. However, if there are fertiliser manufacturers for export needs, the government is ready to consider producing nitrogenous straight fertilisers and fertiliser components for the "nitrogenous straight" agricultural sector. The quality of the products of fertiliser factories in the country is the quality received by the agricultural sector".

"Farmers import fertilisers from abroad because of a lack of fertiliser. Because of this, we have agreed to set up two more factories. We had to import fertilisers as farmers' demands could not be met, and this is becoming the norm in our country. There were concerns about interventions during the establishment of fertiliser factories and the Farmers Organisation Authority (FOA) to regulate activities related to local fertiliser factories."

Earlier, the Farmers Association Act 1967 was established prior to the setting up of the Area Farmers' Organisation. The distribution of subsidies for the rice sector used to be allocated upon the establishment of Kemubu Agricultural Development Authority (KADA) Act 1972 and Muda Agricultural Development Authority (MADA) Act 1972. Following that, to ensure proper management of farmers' interests, the government introduced the Farmers Organisation Act 1973 and FOA Act 1973.

The FOA 1973 was formulated specifically to restructure farmers' associations and cooperatives based on agricultural needs. Farmers' associations were disbanded and

reregistered as farmers' organisations under this act, and agricultural cooperatives joined farmers' organisations as member units. Currently, 119 farmer groups and 1531 agricultural cooperatives serve rural farming areas.

The FOA was established on 14 February 1973 through the enactment of FOA Act 1973. The establishment of the authority is aimed at shouldering the responsibility of helping to improve the economy and social of agro-communities under a body that plays a special role. The duties of FPA as contained in Sections 4 (1) and 4 (3) of the FOA Act 1973 (Act 110) are as follows:

- i. To promote, strengthen, facilitate and promote the economic and social development of farmers' organisations
- ii. To register, control and supervise farmers' organisations and provide for matters related thereto
- iii. To control and coordinate the implementation of the above activities
- iv. To ensure that the tasks are carried out in a way that will advance government policies, especially policies relating to the restructuring of society

The existence of a three-tier farmers' organisation structure considering the rules and legislation of the farmers' association is provided for in Sections 3 (1), (2), (3) and Sections 18A, 18B and 18C of the Farmers' Organisation Act 1973. The farmers' organisation at the area level is called the Area Farmers' Organisation and the State Farmers' Organisation at the state level. At the national level, it is called the National Farmers' Organisation.

### ***The Legal Framework on Rice Fertiliser Subsidies***

#### ***Farmers' Organisation Act 1973***

The purpose of the Farmers' Organisation Act 1973 is to regulate farmers' organisations, including their registration, regulation and oversight, as well as things related thereto. The act regulates the formation of area, state and

federal farmers' organizations to operate and carry out their business, such organisations shall be registered as per Part III.

The registrar shall be responsible not only for the registration but also for managing and regulating all farmers' organisations. Article 6 defines the objectives of farmers' organisations which include among others: (a) Supplying farmers with extension services and training facilities, (b) Encouraging increased agricultural diversification and commercialisation, (c) Making farm supplies and daily essentials accessible and (d) Offering financial facilities and services.

Part IV of the act defines the requirements to be met by members and member-units. Section 17 provides for the settlement of disputes that may arise among members or farmers' organisations. In accordance with Part VI, the registrar is empowered to perform inspections with respect to the accounts and property of any farmers' organisation. Under Section 31, non-compliance can result in a fine of up to RM1,000 and for repeat offenders, an additional fine of RM50 for each day the offence is allowed to continue.

The act was implemented through the Farmers' Organisation Regulations 1983 and its amended version of 1999. The regulations are divided into the following parts: Preliminary (I), Formation of Area Farmers' Organisation (II), Formation of State Farmers' Organisation (III), Formation of National Farmers' Organisation (IV), Members, member-units, representatives and directors (V), General meeting, election, assumptions of office and dismissal (VI), Finance (VII), Dissolution (VIII) and Miscellaneous (IX).

The procedure for the formation of the organisations includes: (a) Formation of the committees, (b) Adoption of the constitution, (c) Application for the registration and (d) Nomination, powers and termination of the pro-tem committee.

Furthermore, the regulations establish the rules of procedure of the organisations, the

nomination, privileges and duties of members, and suspension and cessation of membership. As far as financial provisions are concerned, Part VII regulates, among other matters, the investment of funds, the share-holding arrangement, the liability of members and the accounts to be kept. Final provisions concern the liquidation procedure following dissolution or cancellation of registration. The registrar also issued the standard operating procedures as guidelines.

### ***Farmers' Organisation Authority Act 1973***

The function of the FAO Act 1973 is to incorporate the FAO and to provide for matters connected therewith. The act is divided into the following parts: Preliminary (I), The Authority (II), Divisions, officers and servants (III), Finance (IV), Other powers of the authority (V) and General (VI). The authority shall have the following responsibilities: (a) To encourage and carry out farmers' organizations' economic and social development, (b) To register, control and oversee farmers' organisations, (c) To plan and carry out agricultural development in the so-called "Farmers' Development Areas", established by notification of the Minister in the Official Gazette for purposes of this act and (d) To control and coordinate the performance of the activities for the achievement of the objectives.

Furthermore, the act provides for the establishment of the Farmers' Advisory Council, whose functions generally serve as the minister's adviser on issues relating to the growth of farmers' organizations. Financial provisions concern the following: (a) Formation of a fund that the authority will manage and oversee, (b) Authorisation of expenses and preparation of estimates, (c) Accounts and audit, (d) Power to borrow sums required by the authority for the fulfilment of its obligations and duties, (e) Power to make loans, (f) Investment of the assets of the authority, (g) and Compulsory acquisition of land, as the authority may deem necessary for the purposes of this act.

However, there is no solid legislation purposely for fertilisers, and the government

has yet to table such legislation in Parliament (Ministry of Agriculture and Food Industries, 2021). This idea has been discussed for many years as the amount of fertiliser consumption by major crops was high such as oil palm at 4.410 million metric tonnes, rice at 420 million metric tonnes and rubber at 150 million metric tonnes. This business segmentation is 3.160 million metric (50%) by private plantation companies, 1.250 million metric tonnes (23%) by government agencies, 763 million metric tonnes (14%) by smallholders and farmers and 272 million metric tonnes (5%) by government subsidies for a total of 5.45 million metric tonnes of transactions (FIAM, 2015). Malaysia has a gross import of US\$902 million (1.47% market share) and gross export of US\$633 million (1.03% market share) of world fertilisers valued at US\$61.3 billion such as nitrogen, ammonium sulphate, rock phosphate, muriate of potash, compound fertilisers and mineral fertilisers (Atlas, 2018).

Malaysia, as a member of the FAO, became part of the agreement establishing a Food and Fertiliser Technology Centre for the Asian and Pacific Region. The Contracting Parties of Asian and Pacific countries created a Food and Fertiliser Technology Centre for the Asia and Pacific Region in 1969 in Taipei, which is an effort to encourage the use of fertilisers and contemporary farming techniques to boost agricultural food output. The major goals of such a centre are to encourage, exchange, and disseminate technical knowledge and experience on agricultural food production among member countries, with special attention to the use of chemical fertilisers and the adoption of contemporary farming practises. Additionally, the centre will offer suggestions for raising food production. This is an opportunity to ensure the compliance of this standard in the food system. applying the concept of food sovereignty to farmers in increasing their income from reducing input cost, such as developing organic fertilisers, while at the same time increasing the soil fertility and yield of the paddy.

### **Law and Enforcement Issues**

Cases that are disseminated through the media regarding the absence of data on corruption of rice fertiliser subsidy schemes by farmers are not prosecuted under the Control of Paddy and Rice Act 1994, the Malaysian Quarantine and Inspection Act 2011 or the Farmers' Organisation Act 1973 and the Farmers' Organisation Authority Act 1973<sup>1</sup> but should be under the MACC Act 2009, the Contracts Act 1950<sup>2</sup> and the Control of Supplies Act 1961.

In most cases, there are weaknesses in solving the problems of smuggling government-subsidised fertilisers and fraud, or failure to comply with fertiliser supply contracts due to poor quality of fertilisers, and delays in ensuring the distribution of fertilisers under contracts to farmers. Often there are irregularities due to corruption in the distribution of fertiliser schemes, as well as the sale of fertilisers without a valid permit and subsidised fertilisers being sold in the market by irresponsible parties.

Fertilisers are included under the list of controlled supply in Schedule 1 of the Control of Supplies Regulations 1974, PU(A) 103/1974. Regulations 2 (1) states:

4. Any process or processes whatsoever, including the collecting of any substance, whereby any product or substance capable of being used as a fertiliser is produced, derived or collected, regardless whether such product or substance is a straight fertiliser or a compound of two or more substances and regardless whether such product or substance is a product or a by-product of such process or processes.

Enforcement of regulation on the production and distribution of fertilisers as controlled goods listed in Schedule 1 of the Control of Supplies Act 1961 is not a priority for stakeholders, including the relevant authorities and civil societies, especially those representing consumer and environmental interests. Although

prosecutions have been conducted, statistics only highlight offences for fertiliser cases mixed with other controlled goods.

In *PP KDPNHEP vs Syarikat Unigrow Agriculture Sdn. Bhd.* (Muar Sessions Court 2018), the company's director was fined RM150,000 by the Sessions Court after being found guilty of selling government-subsidised fertilisers without a valid wholesale licence issued by the Malaysian Supply Controller. The case is prosecuted under Section 16 of the Control of Supplies Act 1961 and punishable under Section 22 (2) of the same act and liable to a fine not more than RM2 million upon conviction. The company's director, Tan Yin Ken who has a Certify Schedule Goods Control License was fined RM80,000 for supplying chemical fertilisers to three other companies with no valid wholesale licence. The directors of the company were charged under Section 22 (1) of the same act which provides for imprisonment of up to three years or a fine not exceeding RM1 million or both.

In 2019, there were 835 cases of seizures under the Control of Supplies 1961 valued at RM38,237,973. However, it did not involve only fertilisers and there has been no data filtering, specifically for fertilizers.

Irregularities occurring in fertiliser subsidy schemes can be classified as a form of crime committed by any individual involved directly or indirectly. This commercial crime has a much greater impact when compared to conventional crimes such as robbery, stealing, extortion and fraud as it can adversely affect the financial performance of commercial organisations.

For example, the mismanagement of the Federal Government Paddy Fertiliser Subsidy Scheme funds in November 2017 led to the detention of an Area Farmers' Organisation project manager in Melaka, who filed false claims amounting to RM2.54 million involving

<sup>1</sup> Prosecution is under both the Farmers' Organisation Act 1973 and the Farmers' Organisation Authority Act 1973 read together.

<sup>2</sup> Though the Contracts Act 1950 is a private law statute, prosecution has taken place in pursuant to the 1950 act.



56,700 bags of fertilisers that were never approved by the Area Farmers' Organisation committee meeting. Fertilisers that should have been claimed by the organisation were diverted and believed to be sold for personal gains.

The MACC Act 2009 is committed law that allows for the prosecution of people found to be guilty of crimes involving corruption. In the context of the distribution of fertiliser subsidy schemes, the parties involved can be charged with criminal property abuse by the MACC. Generally, the offenders involved in the of abuse of fertiliser subsidy schemes can be prosecuted and convicted of criminal property abuse and breach of trust under the Penal Code (Asmar *et al.*, 2021).

Section 403 of the Penal Code covers offences of fraudulently abusing property. Those convicted can be sentenced up to five years in prison, strokes of the whip and can be fined. While for offences of breach of trust, Section 406 of the Penal Code provides for a prison sentence of up to 10 years, strokes of the whip and fines (Asmar *et al.*, 2021).

In the case of *Mohd Ariff Abdul Rahman vs PP CLJ 1 [2020] 703*, the issue was whether there was sufficient evidence to support the conclusion that abuse of authority was committed when money was obtained as a result of or in conjunction with corruption under Section 41 (1) the MACC Act 2009.

It was noted that as the chief secretary of the Ministry of Agriculture and Agro-based Industry is appointed as board director of Padiberas Nasional Bhd. (BERNAS) while the deputy chief secretary (development) of the ministry is appointed as director -general of the Paddy and Rice Act 1994, the latter has more power to manage the authorisation quota for the rice

sector agenda. This is an example of intervention coming from political and special interest groups, leading to the capture of regulation. Following the change of government in 2018, members of political parties were appointed to the board of NAFAS and as chairman of FOA, not from the votes of members of Area and State Farmers' Organisations and this arguably went against the regulations of the association.

Prosecutions of cases are heard at the Sessions Court level and most of the cases ended up with payment of compound, while the goods such as seized fertilisers which are perishable, need to be disposed of within a certain period of time. Therefore, the reported cases need to be adjusted in terms of profiling individual perpetrators and so that the companies involved do not repeat them. Some cases are also prosecuted under the Control of Supplies Act 1961 by the enforcement arm of the Ministry of Domestic Trade and Consumer Affairs. However, it is uncertain how prosecution under the 1961 act has been carried out so far. The situation is assumed to be as follows:

- Cases prosecuted under the MACC Act 2009 by the enforcement of MACC and others (such as the Penal Code)<sup>3</sup>
- Cases prosecuted under the Control of Supplies Act 1961 by the Enforcement Division of the Ministry of Domestic Trade and Consumer Affairs and others (such as the Royal Malaysian Customs)<sup>4</sup>
- Cases prosecuted under the MAQIS Act 2011 and Control of Supplies Act 1961 through enforcement by MAQIS<sup>5</sup>
- Cases prosecuted under the Control of Paddy and Rice Act 1994 by the enforcement of the rice industry division (IPB, MAFI) and MAQIS<sup>6</sup>

<sup>3</sup> Angelina Sinyang (21 November 2019). *Ahli Perniagaan Menipu Dijatuhi Hukuman Penjara 90 Tahun 44 Sebatan*. Nurulsham Shamsudin (12 January 2021). *Didakwa Minta, Terima Rasuah Berhubung Tender Baja* (Kosmo).

<sup>4</sup> Hamzah Osman (28 September 2018). *Baja Subsidi RM350,000 Dirampas* (NSTP).

<sup>5</sup> Zulianty Zulkifli (23 July 2019). *KPDNHEP Rampas 2,644 Baja Subsidi*.

<sup>6</sup> Muhaamad Hafis Nawawi (March 2019). *Baja, Benih Subsidi Dirampas* (Harian Metro).

Although the Ministry of Domestic Trade and Consumer Affairs reported on the prosecution, the statistics on the number of fertiliser-related cases were not made publicly known (the Ministry of Domestic Trade and Consumer Affairs, 2019). MAQIS also did not reveal the statistics on the number of cases involving fertilisers, unlike products such as plants, fish and meat as can be seen in Table 1.

Why is the MAQIS Act 2011 not used in cases involving seizures or confiscations? MAQIS controls the country’s borders but questions may arise as to whether such power extends beyond the border, whether at seaports, land border crossings or airports. By right, MAQIS should be able to confiscate goods that are located at premises or in vehicles within the territory of Malaysia, but due to manpower shortage, it did not conduct inspections beyond border areas. Containers carrying merchandise regulated by the MAQIS Act 2011 without permit can be seized and investigated in accordance with Section 11 (1) of the act. If convicted, the person carrying it can be punishable under Section 11 (3) of the same act, where he will be liable to a maximum fine of RM100,000, a maximum six-year jail sentence or both.

The RM79 million collections of fines is not in line with the enforcement action because the number of prosecutions under the MAQIS Act 2011 are small compared to the number of those accused but not found guilty or released. Furthermore, the prosecution record does not include cases involving fertilisers, despite

the high number of cases of fertiliser scheme mismanagement being reported in the media<sup>7</sup>.

The integrated enforcement of laws relevant to the rice fertiliser subsidy scheme include the Ministry of Domestic Trade and Consumer Affairs), Malaysian Maritime Enforcement Agency, Royal Malaysia Police, Royal Malaysian Customs Department, Border Security Agency, the MACC, the Malaysian Armed Forces, MAQIS, the Department of Veterinary Services, DoA and the Department of Fisheries and the powers conferred are for the purpose of seizing, detaining and prosecuting including under the Penal Code. Nevertheless, there is a need to understand why the underlying laws of an order are not only subsidiary laws that should regulate the development of industries such as fertilisers.

The issue of the significance of the fertiliser subsidy aid scheme within the agricultural sector, which is a highly important issue and involves the engagement of different parties, is directly related to corruption. It is quite surprising why some parties still fail to comply with the regulations of fertiliser-related laws, whereas the compound charges, fines and convictions are lower than the legal actions and convictions of the MACC Act 2009 and its impact on the perpetrators. Despite the ability to solve the issue of smuggling of government-subsidised fertiliser, fraud or mismanagement of the sale of fertilisers being unsatisfactory, there is a high number of findings of guilt in corruption cases in the fertiliser distribution scheme.

Table 1: 2019 MAQIS enforcement

Action	Seizure	Compound	Prosecution	Released	No Entry, Forfeit Rights
Number of cases	1,007	582	18	562	380
Value (RM)	116,567,637	4,030,268	202,000	103,441,946	5,908,005

Source: Ministry of Agriculture and Agro-based Industry Annual Report, 2019

<sup>7</sup> Dziyaul Afnan Abdul Rahman (April 2019). AKSEM *Lumpuhkan Sindiket Jual Baja Subsidi*. Berita Harian; Ruwaida Md. Zain (November 2020). *Baja Mineral Tanpa Permit Dirampas*. Berita Harian.

### ***Rice Fertiliser Subsidy Scheme Management Ecosystem***

In the developing world, rice is one of the most significant cereal crops. At least 33 nations consider it to be a staple food, 15 of which are in Asia and the Pacific. Millions of smallholder farmers rely on rice agro-ecosystems for their livelihoods and these systems have the ability to benefit local communities and the general public by maintaining rice harvests. Farm yields can be increased by using chemical inputs that provide farmers with fertiliser and disease control. This interest has been of relevance to governments in providing subsidised fertilisers and chemicals under two government subsidy schemes, namely The Federal Government Paddy Fertiliser Subsidy Scheme and the Paddy Production Incentive Scheme. The two schemes can be seen in Table 2.

Farming has an impact on the environment but debates on the issue are largely conducted by the scientific community, balanced with economic factors to boost farm yields. But most of the discussions are not concerned about

legislation and regulations with regard to the health and safety of the chemical inputs from fertiliser use.

The Rice Industry Division of Ministry of Agriculture and Food Industries plays a role in formulating and establishing the basis for the development of the country's paddy and rice industry. The division is also responsible for the implementation of the development of the rice industry and regulating the production, supply and production chain of rice and rice products.

MADA was established under the MADA Act 1972 to develop, encourage, assist and undertake socio-economic development projects in the Muda Area. MADA is responsible for planning and undertaking agricultural development activities, including infrastructure and irrigation, which have been approved for the states of Kedah and Perlis. KADA is an agency established under the KADA Act 1972 and the authority is responsible for undertaking socio-economic development projects in the Kemubu Area. KADA provides agriculture services and irrigation infrastructure to guarantee rice

Table 2: Rice fertilizer schemes

<b>Year</b>	<b>Program</b>	<b>Condition</b>
1979	Federal Government Paddy Fertiliser Subsidy Scheme	Urea 46% Rate: 4 bags (20 kg/bag) Compound fertiliser 17.5:15.5:10 - Malaysia except Terengganu & Kelantan Rate: 12 bags (20 kg/bag)
1981	Paddy Price Subsidy Scheme	RM360/metric tonne nett sold to registered miller
2007	Certified Paddy Seed Incentive	Rate: RM1.03/kg (certified seed) Cost at miller RM48.60/20 kg Subsidy - RM20.60/20 kg Farmers' rate (Miller price) - RM28/20 kg
2008	Paddy Production Incentive Scheme	Additional NPK - 6 bags/hectare (150 kg) Pesticide - Coupon RM200/hectare/season Kapur - 3 m/hectare/once in 3 years (RM970) Fertiliser - RM100/hectare Bio-fertiliser - 1 bottle/hectare
2015	Fertiliser and Pesticide for Hill Paddy	Compound fertiliser 15:12.5:17.5 - 1 Mg Urea Weeds Pesticide

Source: LKAN 2, 2018

production to meet the national rice needs. Meanwhile, the Integrated Agricultural Development Area (IADA) is the agency under the direct control of the Paddy and Rice Industry Division of the Ministry of Agriculture and Food Industries, which is responsible for coordinating project involving and development of paddy and rice. IADA is responsible for the areas other than Muda and Kemubu.

There are also the Farmers' Organisation Act 1973 and the FAO Act 1973 which established farmers associations and the FAO, respectively. FAO is the agency responsible for monitoring and managing the payment of fertilisers and pesticides subsidies to suppliers on behalf of the Ministry of Agriculture and Food Industries. The Farmers' Association Act 1967 was established in 1967 prior to the Farmers' Organisation Act 1973.

The fertilizer scheme payments are made by FAO based on claims for payment applications received from suppliers and confirmation of progress of the implementation of work by FAO officers. Area Farmers' Organisations were established under the Farmers' Organisation Act 1973. Among the functions of the Area Farmers' Organisation is to manage the registration of farmers who are eligible to receive subsidies and incentives for paddy crops. At the state level, it is the State Farmers' Association and at the national level, it is NAFAS.

The Area Farmers' Organisation will be appointed by FAO to oversee the management of the rice fertiliser subsidies scheme by NAFAS<sup>8</sup> and its suppliers which are companies acting as stockists to order, receive, store, control, distribute and safeguard the integrity of the subsidy and also provide incentives to the storing farmers<sup>9</sup>. The NAFAS supplier is a company appointed to supply fertilisers to farmers (LKAN 2, 2018).

Suppliers have to provide fertilisers and ensure adequate transportation according to the orders received. Suppliers also perform the following functions namely transfer of technology programmes to farmers and Area Farmers' Organisation members which include appointing transport companies, providing contracts of service including fertilizer delivery duties and delivering fertilizers to PPK based on orders (LKAN 2, 2018).

BERNAS is the company responsible for the processing, importing, warehousing, distribution and marketing of rice. Besides that, the company is also responsible for paying the Rice Price Subsidised Scheme to paddy farmers who send rice to factories registered under BERNAS. BERNAS is one of NAFAS's suppliers (LKAN 2, 2018).

The Ministry of Agriculture and Food Industries has spent RM1.8 billion annually on inputs that are subsidised and incentivised, which are aimed at increasing the production of local rice or rice products. Five types of subsidies and incentives were given to farmers to ease the cost incurred and support the income generated by farmers (LKAN 2, 2018).

However, according to the Auditor General's Report from 2016-2018, it was found that the ministry failed to achieve the productivity target of producing 5 metric tonnes of rice despite overpaid claims of the Federal Government Paddy Fertiliser Subsidy Scheme valued at RM178.3 million (LKAN 2, 2018).

### ***Fertiliser Subsidy Scheme Management Inadequacies***

The management of the grant scheme has been argued to be prone to implementation problems of not being executed prudently, efficiently and effectively. Incurred expenses and claims exceed the value of the contract. The Ministry

<sup>8</sup> NAFAS is a corporate entity that mirrors Area Farmers' Organisations as the latter is an area-level farmers' association.

<sup>9</sup> Storing farmers are farmers who warehouse the fertilisers with or without bearing the cost of warehousing. Farmers have to bear the cost of warehouse if they have to depend on rented premises or stores while waiting for the fertilisers to be used in accordance with cultivation or planting schedules.

of Agriculture and Food Industries does not maintain subsidy or incentive registrations. This is a problem when there are no checks and balances in the authorisation of the list made under the FOA without a representative from the applicant farmer as mentioned under the FOA 1973. The ministry relies entirely on the database of farmers in the ePadi system developed by NAFAS suppliers. There is another system called iPadi, developed by KADA which is also used by MADA which still uses a manual registration book of farmers for Kelantan, Kedah, Perak and Perlis. When the ministry decides on the payment of the subsidies involving FAO and Area Farmers' Organisations, questions may arise as to how the data were confirmed and authenticated for the purpose of carrying out the rules of the FOA Act 1973 and the Farmers' Organisations Act 1973, which may lead to wrongdoings (LKAN 2, 2018).

There are cases involving farmers who have died still receiving subsidies or incentives. There are data flaws in the ePadi or incentive system, where some important information, such as identity card number, was non-existent and incomplete. The farmer identity card information for 7,894 to 10,034 subsidy recipients for the years 2016 to 2018 is incomplete, involving a total grant of RM108.08 million (LKAN 2, 2018).

Subsequently, the distribution of fertilisers was also not in accordance with the prescribed ratio, as well as the late distribution and supply of fertilisers and pesticides not following the prescribed specifications. Furthermore, the claim for fines against delays in processing fertilisers did not follow the specifications<sup>10</sup> in 2016 and 2017, as they were only made in July 2019. Mismanaged distribution of fertilisers exceeding the land area with a total amount of RM59.44 million in 2016 to 2018 also occurred due to the differences in the fertiliser calculation method. These were offences under the regulations, reported as fraud by dishonest officers in charge,

which could also result in reports being made under the Rules and Code of Conduct of Civil Servants relating to disciplinary actions (LKAN 2, 2018).

The issue of surplus fertilisers should not arise as the distribution process depends on the area of land and the amount of fertiliser required is according to the prescribed schedule. However, because of land inheritance, including those involving *faraid* cases under syariah law, some of the names of the deceased have yet to be changed. It was noticed that 3,210 to 7,061 deceased farmers still received subsidies and incentives per season, amounting to RM57.92 million. In addition, identity card numbers for 1,427 to 2,421 recipients of subsidies and incentives amounting to RM28.85 million do not exist (LKAN 2, 2018).

The registration of genuine paddy farmers and production records is more viable for the claims of subsidy and incentives. Under the Farmers' Organisation Act 1973, the registrar must comply with the latest updated records from each organisation member and it must tally with a list of members endorsed during the organisation's annual meeting.

It was reported that the fertiliser companies' claims for 2016 and 2017 against the supply of the Federal Government Paddy Fertiliser Subsidy Scheme exceeded the contract value of RM178.23 million. The claims for the Paddy Production Incentive Scheme and Pesticides Pest Control Scheme) for 2016 also exceeded the contract value of RM17.58 million in violation of the Government Contract Act 1949 (LKAN 2, 2018).

There was a delay in delivery of fertiliser by NAFAS suppliers between 14 days to 278 days. Fines for late supply of fertilisers and supplies that did not meet the specifications amounted to RM192.96 million for 2016 and 2017 but were only claimed in July 2019. At the time of the release of the Auditor General's Report Series 2, 2018, the fines have not yet been paid. This is the case involving the contractor in *Agromate*

<sup>10</sup> Specifications here refer to fertilizers quantity and quality information proposed for the farmers.

*(M) Sdn. Bhd. v Felcra Niaga Sdn. Bhd.*, [2020] 1 LNS 1910 and *Agromate (M) Sdn. Bhd. v KTS Trading Sdn. Bhd.* [2017] 1 LNS 1707], where the victims were farmers whose aid got delayed. A review on the breach of contract on delayed delivery of fertilisers and non-compliant fertilizer species found that there was a delay in fertiliser delivery by the supplier. It is also found that the supply of fertiliser does not comply with the specifications required for the supply.

### ***The SDG Dimension and Rice Fertiliser Distribution in Malaysia***

All United Nations member states adopted the Sustainable Development Goals (SDGs) also referred to as the Global Goals, through the General Assembly resolution on Transforming our World: The 2030 Agenda for Sustainable Development which was adopted on 25 September 2015. The SDGs are an international call to action to end poverty, protect the environment and guarantee that everyone lives in peace and prosperity by the year 2030. (United Nations Development Programme [UNDP] Malaysia, 2021). The SDGs came after the Millennium Development Goals (MDGs) which expired in 2015. The SDGs are encapsulated in the following goals:

1. No poverty
2. Zero hunger
3. Good health and well-being
4. Quality education
5. Gender equality
6. Clean water and sanitation
7. Affordable and clean energy
8. Decent work and economic growth
9. Industry, innovation and infrastructure
10. Reducing inequality
11. Sustainable cities and communities
12. Responsible consumption and production
13. Climate action
14. Life below water
15. Life on land
16. Peace, justice and strong institutions
17. Partnerships for the goals

The management of rice fertiliser subsidy in Malaysia directly relates at least to Goals 1 (No poverty), 2 (Zero hunger), 8 (Decent work and economic growth), 10 (Reducing inequality), 12 (Responsible consumption and production), 13 (Climate action), 14 (Life below water), 15 (Life on land), 16 (Peace, justice and strong institutions) and 17 (Partnerships for the goals). Such relationships suit rice production which is associated with agricultural and rural communities, particularly in the context of a developing country. In fact, the UNDP Strategic Plan (2018-2021) includes the following: Eradicating poverty, structural transformations and building resilience. However, it is also important to look at what has been put on the plate for Malaysian rice fertiliser subsidies vis-à-vis SDGs. Malaysia will launch the National Agrofood Policy 2.0 (2021-2030) (NAP 2.0), safeguarding national food security (The Sun, 2021). The NAP 2.0 will contribute to Malaysia's ambitions, particularly environmental sustainability in the agrofood industry, in support of the SDGs over the course of a decade (The Sun, 2021). Through the NAP 2.0 as well, the Malaysian government undertakes efforts to ensure the sustainability of the food system is assessed by both domestic and international indicators (The Sun, 2021). The international indicators include the SDGs.

With regard to the future development of rice fertiliser distribution in Malaysia, the provision of existing fertiliser assistance to farmers under the Federal Government Paddy Fertiliser Subsidy Scheme is based on three bulk formulas, such as land size, soil level and geographical location. The grant depended on land requirements based on zones in Peninsular Malaysia, Kelantan and Terengganu, as well as Sabah and Sarawak. In addition, the DoA is implementing a Specific Location Nutrient Management (SSNM) programme or known as soil profiling. SSNM is fertilisation routine formulated according to the actual needs of rice crops and soil fertility profile specifically. SSNM is one of the main focuses of the reforms as 40 per cent of paddy production factors are related to nutrient management (fertilisation).

### ***Increasing Regulatory Pressure due to the COVID-19 Pandemic***

The fertiliser sector is subject to new supply-related laws in various jurisdictions at the regional, national and sub-national levels. Due to environmental and safety concerns, policymakers are enacting additional rules on fertilisers, product and plant certifications, and tailings management. At this moment, the registration of fertiliser is placed under the Plant Quarantine Act 1976. The Crop Protection and Plant Quarantine Division of the DoA issues import permits, export licences and certificates under the Plant Quarantine Act 1976, Customs (Prohibition of Import or Export) Order 2008 and International Trade of Endangered Species Act 2008. Import and export permits are issued online. With regard to import permits, which underline border controls, enforcement falls under the jurisdiction MAQIS, which works closely with other enforcement agencies such as the Royal Malaysia Customs Department, Ministry of Domestic Trade and Consumer Affairs (and Ministry of Home Affairs).

Food and agriculture are essential sectors, in which production and transportation continued during lockdowns during the COVID-19 pandemic. Moreover, bulk shipping which is the main transport mode for agricultural goods has been far less affected by restrictions than other forms of transport. Strong and proactive public and private collaboration efforts throughout the world have anticipated potential trade and supply chain problems (IFA, 2020).

Major jurisdictions have moved quickly to promote their agriculture and fertiliser sectors in addition to classifying these industries as important. The focus on environmental issues associated with fertilisers has increased and a number of governments are introducing measures to reduce emissions related to agriculture. Increased crop prices, a more favourable relationship between crop and fertiliser prices, the weakening of domestic currencies in major agricultural exporting nations, as well as favourable weather in important consuming nations, are all factors that

will contribute to increased fertiliser demand in 2020. As a precaution against anticipated delivery delays or financial challenges, some farmers may have also bought fertilisers sooner than usual.

Despite the expansion in fertiliser use worldwide, some nations are having trouble and may see a reduction in fertiliser consumption. Additionally, the pandemic has impacted several particular industries, like biofuel crops, fruits, and vegetables. This is due to the need for movement of paddy fields workers to follow the regulations for manual fertilising works.

### ***Towards Sustainability in Malaysian Rice Fertiliser Subsidies***

For the fertiliser industry, sustainability also goes well beyond application. To deal with the 1% of greenhouse gas (GHG) emissions that come from fertiliser production and reduce the overall environmental footprint of fertiliser production, manufacturers are working hard to increase energy efficiency, reduce emissions, cut water consumption and increase water recycling. The industry is also committed to ensuring safety and security at their production sites and beyond. To achieve this, producers are constantly updating their production methods, adopting best-available technologies and even pioneering new innovations (IFA, 2020).

The DoA is keen towards the biofertiliser industry market penetration. Locally made or imported biofertilisers are readily available in the nation. The sale of locally produced biofertiliser does not require permission. The marketing of imported fertilisers and goods requires import permission. For the marketing and import of microbiological products, two types of permissions are necessary: (i) Import permit in term for bulk consignment importation for marketing and (ii) Permit to import sample for the associated authority analysis (small consignment up to 2 kg or 2 litres). An off-module (non-electronic) application can be used to get a permit to import samples.

For the following reasons, off-module application may be used: (i) Department/

government agencies, (ii) Participants in exhibitions, (iii) Owners of personal materials and samples (personal effects), (iv) Researchers and students and (vi) Newly imported items. Applicants must include a verification letter from the organiser or any associated party with this application. Fill out the off-module import permit application form (EP-4A form) and submit it to the Crop Protection and Quarantine Section of the DoA, together with a bank draft, postal order or money order with RM15 payable to the Director-General of Agriculture. The authority will reject any EP-4A form that is incomplete. Application for the permit must be made 30 days prior to the importation of samples of microbiological products.

The information requested in the EP-4A form include: (1) Importer name and address, (2) Contact number of fax number, (3) Exporter name and address, (4) Fertilizer and product commercial name, (5) Raw material blends with fertiliser or product (e.g., animal dung, sugarcane waste, paddy husk and others), (6) Microorganism (bacteria, fungus and others scientific name) blends with fertiliser/product, (must enclose certified letter from manufacturer if the fertiliser does not contain any microorganism), (7) Lab procedure or protocol in the process of microorganism existence in the fertiliser/product, (8) Declaration from the responsible authority (government authority) that the fertiliser/product does not contain any ingredient that can cause harmful effects to any plant, livestock, fish, human and the environment, (9) NPK contents (such as nitrogen 8%, phosphorus 10%, potassium 7% if applicable), (10) Mineral contents (such as manganese, iron if applicable), (11) Others (if applicable), (12) Manufacturing process of fertiliser or product (flowchart to be enclosed), (13) Fertiliser/product form (solid substance/liquid/granule), (14) Country of manufacturer, (15) Other countries using this fertiliser or product, (16) Purpose for using the fertiliser/product (e.g., root growth), (17) Fertilizer or product effect on plants, (18) Fertilizer or product effect on livestock and (19) Fertilizer or product effect on humans and the environment.

The maximum amount of organic fertiliser, microorganisms and products containing microorganism that can be imported for the first time is 2 litres, 2 kg or 5 units per sample (test tubes per ampoules) for analytical reasons. The only entrance point for importing samples is the Kuala Lumpur International Airport. By employing the aforementioned procedure, applicants must pay RM340 as the analysis charge for the samples. During the application process, five sets of biofertiliser and biopesticide samples must be provided, each weighing 250 g (powder/solid) or 250 ml (liquid).

To verify that the item won't threaten plants, fish, cattle, humans or the environment analysis will be done by four government departments, including the DoA, Department of Fisheries, Department of Veterinary Services and Institute of Medical Research. The Committee for Microorganisms Importation shall be given the analysis findings of the products. The group, which is made up of officials from 17 government organisations will assess the importation risk and the safety of the products. The release of the Permit to Import Plants, Soil, Rooting Compost, Growing Media, Beneficial Organism and Organic Fertiliser will authorise the import of the product if there is no opposition from the committee members. If there is opposition, the permission will be halted and the importer will be asked for further details on the products, or the committee will ask the importer to provide fresh samples (five sets) for a second analysis. RM340 cost must be covered by the importer. The products' second analysis findings will once more be provided to the Committee for Microorganisms Importation. The permission will be issued if the committee members accept the findings without raising any issues. However, the permission application will be turned down if there are any objections.

Overall, the management of MAQIS Agricultural Consignment Import Control Activities was less effective. The implementation of visual/physical examination is low and the inspection charges are not imposed on consignments other than fish. In addition, enforcement powers under the MAQIS Act



2011, poorly conducted screening tests and time-consuming laboratory result reports have made it difficult for MAQIS to ensure the imported agricultural consignments are safe and of quality. In this case, as the Ministry of Agriculture and Food Industry which has the power to manage fertiliser cases must comply with reporting requirements under the Fertiliser Bill. The MAQIS Act 2011 does not impose inspection charges on consignments other than fish, resulting in reduced government revenue. According to audit estimates, a total of RM1.59 million of vegetables and fruits are not subject to inspection charges in accordance with Section 9 (c) of the MAQIS Act 2011 at border entrances.

It is crucial for fertiliser raw materials to be subject to quarantines to enable pest or disease testing to be conducted so as to ensure no risks arise from a lack of safety for local conditions. The Auditor General's Report Series 3, 2018 has required MAQIS to formulate a standard operating procedure (sampling) for taking and sending samples to the laboratory for screening. The MAQIS Act 2011 authorises the authority to issue permits, licences or import and export certificates for agricultural consignments.

Since Malaysia requires an import or export licence for all goods, it is necessary to apply for a permit to import fertilisers in substantial quantities for commercial use. The application for the permission must be submitted electronically (ePermit) via a designated vendor, Dagang Net Technologies Sdn. Bhd. (DNT). For ePermit access, importers, exporters, forwarding brokers and anyone, including foreigners must be registered with Dagang Net. The registration form can be collected through DNT branches nationwide or downloaded from <http://epermit.dagangnet.com>. There is a RM500 corporate registration cost and a RM200 fee for small- and medium-scale enterprises. For each ePermit renewal, RM200 is charged. Samples are required for the permit application under the Crop and Plant Quarantine Division of the DoA for any import of organic fertilisers, biofertilisers, biopesticides, microorganisms and anything containing microorganisms (the committee). The applicant must notify the

committee to start the online application once the ePermit application has been registered with DNT. To apply for an import or export permit online using the ePermit Deposit Form EP-1, the applicant must open a deposit account. A deposit account can be opened with as little as RM150. The committee staff will go to the warehouse where the products will be kept before the bulk shipment of biofertilisers and biopesticides arrives. The staff will approve the import permission if they are pleased with the storage warehouse's condition. The Committee for Microorganisms Importation will be shown the results once the committees staff members have collected samples from three successive bulk consignments of the product that have arrived. The import authorisation will be cancelled if the analysis data displayed contains any error.

The application and approval of the permit will be processed and approved by MAQIS before registration under the Customs Information System. Subsequently, the Royal Malaysian Customs Department will make a certificate against the permit in the Customs Information System and then display it in the ePermit System. Improvement of the said systems may help in getting earlier responses from the government to gain public trust.

These regulators keep an eye on industry-related laws and regulations as they are put into effect. Most laws and regulations play a direct part in and are centred on the supply chain's upstream, midstream and retail production components. The National Agro-Food Policy (NAFP) 2011-2020 which outlines strategies for the expansion of the paddy and rice industries through strengthening the supply chain, is therefore the key policy. A new NAFP 2.0 for 2021-2030 was published online in November 2021 and the 12<sup>th</sup> Malaysia Plan was officially launched on 27 September 2021. It was hoped that the Fertilizer Bill would be tabled in Parliament soon.

It was noticed that DoA and the Ministry of Agriculture and Food Industries have conducted stakeholder engagements to encourage contract farming facilities between the public sector and

industry players on the agreement for planting paddy with the Malaysian Good Agricultural Practices (MyGAP) certification. Sustainable agriculture is replacing conventional agriculture as the dominant model for the global agricultural sector. Good agricultural practises have been developed as a guide for implementing sustainable agriculture, which recognises the value of the economy, environment and society in generating high-quality, wholesome food. MyGAP is in a compliance with the Malaysian Standard (MS) 1784:2016 on Good Agricultural Practice Crop Commodities (Second Revision) used for crop sector modules (Nurul Izzati *et al.*, 2020). The Malaysian Standard for Biofertilizers is also in the fifth draft for endorsement by the Department of Standard Malaysia. Further, the Food Act 1983 and Environmental Quality Act 1974 can be relevant for future development of organic fertilisers from food waste.

In addition, laws like the Road Transport Act 1987, Factories and Machinery Act 1967, Civil Aviation Regulations 2016 (concerning unmanned vehicles like drone technology to spray fertilisers on rice fields) and Biosafety Act 2007 may benefit from periodic reviews to ensure that the legal and regulatory frameworks remain relevant. This is because of the rapid progress in technology, farm mechanisation, biotechnology and aerial monitoring. This is crucial in light of the recent development of precision paddy farming which will require legislation pertaining to aviation and data protection. Precision paddy farming uses ground data sensors, aerial surveillance (drones and satellites) and big data (Sarene *et al.*, 2018).

Laws such as the Factories and Machinery Act 1967 can also be considered with regard to local fertiliser production standards. Moreover, the compliance with occupational safety and health standards, and company regulations can safeguard the interest of fertiliser factory management and workers because the actions involved in the fertilizer production operation determines the operating costs and input costs of fertilisers that are said to be expensive in the market.

Malaysia should study the experiences of the European Union in the fertiliser industry. In the European Union, for instance, agricultural law is frequently referred to as a separate sector that functions mainly independently from other rules governing the internal market. Recent legislative, political and judicial developments have pushed for the implementation of policy considerations outlined outside of the treaties' sections on agriculture. In contrast to these changes, agricultural law is now or has recently been integrated into the "regular" internal market law. It implies that there is evidence showing that the unique treatment of agriculture under European Union laws has been severely undermined with regard to the free movement law. Agriculture is still considered to be a special sector in the conventional sense under European Union competition law. Lessons should not only be learnt from an advanced economy like the European Union. Thailand is an example of a developing country that is close to Malaysia which has greater yields of food and agricultural products, including rice. The rice and rice inputs distribution system and laws can be studied, such as the rice pledging scheme implemented during Yingluck Shinawatra's tenure as prime minister which can be analysed further in the context of a failing populist policy that was supposed to support farmers, but ended up being riddled by corruption.

### **Conclusion and Recommendations**

In conclusion, it is a must for fertiliser manufacturers, retailers or even the farmers to comply with legal provisions. It was noted that the Plant Quarantine Act 1976, with the requirements of Plant Quarantine Regulations 1981, provides for import the fertilizers and the materials to produce fertilisers. The fertilisers' retailer activities shall be registered with the government. The list of suppliers must be published for records and tracing by the public.

The management of fertiliser transaction should be supervised closely. Otherwise, some party may mismanage the distribution for

personal gains. In addition, chemical waste generated from improper usage and storage of fertilisers can lead to health problems. Involved parties must collaborate in combating the issue of improper handling of fertilizers.

It is recommended that the laws and regulations as the medium of protection should be brief in their details. The government needs to be aware of registration which in turn needs to be properly notified and the standard operating procedures for farmers who need fertilizers to increase production. The applications of fertiliser technologies such as RiceFERT already apply for local produce rice farming. RiceFERT was developed by Malaysian Agricultural Research and Development Institute researchers as a decision support system for the recommendation of paddy fertiliser rates according to specific locations. Through specific fertilising location recommendations, soil nutrient status databases can be developed to guide soil fertilisation and rehabilitation in specific locations. This fertiliser recommendation system will provide the required fertilizer rate according to the soil fertility zone and can reduce fertilisers from being supplied in excess (Theeba *et al.*, 2020). It was hoped that more engaging parties will be involved in testing for the usage of these procedures at the farmer level.

In February 2021, the Ministry of Agriculture and Food Industries intended to introduce specific laws on seeds and fertilisers to regulate those planting materials. The rationale of the draft for the Fertiliser Act is to make sure that the fertiliser content is properly monitored before the finished products are marketed. This will allow the government to decide which fertilisers are appropriate for sale and what actions to take if production and distribution do not follow the appropriate regulations. The government was concerned about safeguarding the rights of farmers and smallholders against violations that might take place along with discrepancies in the cost and credibility of fertilisers purchased. In the event that market participants failed to comply with

the new regulations, it was suggested that the government may generate additional revenue through new registration, tariffs and penalty charges. The act would need new procedures and rules that would impose restrictions or risk upsetting the current flexible system of importing raw materials as well as producing, storing and distributing fertilisers among local producers and importers. A mechanism such as the establishment the Board of Fertilisers or monitoring entities is required to ensure both parties benefit. The draft however needs further clarification and stakeholder engagement sessions and has yet to be finalised.

It is also recommended the transaction involving distribution chain agencies be supervised and scrutinised. Changing the management in response to illegal activities and dishonest officers in benefits the nation. The fertiliser data sheet safety should be recorded accordingly for auditory and regulatory compliance purposes. It is suggested that strict laws and regulations be put in place governing the use and supply of fertilisers. Effective penalties and fines should be applied. Additionally, cooperation between producers, sellers and farmers is required to uphold the law and prevent improper management of the fertiliser industry. In order to utilise the natural plantation system without relying on imported fertiliser substances, more research needs be done. Through these collaborative efforts, environmental and water disasters due to fertiliser reactions can be avoided.

Some countries have introduced taxes on fertilisers to encourage innovation and cost-effective pollution reductions, and established incentives for companies and consumers to change their behaviour towards less-polluting goods or chemicals. In addition to regulatory frameworks and standards on chemical and hazardous contents, taxes on fertilisers have been implemented as part of a larger policy framework for the sustainable use of pesticides and fertilisers in agriculture (United Nations Environment Programme, 2020).

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