

## ABSTRACT

Industrial agriculture has become the prominent agriculture system worldwide. In this system, farmers have become less dependent to environmental processes in shaping food production systems. They begin to adapt monoculture farming and rely on increasing quantities of agrochemicals, automated machineries, hybrid seeds and, more recently, Genetically modified crops. However, these practices have caused environmental consequences such as depletion of biodiversity, soil degradation, pollution and global warming. Furthermore concentration and vertical integration of corporate undermines farmer's participation in the agrifood system. Farmers merely act as technology adopters and passive producers. In this system, farmers' knowledge and innovations are impeded. In addition to this, heavy dependent on agrochemical and fuel increases production cost, thus reducing the farmer's profit. Responding to these drawbacks, sustainable agriculture is proposed as an alternative to the industrial agriculture. Organic farming is a sustainable agriculture system. It is actively being promoted as an option toward achieving sustainable agriculture, all over the world, including in Malaysia. This thesis is an exploratory study to understand the origin, definition and principles of organic farming; to explore the practices on the ground and how it's contributed to sustainable agriculture model and comply with the principles of organic farming; and finally to recommend few strategies for developing organic farming as a sustainable agriculture system in Malaysia. The origin, definition and principles of organic farming were studied through literature review. Organic farming practices were documented using qualitative case study method, in which semi-structured interviews, participatory observation, farm tours and secondary data collection were carried out with farmers, extension officers and non governmental

organization (NGO) workers. Analysis of the observed practices shows that the practices fit into the sustainable agriculture model. The practices on the ground showed that organic farming is effective in providing environmental benefits, contributing for better economy for farmers, and improving the social status of farmers. Furthermore organic farms showed persistence and resilience as well. Observed practices also comply with principles of organic farming. Suggested strategies are supporting conversion to organic farming; building organic farming knowledge; enabling production of organic farming inputs; overcoming shortage of manpower; simplifying the certification process; assisting market development; and spreading the organic awareness. Observations showed organic farming is a suitable system to develop sustainable agriculture in Malaysia. However, because of the strong establishment of the industrial agriculture system in the country, mainstreaming organic farming will not be viable, therefore the way forward will be concentrating on the small holders who are cultivating non-commodity group and acceptance of a certain degree of flexibility in practice of organic farming principles.

## ABSTRAK

Pada masa kini, kebanyakan para petani di seluruh pelusuk dunia mengamalkan sistem pertanian industri. Dalam sistem ini para petani semakin kurang mengamalkan amalan-amalan pertanian yang bergantung kepada alam sekitar. Para petani mempraktikkan tanaman monokultur dan banyak menggunakan racun kimia, jentera, bijih benih kacukan dan tanaman diubasuai secara genetik. Penggunaan input-input pertanian sebegini menyumbang kepada kemerosotan alam sekitar. Antara kesan yang nyata adalah seperti kehilangan biodiversiti, kemerosotan kualiti tanah, pencemaran dan peningkatan suhu bumi. Seterusnya, dalam sistem ini para petani hanya bertindak sebagai pengguna yang pasif. Ini menyekat perkembangan pengetahuan dan inovasi para petani. Selain itu, penggunaan input-input pertanian yang mahal jelas meningkatkan kos pertanian dan mengurangkan keuntungan para petani. Disebabkan oleh kesan-kesan negatif sebegini, pertanian lestari telah diperkenalkan sebagai alternatif kepada sistem pertanian perindustrian. Pertanian organik merupakan salah satu sistem pertanian lestari. Pertanian organik semakin banyak dipromosikan diseluruh pelusuk dunia termasuk di Malaysia. Tesis ini merupakan sebuah kajian eksploratasi untuk mengetahui asal usul, definisi dan prinsip-prinsip pertanian organik ; untuk mengkaji amalan pertanian organik yang diamalkan para petani dan bagaimanakah ianya menyumbang kepada modal pertanian lestari dan sejauh manakah prinsip pertanian organik dipraktikkan oleh para petani; dan akhirnya untuk mengemukakan beberapa cadangan yang dapat membangunkan pertanian organik untuk mencapai sistem pertanian lestari di Malaysia. Asal-usul, definisi dan prinsip-prinsip pertanian dikaji melalui kajian ilmiah. Amalan pertanian organik direkod secara kajian kualitatif. Antara kaedah-kaedah yang digunakan ialah teknik temubual separa berstruktur, observasi peserta, lawatan kebun/ladang dan pengumpulan

maklumat dari sumber sekunder. Kajian kualitatif ini merangkumi para petani, pegawai-pegawai pertanian dan pegawai-pegawai dari pertubuhan bukan kerajaan (NGO). Analisa amalan pertanian organik yang direkod jelas menunjukkan bahawa pertanian organik sesuai sebagai modal pertanian lestari. Ianya memberikan kebaikan kepada alam sekitar, ekonomi dan tahap sosial para petani. Selain itu, pertanian organik juga menunjukkan ketahanan dan keterusan. Analisa juga menunjukkan bahawa para petani mempraktikkan semua prinsip pertanian organik. Antara cadangan-cadangan yang dikemukakan adalah memberi pelbagai sokongan kepada para petani semasa bertukar kepada pertanian organik ; meningkatkan pengetahuan pertanian organik ; mengalakan produksi input-input organik ; mengatasi masalah kekurangan tenaga pekerja pertanian ; memudahkan proses mendapat sijil pertanian organik ; membantu dalam pemasaran produk organik ; dan meningkatkan kesedaran produk organik di kalangan pengguna. Observasi dan analisis menunjukkan bahawa sistem pertanian organik adalah sesuai diperkembangkan untuk mencapai sistem pertanian lestari di Malaysia. Namun begitu, menjadikan pertanian organik sebagai pertanian utama di Malaysia adalah sukar pada masa kini kerana sistem pertanian industri telah lama diamalkan di Malaysia. Strategi terbaik untuk memperkembangkan pertanian organik adalah dengan menumpukan usaha promosi pertanian organik di kalangan para petani kecil-kecilan yang menanam tanaman bukan komoditi dan mengamalkan beberapa kelongaran dalam mempraktikkan prinsip-prinsip pertanian organik.

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