

## Agriculture and Fisheries

### AGRICULTURE

Geographically, Hong Kong consists largely of steep hillside. Only 7 square kilometres of land are actively farmed. Farms are generally small in size and they produce mainly leafy vegetables, pigs or poultry.

**Consumption:** The daily fresh food consumption by Hong Kong's population of more than seven million in 2018 included 846 tonnes of rice, 2 310 tonnes of vegetables, 4 313 heads of pigs, 47 heads of cattle and 22 tonnes of poultry. Many of the above were imported, but Hong Kong's primary producers helped satisfy some of the demand.

**Local Production:** The gross value of local agricultural production totalled \$1,034 million in 2018. Two per cent of the vegetables Hong Kong people consumed, together with 100 per cent of the live poultry and 8 per cent of the live pigs, came from local farms. Local production is geared to complement rather than compete with other major market suppliers. Production efforts are aimed mainly at high-value fresh food.

**Principal Crops:** The value of crop production amounted to \$348 million in 2018. Vegetable and flower production account for about 93 per cent of the total value, being \$322 million in 2018.

Vegetable crops grown all year round include Chinese white cabbage, flowering Chinese cabbage, lettuce, Chinese kale, radish, leaf mustard, spring onion and chive. Spinach, watercress and Chinese wolfberry are produced in the cooler months. Yard-long bean, water spinach, Chinese spinach, cucumber and several species of Chinese gourd are produced in summer. A wide range of temperate vegetables including tomato, sweet pepper, cauliflower, carrot and celery is grown in winter.

Flower cultivation has gained importance in recent years. Gladiolus, lily and chrysanthemum are grown in winter; and ginger lily and lotus flower in summer. Peach blossom is grown especially for the Lunar New Year.

A wide range of fruit is grown on the lower hill slopes, the main types being lychee, longan, wampei, local lemon, orange, tangerine, guava, papaya and banana.

**Animal Husbandry:** There were 43 local pig farms and 29 local poultry farms as of 2018. In the first half of 2018, local pig production was valued at \$175 million and local poultry production including eggs was valued at \$169 million.

To reduce the public health and environmental pollution problems associated with livestock keeping, the government introduced a Voluntary Surrender Scheme for Poultry and Pig Farms in 2005 and 2006 respectively as well as a Buyout Scheme for Poultry Farms in 2008. These schemes encourage livestock keepers to surrender their Livestock Keeping Licence (LKL) and cease their farm operation

permanently in return for exgratia payment. Under these schemes, 162 poultry farmers and 222 pig farmers had surrendered their LKL.

Hong Kong has only one licensed dairy farm located in Sha Tau Kok, New Territories.

**Agricultural Development:** The Agriculture, Fisheries and Conservation Department (AFCD) and its closely related marketing organisations provide infrastructural support and technical services to the various primary industries.

The department's crop specialists undertake studies into practical problems in pest control, crop husbandry and soil management. They also investigate specific production technologies to enhance the efficiency and economic benefits of the industry. This work is carried out in an experimental station in Sheung Shui and results are made available to farmers by the department's advisory services.

Agricultural advisory activities are aimed at assisting farmers to improve productivity through the introduction of new and improved produce varieties and production techniques, backed up by adequate credit facilities and efficient and orderly marketing services.

Promotion of adaptive greenhouse and organic production techniques to local farms are currently being undertaken.

Examples of well-received new produce varieties include supersweet corn, milky pak choi, round eggplant, mini watermelon, strawberry and white bitter cucumber.

Loans issued to farmers for farm production and development purposes in 2018 amounted to \$5.7 million. As at December 31, 2018, the total accumulated deposit under three separate loan funds administered by the AFCD amounted to over \$48 million.

Agricultural development also includes improvement of basic infrastructure, rehabilitation of fallow land and studies in farm management problems. Infrastructural work concentrates on the maintenance and improvement of communal irrigation and drainage facilities.

An Accredited Farm Scheme for protecting the environment and consumers against residues of agricultural pesticides was introduced in 1994. Accredited farms are strictly monitored and supervised on uses of pesticides and produce is further checked for pesticide residues before they are sold at accredited retail outlets. As at the end of 2018, a total of 311 farms in Hong Kong and the mainland of China were accredited, supplying about 29 tonnes of accredited produce daily.

The AFCD has been providing technical support to local organic farmers since December 2000. The AFCD introduces the organic production standards and requirements to farmers, and helps farmers resolve the problems on integrated pest management, horticultural practices and soil management. As at the end of 2018, a

total of 306 farms in Hong Kong joined the service, supplying about 6 tonnes of organic vegetables daily.

The AFCD also launched the Local Vegetable Farms Voluntary Registration Scheme in July 2006. As at December 31, 2018, a total of 1 967 vegetable farms had been registered. The department provides technical assistance and agricultural services to registered farmers to enhance their awareness of safe production, good farming techniques and produce quality.

The Government will continue to implement the New Agriculture Policy (NAP) to promote the modernisation and sustainable development of local agriculture. A \$500 million Sustainable Agricultural Development Fund was launched in December 2016, and open for applications to enhance the overall competitiveness of the agricultural industry. Other major measures under the NAP include establishing the Agricultural Park; exploring the feasibility of designating agricultural priority areas; providing better support and assistance to help farmers move up the value chain; enhancing food safety and marketing as well as brand-building of local farm produce; facilitating development of hydroponics and agro-technology; and developing leisure and educational activities related to agriculture. The supportive measures under the NAP will be implemented by the Government progressively in stages.

To comply with environmental protection legislation, all livestock farms are required to be licensed and must install appropriate livestock waste treatment systems.

Sporadic outbreaks of diseases in livestock, such as foot-and-mouth disease, are kept under control by good biosecurity and vaccination, and the AFCD's veterinary services are equipped to investigate and combat major livestock diseases, as well as to contain the threat of antimicrobial resistance (AMR) in livestock in Hong Kong. With the increasing threat of AMR globally, the Government launched the Hong Kong Strategy and Action Plan on Antimicrobial Resistance (2017 – 2022) (Action Plan) in July 2017. The Action Plan details the relevant measures to be implemented by the AFCD in the local livestock production sector. The relevant measures are aimed at developing appropriate sustainable systems for the surveillance of antimicrobial usage (AMU) and AMR at the local livestock farm level. The AFCD will also facilitate and support the development of projects for the provision of veterinary services to local livestock farms while enhancing the knowledge, attitude and practice of relevant stakeholders towards the problem of AMR through educational and publicity activities. It is anticipated that AMR will be closely monitored and AMU will be reduced in the local livestock production sector so as to alleviate the development of AMR.

## FISHERIES

Capture and aquaculture fisheries make an important contribution to Hong Kong by maintaining a steady supply of fresh fish to local consumers. The total capture fisheries and marine fish culture production is equivalent to about 18 per cent of seafood consumed in Hong Kong, while pond fish farmers produce about four per cent of the freshwater fish eaten.

**Capture Fisheries:** Hong Kong's fishing fleet comprises about 5 050 vessels, almost all of which are mechanised. About 78 per cent of the local fishing vessels are sampans using multiple fishing gears and other smaller non-trawler vessels (such as gill netters, long liners, purse seiners, etc.) which operate mainly in the coastal waters around Hong Kong. The remaining 22 per cent of the vessels are trawlers and other larger non-trawlers generally operating in the adjacent waters of the South China Sea. In 2018, the estimated production was about 124 000 tonnes, valued at \$2.75 billion. Major species of fish catch include hairtail, threadfin bream, scad, squid and sardine.

**Aquaculture Fisheries:** Fish ponds in use total 1 132 hectares and are located mainly in the north-western New Territories. The majority of fish farms are engaged in carp polyculture (bighead carp, silver carp, common carp and grass carp) in combination with tilapia or grey mullet. Other cultured species include jade perch, seabreams and spotted scat. Total fish pond production in 2018 amounted to 2 536 tonnes, valued at \$59.48 million.

About 930 licensees are engaged in marine fish culture in the 26 fish culture zones designated under the Marine Fish Culture Ordinance. Common species cultured include green grouper, hybrid grouper, Russell's snapper, mangrove snapper, cobia and pompano. Total marine fish culture production in 2018 amounted to 850 tonnes, valued at \$71 million.

**Development and Services:** To promote sustainable development of the fishing industry and conserve fisheries resources in Hong Kong waters, the AFCD pursues a number of fisheries conservation and management measures. The ban on trawling in Hong Kong waters came into effect on December 31, 2012 to restore the seabed and the depleted fisheries resources. The department has strengthened enforcement against trawling activities and other destructive fishing practices. To complement the trawl ban and bring local fisheries industry back to a sustainable path, the Government implemented other fisheries management measures including setting up a registration system for local fishing vessels; limiting new entrants to control the number of fishing vessels and fishing effort; and prohibiting fishing activities of non-local fishing vessels. The department is also preparing for the designation of fisheries protection area to protect important fisheries spawning and nursery grounds.

The AFCD has deployed 673 units of artificial reefs with a total volume of over 179 200 cubic metres in Hong Kong waters, with a view to enhancing the fisheries resources. Results of underwater monitoring survey revealed that the deployed artificial reefs supported a higher diversity and abundance of fish species as compared with the nearby natural habitats. Over 220 species of fish, including many high-valued species such as groupers, breams, snappers and sweetlips, are using the reefs for feeding, shelter and as spawning and nursery areas.

Besides, continuous emphasis is placed on assisting fishermen to switch to sustainable fisheries and other related operations through provision of technical advice, training, liaison services, grants and credit facilities.

To alleviate the manpower shortage of the fishing industry, the AFCD operates the Mainland Fishermen Deckhands Scheme to allow Mainland deckhands to enter Hong Kong to help fishing vessels operators unload their catches at wholesale fish markets. As at December 2018, some 4 250 deckhand quotas have been issued to vessel owners and their corresponding fishing vessels in about 690 applications.

The AFCD introduced the voluntary Accredited Fish Farm Scheme (AFFS) in 2005 in a bid to enhance the environmental hygiene standards of local fish farms and the quality of cultured fish. Participating fish farms under the scheme are required to adopt a set of good aquaculture practices. Quality assurance tests including analyses of drug residues and heavy metals in fish are conducted to ensure that the cultured fish meet the food safety standards before marketing. The accredited fish are marked with specially designed fish tags under the “Accredited Fish Farm Scheme” brand name to enable easy recognition by the public. To enhance consumers’ confidence in the AFFS products, the AFCD has introduced a new fish tag bearing a unique traceable QR code for the AFFS products. By scanning the QR code, consumers can obtain the information of the production farm and the food safety test results of the consignment online. In 2018, 122 fish farms have been accredited under the scheme.

The AFCD conducts aquaculture studies and provides technical services for efficient fish culture methods and husbandry techniques. Techniques on pond fish over-wintering, aeration by venture nozzles and oyster depuration are being transferred to the fish farmers. The AFCD continues to promote the development of local fish hatchery and nursery by conducting training workshops, providing on-farm technical support and offering live feed stock cultures to the interested fish farmers.

With a view to enhancing biosecurity measures and surveillance of AMR in aquaculture, “Good Aquaculture Practices Programme” aims to promote modern fish farm management and monitor AMU and AMR at the local fish farm level. Under the programme, the AFCD conducts regular farm visits to facilitate early detection of disease outbreaks, collect water and fish samples for analysis, and collect AMR-related information. The department also introduces modern fish farm and health management techniques and practices to fish farmers via workshops and seminars. In 2018/19, 31 seminars and workshops have been scheduled to promote the importance of prudent use of antimicrobials and good husbandry practices. The AFCD also provides fish disease diagnosis and viral screening services.

The AFCD has strengthened the red tide reporting network and the proactive phytoplankton monitoring programme with a view to providing early red tide warnings to mariculturists, thereby minimising the impact of red tides on mariculture. In 2018, 12 red tide incidents were recorded in Hong Kong waters.

The AFCD administers various loan funds for fishermen and fish farmers for production and development purposes. In 2018, 610 loans amounting to \$244.8 million were provided. The Government also set up a fund to

provide grants to help the local fishing community move towards sustainable or high value-added operations. As at December 2018, 11 applications had been approved, involving a total commitment of about \$58.6 million.

The department administers the Fish Marketing Organization which is a non-government, non-profitmaking corporation vested in the Director of Marketing (currently the Director of Agriculture, Fisheries and Conservation) to provide orderly fish marketing services to both the fishermen and fish traders. The Organization currently runs seven wholesale fish markets in Cheung Sha Wan, Aberdeen, Castle Peak, Shau Kei Wan, Kwun Tong, Tai Po and Sai Kung. Revenue comes from charging commission on the proceeds of sales and fees for using the market facilities. Surplus earnings are channelled back into the industry through the provision of low-interest loans to fishermen, improved services and facilities in the markets and scholarships for fishermen and their children. It also helps promote the marketing of the local fisheries products through its marketing network and participation in trade fairs and exhibitions.