CONTROLLING OFFICER'S REPLY

(Question Serial No. 0693)

Head: (49) Food and Environmental Hygiene Department

Subhead (No. & title): (-) Not specified

Programme: (1) Food Safety and Public Health

Controlling Officer: Director of Food and Environmental Hygiene (Miss Diane WONG)

Director of Bureau: Secretary for Food and Health

Question:

Under Matters Requiring Special Attention in 2021-22, it is mentioned that the Food and Environmental Hygiene Department will continue to take forward initiatives to enhance pest control services, particularly in respect of mosquitoes and rodents. Has the Government reviewed the effectiveness of the pest control services provided in the past? If yes, what are the details and the improvement measures? If no, what are the reasons?

Asked by: Hon QUAT Elizabeth (LegCo internal refere0nce no.: 35)

Reply:

The Food and Environmental Hygiene Department has adopted an integrated management approach to the prevention and control of pests with reference to the recommendations and technical guidelines of the World Health Organization (WHO). The Department also reviews and enhances various vector surveillance programmes and pest control measures from time to time with a view to strengthening the prevention and control of vector-borne diseases.

On mosquito surveillance and control, the Department primarily focuses on conducting vector surveillance and eliminating mosquito breeding places. The Department has invited an expert from the WHO Regional Office for the Western Pacific to review the mosquito prevention and control work of Hong Kong. The expert generally agreed with the strategy and work of the Department in respect of dengue vector surveillance and control, as well as the handling of dengue fever cases. The expert also put forward improvement recommendations, including replacing ovitraps with gravidtraps, which could collect adult mosquitoes, as a surveillance tool; reducing the extent of fogging operations when handling dengue fever cases to concentrate resources on core locations; and strengthening vector surveillance at locations connected with imported dengue fever cases in Hong Kong. The Department has been gradually implementing the recommendations of the expert.

In 2020, the mosquito prevention and control work of the Government yielded positive results. There was only one local dengue fever case in Hong Kong in 2020, while the territory-wide Gravidtrap Index (GI) for Aedes albopictus during the rainy season between

May and September 2020 was at a similar level to that of the previous years. Meanwhile, the Department expanded the scope of the dengue vector surveillance programme in the community. The number of survey areas increased from 57 to 62, and further to 64 in January 2021. Furthermore, since April 2020, the Department has put in place newly designed gravidtraps as a replacement for the ovitraps previously used, which enable direct counting of the number of adult Aedes albopictus to enumerate the new GI and to release the additional Density Index (DI) for the programme. The GI reflects the extensiveness of distribution of Aedes albopictus in the survey area, while the DI indicates the average number of adult Aedes albopictus collected in each positive gravidtrap to quantify their activity level. The Department has also introduced a new mosquito trap which involves the carrying of growth regulators by female mosquitoes to the water bodies where they lay eggs to prevent the larvae in those water bodies from developing into adult mosquitoes. Since the new mosquito trap is effective, the Department has put the trap to extensive use, and encouraged relevant government departments/organisations to use the trap in appropriate environments.

On rodent surveillance and control, the Department conducts the Rodent Infestation Survey (RIS) and eliminates the 3 survival conditions of rodents, namely food, harbourage and passages, with the aim of prevention and control of rodents. The number of survey locations for the RIS increased from 41 to 50 in 2020, so as to expand the coverage of the surveillance programme. The overall Rodent Infestation Rate (RIR) for 2020 was 3.6%, lower than the 4.2% in 2019. To further enhance rodent surveillance, the Department conducted field trials on thermal imaging cameras with artificial intelligence analytical function at a number of locations (including the target areas of the anti-rodent operation in designated target areas) in 2020. The tests have shown that the new technology is quite effective in identifying places where rodents frequently visit and the time and patterns of rodent activities, as well as assessing and quantifying anti-rodent work. By means of the artificial intelligence function, the technology can be used for identifying rodents in thermal images, tracing their movements and keeping track of the locations and temporal patterns of foraging rodents, thereby assisting pest control staff to place rodenticides and trapping devices more accurately and install rodent proofing measures in a targeted manner for better rodent control. Furthermore, direct comparison of indicative data collected before and after anti-rodent operations is possible by virtue of the data on the thermal images captured, which helps the management staff of the Department evaluate and quantify the effectiveness of anti-rodent work. The Department fully adopted the use of thermal imaging cameras during the second round of anti-rodent operation in designated target areas in all districts across the territory in November 2020. It also plans for a wider use at other suitable locations with a view to increasing the effectiveness of the anti-rodent operations.

In addition, the Department has invited an expert referred by the WHO to review the rodent prevention and control work of Hong Kong. The expert considered that the Department had well-established procedures for monitoring and controlling rodent infestation, and provided technical advice on the use of traps and poisonous baits. The expert also recommended that community engagement could be enhanced to involve the public in anti-rodent work. The Department has been gradually implementing the recommendations of the expert, including the use of different kinds of food at a time as baits and the adoption of a newly designed snap trap to enhance the effectiveness of anti-rodent efforts. In 2021, the Department will further encourage community engagement in rodent prevention and control work by organising a territory-wide and inter-departmental anti-rodent campaign in

two phases with a view to stepping up rodent prevention and control in designated target areas and reminding the public of the importance of rodent prevention and control. Two rounds of anti-rodent operations, each lasts about 8 weeks, will be conducted in designated target areas in the territory in May and November 2021 respectively. Public education and publicity will be stepped up during the anti-rodent operations to provide the public with information and technical advice on rodent prevention and control. On RIS, the Department will make enhancements in several aspects, including stepping up the sharing of survey data with the departments and organisations responsible for managing the relevant venues and facilities; releasing the RIR of all 50 survey locations to the public; installing thermal imaging cameras at the survey locations with a persistently high RIR for deployment of more effective follow-up actions; and actively exploring various bait choices for improving the sensitivity of RIR.

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