1) отобрать образцы почв и прочих материалов для выделения триходермы;
2) провести выделение грибов из отобранных материалов и изолировать образцы триходермы;
3) провести отбор однородных морфотипов триходермы для создания коллекции изолятов;
4) изучить изоляты по комплексу морфологических признаков.

Работа проводилась в течение 2019/2020 года. Для проведения работы использовался ряд стандартных микробиологических методов: изоляция и культивирование грибов на различных средах, в том числе селективных (среда Чапек, Среда Чапек с КМЦ), микроскопирование, проведение морфологического изучения грибов. Также была проведена оценка роста мицелия грибов.

В результате, из отобранных материалов нами были выделены быстрорастущие штаммы грибов рода Триходерма, которые в перспективе могли бы использоваться в производственных условиях.

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INFLUENCES OF STORAGE CONDITIONS ON BEEF

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Summary. *This study aimed to explore the influences of different storage conditions on beef texture from both micro-perspective and macro-perspective. In this study, the postmortem beef was stored under three storage conditions, i.e. (1) freezing point temperature + vacuum packaging (Cv), (2) 0℃ + vacuum packaging (Zv), (3) 4℃ + vacuum packaging (Fv). During the storage, sulfhydryl group (-SH) content, myofiber diameter, sarcomere length (SL), myofibril fragmentation index (MFI) and shear force (SF) were determined regularly. The result showed that: under above three conditions, both -SH content and myofiber diameter gradually decreased while MFI increased. With the treatment of Cv, Zv and Fv, myofiber diameter decreased by 46.67%, 52.27% and 57.23% respectively on the 24th day. The SL was minimized at the 1st day with Zv and Fv condition and at the 4th day with Cv condition. The SF of three types of samples behaved in the similar pattern as increasing firstly and then decrease, however, the change of samples with Cv condition was much slower than those with Zv and Fv condition. Therefore, we conclude that Cv condition can effectively delay the rigor mortis and rigor-off processes of beef, and thus, enable the beef maintain good quality for a long time, following by Zv condition and then Fv condition.*

Beef has a large customer market and enjoys an increasing demand for its high protein, low fat and delicious taste. The traditional cold storage technology can only maintain beef freshness for a short period, which result in the imbalance between demand and supply and so brings some economic and demand losses for merchants and customers. In addition, the freezing technology has some disadvantages in maintaining the quality of beef such as flavor deteriorating quickly and nutrients losing rapidly. The shelf life of fresh material can be prolonged by controlled freezing point storage at non-freezing temperature-zone between the freezing point of water and that of an individual material with good quality retention.

In recent years, controlled freezing point (CFP) technique has been applied in the storage of blueberry, spinach, green beans, pears, Penaeus vannamei and chicken. Researchers have showed that the shelf life of fresh pork can be prolonged appreciably by using CFP. However, the study about CFP on the storage of beef storage is rarely reported comparing to the wide application of CFP in fruit, vegetable and aquatic products. Therefore, in this study, we focused on the possibility of using CFP to promote the shelf life of beef.

During the storage of meat products, the degradation and oxidation of proteins were the main reasons for the disordered and damage muscle structure. The main purpose of this study was to used different texture indicators (-SH content, myofiber diameter, SL, MFI and SF) to evaluate the influences of Cv, Zv and Fv on the beef texture.

This study analyzed the texture of Longissimus dorsi of beef. The oxidation of proteins caused the continuous decrease in -SH content; during the rigor mortis and rigor-off processes, SL initially decreased and then increased as the decrease in myofiber diameter; MFI constantly increased with the function of endogenous enzymes and micro-organisms; SF of meat decreased initially and then increased, and meat tenderness changed accordingly. In summary, the lower temperature brought the better quality at a time point. Cv condition significantly delayed the process of qualitative change in meat products, and played a positive role in assuring meat quality, comparing with Zv and Fv condition.

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PATHOGENICITY OF BEAUVERIA BASSIANA AGAINST LOCUSTA MIGRATORIA MANILENSIS

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Summary. *Locusta migratoria manilensis (Meyen) is one of lawn pests, feeding a variety of grasses.Locusts nibble grass blades on the lawn great harm,leading to deterioration of the ecological environment,affecting people's appreciation entertainment.Therefore, prevention is important for landscape ecological protection lawn locusta.The traditional chemical control of environmental pollution,not very environmental protection.Maximize the use of biological control can reduce the pollution of the surrounding environment, while at the pest control meet the people close to the green demand.B.bassiana , as an entomogenous fungi, had been widely used for pests control for several decades, which could be a potential control way efficient control and keep species diversity, ecological balance,excellent control.However, very few research was reported for locusta control on garden lawn by using B. Bassiana.*

This experiment was 5 dominant strains, screening of high virulent strains of locusts, by impregnation method and feeding method, get the best method of indoor bioassay of locusts,The phenol oxidase activity in the locust, B.bassiana pathogenicity by time.All the research provide the feasible basis for additive proportion and field application,The conidia of B. bassiana powder in germination rate, Pr1 protease activity bioassay to Ostrinia furnacalis.B.bassiana powder obtained long-term preservation conditions, thereby prolonging the shelf life of B.bassiana formulation.also support for new garden lawn biological control research.The result of this study are as follows:

1.The dominant strain 5 tested were effect on locusts are pathogenic, dead larva mortality in 50.%-80.%,The strain D4-2-1 on locust dead rate is highest, so D4-2-1 high virulent strains.

2.Through the locust bioassay of dipping method and feeding method,test data show that at spore concentration is 1×108/mL,it has the best control effect on Locusta migratoria manilensis.But