

## **TRANSFORMING DESERT LOCUS (*Schistocerca gregaria*) INTO FOOD AND FERTILIZER BY USING BIODIVERSITY: BIRDS**

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### **Abstract**

According to 3 February 2020 update of “Locust Watch” website of FAO (<http://www.fao.org/ag/locusts/en/info/info/index.html>) desert locus situation is extremely alarming in Horn of Africa (Ethiopia, Somalia, Kenya, Uganda and South Sudan), Red sea (Sudan, Egypt, Eritre, Yemen, Saudi Arabia, Oman) and Southwest Asia (Iran and Pakistan). Spraying pesticides is the main approach to combat desert locus currently. But this solution have adverse effects on human health and environment. Effective, alternative, sustainable solutions are urgently required to fight with this problem.

China has tested chickens to combat with huge locus swarms in 2017. They obtained success where observed that one chicken can catch over 600 locusts a day and can cover half a hectare.

This paper is an informing technical note on this subject including other benefits.

**Keywords:** Locus, birds

### **Introduction**

China has successfully used chickens, ducks and rosy starlings to fight insects like locusts and grasshoppers. In China, grassland around Aksu prefecture, which borders Kyrgyzstan, has been frequently hit with locusts outbreaks. The system has been used Xinjiang, Inner Mongolia and China-Kazakhstan border. Xinjiang has more than 100 kinds of locusts. One chicken is able to catch more than 600 locusts a day, with ducks and other birds also used to combat pests. China also has set up nests in mountainous areas to attract 50,000 migrating rosy starlings, which is a bird that preys locusts and grasshoppers. The number of locusts/m<sup>2</sup> has dropped from 40 to two in areas the birds have visited. The starlings won the battle in 17,000 hectares where locusts were most concentrated. Meanwhile, 85,000 special chickens, have been sent out to battle the locusts. The chickens, raised by local herdsmen, have stopped the spread of locusts in a further 30,000 hectares of land in Tacheng. China was continuing building nests in 2019 to support the the baby birds until they hatched and leave the nests (Anonymus 1, 2, 3, 4, 5).

Due to high protein, fat, vitamin and antimicrobial contents of insects, the articles published on test results of insects as food, feed and biodiesel is increasing fastly in global scale. As an example, the search result on Black soldier fly gives 79 hits on Google Academic when searched for “feed” and “black soldier fly” keywords in article title (allintitle: black soldier fly feed). Also search in whole texts with "black soldier fly" biodiesel keywords gives 978 hits in 2020 January.

Eggs are cheap and high-quality sources of protein, essential vitamins and minerals (Miranda et al., 2015). Chicken manure is also a valuable fertilizer which can be spread to range random and promote the fertility of these low input forced zones. Also cost of insecticides and applications systems of pesticides are other accompanying problems.

Please follow Anonymus 6, 7 for further readings.

### **Conclusion**

Chicken, ducks and rosy starlings are in the front line of this type of combat for the protection of crops, production of eggs, meat and fertilizers. An approach shift is needed to transform this treat to an opportunity.

**Note:** A simple and comfort style deliberately preferred during the preparation of this paper to increase the encourage of African researches on publishing all types of local problems and research and theoretic solutions.

### **Literatures**

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