RAT CONTROL AT FELDA SUNGAI NEREK AND FELDA JENGKA 4: CASE STUDY

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Sincerely,

ALBAKRI BIN AHMAD NAZRI

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ABSTRACT

RAT CONTROL IN FELDA SUNGAI NEREK AND JENGKA 4

Rattus tiomanicus, *R. argentiventer* and *R. rattus diardii* is the most dominant species in Malaysia Oil Palm Plantation. There are two methods that are usually been used to control rats damage are chemical control and biological control. Rodenticide as a chemical control is one of the most common way to prevent rat damage and *Tyto alba* (Barn Owl) is a biological control to eradicate rats population in the oil palm plantation due to the specific diet for *Tyto alba* (Barn Owl) is rat.The objectives of these study is to determine whether the rat damage affect the yield of the oil palm in FELDA Jengka 4 and FELDA Sungai Nerek and to compare the effectiveness of rat management between this both estate. The study are based on secondary data from FELDA Jengka 4 and FELDA Sungai Nerek. The outcome of this study indicate that FELDA Jengka 4 are more efficient in controlling rat damage compared to FELDA Sungai Nerek.Based on the result, for effective control of rat, integrated control between chemical and biological control is needed to reduce the rat population efficiently to achieved high yield.

Keyword: Rat damage affect the yield of oil palm in FELDA Jengka 4 and FELDA Sungai Nerek.

CHAPTER ONE

INTRODUCTION

1.1 Introduction

Malaysia has 3.7 million hectares planted with oil palms and is one of the world's largest producers of palm oil (Basri et al. 2005). Oil palm pests can be classified into insects, diseases and vertebrates. The vertebrate pest include rodents, wild boar, porcupines and elephants. Vertebrates pest consist a major species such as rat, elephant, porcupine and wild boar (Darus and Basri, 2000). The common pest species found in oil palm plantation is rat (Puan et al., 2011). In agricultural sectors the relationship between pest abundance and crop damage can be complex (May 1981; Hone, 1994) and reducing the damage caused by pests might not merely be a matter of reducing their number. Prediction of rates should be determine the appropriate level, timing and frequency of control if to decrease the rat damage problem. (Hone and Carley, 2007). When the damage of rodent have been outbreaks it will likely be too late as the rats populations will often be high that control efforts cannot reduce or eradicate the associated damage (Hone, 2007).

Rat management is to keep the pest population below the level of economic injury (Ariffin, 1998). Rat usually will damage the oil palm bunches by feed on oil palm fruitlets as well as the base of frond petioles and palm buds during immature phase