

# [Republic that they already know how to handle](https://assignbuster.com/republic-that-they-already-know-how-to-handle/)

Republic of the PhilippinesMindanao State UniversityBarangay Fatima, General Santos City       Knowledge on Rice Pest Control         Submitted by: Apriel Joy F. Marcelo(Student)Submitted to: Prof. Mario Aguja(Adviser)  The riceplant is an ideal host for many insect species. All of the plant parts arevulnerable to insect-feeding from the time of sowing till harvest. There areover 800 insect species damaging rice in one way or another, although themajority of them do very little damage (Nwilene, F., Stout, M., Hadi, B.

, Freitas, T. 2017, pp. 1 ). Pest is an enemy of farmers in their rice crops. Fromthe past up and to the present time, pest causes a big trouble to the farmers. Rice pest is a threat to the large scale and small scale farmers. It can lost alot of grains of rice. Specifically, it can damage a large part of rice farm.

And also, it will lead to a problematic and serious situation. There are manypest attacked in the wide range of farms. Since the rice plant starts to growup to the time of harvest, a lot of pest occur to attack the rice plant.

Thedestruction of pest bring too much lost to the production of yields. And it maycause greater amount of lost in income. This kind of situation brings conflictin the farmers. For the pastyears, rice farmers practiced various strategies to prevent danger made by therice pest. This knowledge practiced is coming from the different factors thatinfluenced them. In the past and present days, many rice farmers have their ownknowledge in order to fight against their enemy. Farmers’ strategies ortechniques might be coming from different sources. These strategies influencedthem in handling and managing their farms.

Obviously, these techniques isalready their customary practices. Also, they know how to apply differentstrategies when there is a pest attacked to their farm. It is understood thatthey already know how to handle their farm when pest violate. The strategies ortechniques is coming from the factors that affect the knowledge of manyfarmers. This knowledge may came from the people that they interact every day.

Additionally, they use the techniques acquired in interacting people. Themethods in pest control are classify as mechanical, chemical, physical, orcultural. These methods are used by farmers in controlling pest. And also, theycan be measured by different factors. These factors that influenced the smallscale farmers, tenants and large scale farmers used to help in reducing theharm made by different pest. In thisconcept, it will explain and understand the knowledge of rice farmers incontrolling pest.

The concept of controlling pest will explore all theknowledge acquired by farmers in interacting to the group of people. Theeducation, cooperation, access to technicians, experiences in farming or comingfrom their ancestors can be explained on how and what they do these kind ofpatterns in farming. According toRogers (1995), knowledge and awareness of a new technology is the first ways ofadoption. This is the case especially for interventions that are skill orknowledge based (David and Asamoah, 2011, pp. 18). Knowledge in differenttechniques helps farmers to adjust pest attacked.

It believed that rice is theworld’s most important staple food crop. More than half of the world’spopulation relies on rice as the major daily source of calories and protein(Kasmaprapruet, Paengjuntuek, and Saikhwan, & Phungrassami, 2009, pp. 100).

Onereason to help the rice yields is having a good production (GTNRDS, 2009, pp. 5). Mostly, farmers challenge in rice production is low yield.

According toHushnawati, Kwong-ching, LinPing-Shih (2012) there are different pest anddiseases in the rice crops. They are rat, bird, apple snail, rice bug, stemborer, rice leaf roller and bacterial leaf blight. Farmers face different kindsof risks. Farming rice in rural areas is influenced by human selection andmanagement. Environmental, biological, and cultural factors influenced afarmer’s decision to accept or reject various strategies in cultivation. Theyface production risks from natural phenomena and economic risks from marketfluctuations and related economic phenomena. If all relevant variables wereknown with certainty, farmers would face the classical maximization problem: maximizing profits.

However, after decisions are made, natural and economicconditions change, and with this new setup, previously optimal decisions becomesuboptimal (Rola, A. & Pingali, P., 1993, pp. 41-42). Along this line, Antle(1983) advanced the hypothesis that risk matters primarily because productionis a dynamic phenomenon and that production and price uncertainty thereforeaffect expected productivity and expected income. The analysis of dynamic, uncertain models shows that farmers’ optimal decisions are affected by riskwhether they are “ risk neutral” or “ risk averse.” This suggests that dynamic, risk neutral models may be more useful than conventional static risk aversemodels (Anderson et al 1980) for understanding the role of production risk infarm management. (Rola A.

& Pingali, P. 1993, pp. 42). Farmers’ pest control activitiesreflect their individual perceptions, not necessarily the actual situation(Tait 1977; Mumford 1981, 1983; Norton and Mumford 1983; Pingali and Carlson1985; Carlson and Mueller 1987 pp. 7). Indigenous pest control methods employedby local rice farmers, after having been identified, were classified into: cultural (9), chemical (2), mechanical (5), biological (2), and physical (2). Two practices such as uttering of prayer while fertilizing the plants andoffering foods to the Gods, saints, and spirits were categorized as “ culturalworships”. (Nicolas, A.

& Cabarogias, . 2015, pp. 442). And also, thesefarmers deflect the ideas of farming from the individuals they encounter. Agriculturein Bangladesh are used to control pest using other traditional methods besidesinsecticide.

In these cases they used indigenous knowledge to control pest notto avoid the hazard of pesticide, mainly to minimize the production cost. Amongthe other methods, 40% of the farmers used crop rotation as an alternative tochemical pesticides use, 19% used timely planting and 15 % used resistantvarieties. Only 2% of the farmers used Integrated Pest Management (IPM) techniqueto control pest of rice. Bio-controls means that they use bird to feed theinsect.

Remaining 12% farmers used other methods such as, soap, kerosene oil, light and net trap to control insect. (Sultana, P. & Nobukazu N.

, pp. 116). In certain extent they pull the insect larvae by hand also. The knowledge offarmers was greatly influenced by their level of education.

The average levelof education of the farmers was 6 years of schooling. (Sultana, P. &Nobukazu, N., pp.

123). Farmers also uses pesticide as ricepest control to their farm. Farmers believe that pesticides is effective incontrolling pest production. Many farmers think that the pesticide is amedicine to threat the crop to be recovered from the pest attack. Mostfarmer-respondents (67%) spray their fields when a neighbor sprays to preventthe pests from transferring to their farms (Rola, A. & Phrabu P. 1993,). Theissues, which were not perceived by the farmers, they showed neutral attitudetowards them.

It might be due to the influence of socio-economic characteristicsuch as, age and education and occupation (Rola and Pingali 1993 pp. 124). Agricultural education is needed to facilitate learning, which instills a favorableattitude towards the use of improved farm practices (Nkamleu and Manyong 2005, pp. 66).

Farmersobtain their knowledge about pesticide dosage from government technicians, pesticide sales people, pesticide labels, and other farmers. Knowledge offarmers is acquired from technicians who gave them ideas in farming. Technicians assist farmers in proper handling the pest control.  Proper training about correct dosages isimperative for government technicians because industry sales people may tend toconvey a message of higher dosages and frequent application to increase theirsales (Rola, A.

Pingali, P., 1993, pp. 33). According, Msangya & Yihuan(2016) lack of technician in farming influence in rice productivity. It isstated that technical assistance shall be needed in farming rice. Strategies in farming also form fromthe ancient practices. These practices were acquired from their ancestors andpassed down from generation to generation by word of mouth.

Plastic straws withplastic bags or cans are tied around the rice field (Nicolas, A. &Cabarogias, A. pp. 441-444). Another rice pest that attacked inthe rice crop is the bird named “ maya”.

Maya is also a pest that affects growthof the rice crop. Many farmers find different strategies to avoid thedestruction made by the birds. The straws produce a sound as the wind strikeson it. Some use gunshots or firecrackers to scare away birds that may feed onthe grains.

Farmers collect the rice straws that were ejected by the thresher, dry them, and burn. They consider it a good practice for it kills the immaturestages of insects present on it. When the crop has already been harvested, farmers offer some of their produce to the church for thanksgiving. Theybelieve that when they give thanks to the Lord, they will be continuouslyblessed with good harvests (Nicolas, A. & Cabarogias, A. pp.

441-444). Furthermore, the use of domestic ducks has been key to knocking back snail populations tomanageable levels. Where multiple strategy control systems are in place, theaddition of domestic ducks significantly reduces the time and labor spent inhand removal of snails and reduces crop loss and damage to less than tenpercent (Levin, P., 2006, pp. 86). Farmers needto have training to improve knowledge, attitudes and skills on better farmingpractices in order to increase productivity and alleviate poverty in ruralareas (Kebede, 2010, pp.

10). A study on diffusion of biotechnology in Cotton inChina showed that training helped farmers to change their cotton bollwormspraying practices (Lifeng, et al., 2007 pp. 10). The intensity of participationduring training increases the probability of farmers adoption of new farmingpractices (Kijima, et al.

, 2010; Noltze, et al., 2012 pp. 17). Additionally, theundergoing training and exposure in the demonstration field made by 335 farmersapplied over an area of 609 hectares in 11 districts of Giang. This proved thattraining or exposure can influenced knowledge of farmers in farming.

Majorpractices in rice production over the last 100 years essentially evolved out ofthe changes in the varieties introduced and planted by Filipino farmers, whichsubsequently changed the manner production and postharvest operations had to bedone. Rice production practices are expected to continue to evolve to thechanging challenges and needs of the times-when both Filipino scientists andrice farmers come up with innovations that would pursue rice self-sufficiencyand global competitiveness in farming. Direct seeding, mechanization, andintegrated nutrient and pest management will continue to be refined andpractice on a wider scale (Bautista, E. U. & Javier, E. F., 2008, pp.

100). The practiced of the farmers regulate in the form of interacting various groupof people. The knowledge they acquire remains because it will continue totransfer from one farmer to the other groups of farmers. ConceptualParadigm        –          FIGURE 1          References : Rola, A.& Pingali, P. (1993). Pesticides, rice productivity, and farmers’ health aneconomic assessment.

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