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RESEARCH ARTICLE

OCCUPATIONAL SAFETY AND PESTICIDES HAZARD AMONG AGRO INPUT DEALERS IN OYO STATE, NIGERIA

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ABSTRACT

A survey on the knowledge based, location and safety provision of agrochemical dealers in Oyo state was reviewed. Survey research techniques using questionnaires was employed for the collection of data. As many Questionnaires as the numbers of dealers per zone were distributed in each of the 4 zones. Univarite analysis involving the use of simple percentage was used to analyze the data and the results were presented in different types of charts. The results showed that most of the dealers (91) did not go through any formal training, though they are aware of the hazard associated with their business but only few have sales office different from where they display and sell the chemicals, which exposed them to hazard from the smell of the chemical. Technical knowledge was also limited, critical area that required adequate knowledge was also lacking. Most of the dealers need more training on hazard classification and first aid treatment. It is therefore recommended that specialized training should be organized by the association leaderships, Agrochemical companies, Regulating Agencies and other input related agencies to improve the knowledge base of the dealers so that they can prevent hazard and give both advisory and first aid information to the end users.

INTRODUCTION

Pesticides are dangerous and can have many negative health effects on humans. During every stage of their manufacturing and transportation, and before, during, and after use, pesticides have the potential to harm plants, animals, people, and the environment. Since pesticides can do so much harm, there have been many studies about the health effects of pesticides. Researchers have linked routine pesticide exposure to some very deadly illnesses, such as non-Hodgkin lymphoma, leukemia, and prostate cancer. For workers who handle the chemicals that make pesticides, abdominal pain, dizziness, nausea, vomiting, skin and eye problems, respiratory and memory disorders, cancer, depression, and birth defects have all been associated with long-term exposure

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(C.G.P .T. S. 2007). The biggest concern for consumers is that many pesticides used to control pests on food crops are dangerous to eat, and some foods can contain pesticide residue even after washing or peeling. The EPA has banned several chemicals used in pesticides for a variety of reasons. If these chemicals have a high resistance to degradation, they can still be present in the soil where farmers grow their food. (Fred whitford *et al.,* 2001). To reduce the amount of pesticide residue people consume, it is advisable to wash, peel, and cook your food, trim the fat from any meats, and to eat a variety of different foods to avoid repeat exposure to any one type of pesticide. However, many pesticides are systemic, which means that they penetrate the food, thus rendering washing useless. Additionally, pesticide manufacturers design them to be rainproof, so the residue can resist washing.

Pesticide drift is the most dangerous element to the public. When the wind blows pesticides to somewhere other than their intended destination, that area becomes contaminated. Children exposed to pesticides early in life have a higher chance of developing brain cancer and leukemia. Additionally, pesticides sprayed in schools to eliminate rodents or insects are only temporary and require continual reapplication. Since the poisons in pesticides are not harmful to just pests, children and faculty members are at constant risk of pesticide exposure. Scientists have documented in detail the health effects of pesticides, since they have been in use for nearly a century. Pesticides are particularly harmful to young children and those who have continual or repeat exposure. If possible, try to use environmentally friendly or "green" pesticides, since they do not affect the environment as severely.

Inputs for agricultural productivity can be distinguished by their cost relevance and their infrastructural requirement, some inputs like seed and fertilizers have lower requirement and are easy to handle, others like liquid chemicals pesticides have higher requirement particularly in terms of handling and user knowledge in other to avoid environmental and safety hazards (AGI, 2010) . The agric input dealer provides a net work of services to farmers; social, education, and skill sharing services to farmers. They act as counselors to many farmers and are involve in training of farmers on safe use of the chemicals (Akinmade, 2010). Development of agro dealers is critical for accelerating small holder's access to quality agricultural inputs in Nigeria. Distribution /sales of appropriate small packs of agricultural inputs increase their affordability, safety and quality. To improve food security and achieve the millennium goals there is need to improve farmer's access to inputs and improve agric inputs business knowledge, skill and technical knowledge of agric input marketing entities at all level in the marketing chain in selected formal Targeted training programme, on-job- training program. (IFDC2005).

The issue of safety and environmental conditions must be accorded great priority if agrochemical business is to be sustained for the sake of development. It is obvious that safety in the work place is supposed to be an issue that concerns everyone; (Igboro e*t al*., 2007), the manufactures, marketing companies, dealers, Government, and the general public. The health and wellbeing of dealers and knowledge on safe use and handling is very crucial since they are in direct contact with the chemicals and with the end user (Ibrahim etal., 2008). .In developing countries the health safety regulations are less stringent or poorly enforced because hazard are commonly not well understood (EJF, 2000) .Exposure to hazard can result from either occupational and /or environmental source. (Langley and Summer, 2002). There is no known reported study on occupational safety in the crop protection industry in Nigeria. In Ghana, Marika and Afua (2009) and A.G.I (20I0).

Worked on the over view of agric input dealers in Ghana. In Ghana, Marik and Afua (2009) and A.G.I (2010) worked on the overview of agric input dealers in Ghana. Therefore, this study is aimed at determining the extent to which the dealers understood what they are selling, the safety and health measure; and also the extent to which the regulatory body have provided effective and efficient supervision of the dealers to ensure that safety regulations are observed. The study also attempts to ascertain the existence of training programs for the dealers in order to conscientize

them about the need to develop positive safety attitudes and / or practices at work. To inculcate an attitude of Proper handling amongst Applicators and CPP Practitioners and educate the Trainers on the, Educate the Trainers on the need to inculcate a culture of Safe Handling amongst Farmers.

MATERIALS AND METHODS

Survey research was conducted between January 2009 to December 2009 in the four agro ecological zones of Oyo State, (Ibadan /Ibarapa, Ogbomosho, Shaki and Oyo zone) to determine the extent to which the dealers has put in place safety and health measure; and also the extent to which the regulating government agencies have provided effective and efficient supervision of the dealers to ensure that safety regulations are observed and to ascertain the existence of training programs for workers in order to conscientize them about the need to develop positive safety attitudes and / or practices at work.

To achieve these objectives Survey research techniques using questionnaires was employed for the collection of data on the social economic characteristics of the dealers, business size, health and environmental issues that affects the dealers. Census of agrochemical dealers was conducted and compared with OSAIDA registration list. A total of 320 dealers in Oyo state which represent about 95% of the dealers were give questionnaire. The questioner was administered to dealers on zonal basis. Univariate analysis involving the use of simple percentage was used to analyze the data and the results were presented in Tables. Discussions with OSAIDA and WAIDA staff was also helpful in gathering information.

RESULTS

There are about 320 people selling agricultural inputs in Oyo state of which are dominated by male (87%) only (13%) are female. Majority of the dealers are retailers constituting about (90%) who sale directly to end users. Only about 10 % can be classified as wholesalers. Selling to retailers, and sometimes end users. The business size of agricultural inputs in Oyo state through the trade according to channel audit and retail audit conducted is estimated at about 800 million Naira. (Ibrahim *et al.,* 2009). It is also amazing to know that just very few (9%) have formal agricultural training either at certificate, Diploma, o*r* higher Degree level. Table 2 shows the technical competence of the dealers in handling and distribution of pesticides. Majority of them (93%) were able to identify the different classification of pesticides and the brands from each company, while only (75%) can explain the different formulation types but (85%) clearly understood the active ingredients in each segments of the pesticides. It was also very surprising that despite the fact that they were able to mention the active ingredient only (12%) knew the volume and mass of the active ingredient and the toxicological effect of this active ingredients. some do not even understand the toxicological warning, and various precautions on the pesticides containers .About (52%) were able to identify and understand these precautions and warning on the product label.92% also are aware and able to identify where the NAFDAC number were written on the products.

Table 1. Social Economic Characteristics of Agrochemicals Dealers in Oyo State.

	Ibadan/ Ibarapa	Oyo	Obgomosho	Shaki	Total	Percentage
No Dealers	172	70	51	27	320	100
Male	151	67	38	24	279	87
Female	21	4	13	3	41	13
Retailers	152	63	48	25	288	90
whole sellers	20	7	3	2	32	10
Bussiness Size	300m	200m	200m	100	800m	
Certificate, Diploma or B,Sc., in Agric.,	11	7	4	3	29	9
Non agricultural degree/no formal schooling	163	63	47	24	291	91

Table 2. Technical and professional knowledge of dealers

Technical knowledge	Yes %	No %	Total %
product name	97	3	100
formulation	75	25	100
Composition(a.i)	87	31	100
volume or mass of content	12	88	100
Registration number	92	8	100
Usage declaration	69	31	100
Manufactural logo	62	38	100
Direction for use	47	53	100
Warnings/precautions	52	48	100
Symptoms of poisoning	13	87	100
First aid instructions/ note for physicians	13	87	100
Compatibility with other product	72	28	100
Date of manufacturing/expiring date	95	5	100
Batch number	85	15	100
Storage instructions	63	37	100
Toxicogical hazard	12	88	100
Warranty and distributors details	17	83	100

Pesticides usage and direction was not a major problem as almost all of them knew the function of each segment but the exact application rate which differs according to weed ecology and mass and density of the weeds were fully understood by (62%). Similarly (62%) of dealers were able to identify and differentiate the Manufacture logo of each of the different brands against adulterations. But only (13%) are aware of the warranty and the manufactural and the distributor's details Symptoms of poisoning, first aid instructions and note for physicians were not clearly known to most of the dealers as just (13%) can explain them. The compatibility of the different segments with others was well knew to (72%) of the dealers as they can clearly explain which chemical to mix and which shouldn't be mix. Almost all the dealers (95%) are fully aware that every pesticide should have Batch number, date of manufacturing and expiring date. Instruction on storage and staking was understood by almost (63%).

DISCUSSION

From the social economic characters of the dealers, the result of the research shows that over 800 Million Naira worth of pesticides was sold in 2009 in Oyo State alone. It was projected that the annual business growth of pesticides in Oyo is at 25% (Ibrahim *et al.,* 2009) which implies that by the year 2010 the turnover will have been at 1 Billion Naira. Adoption of pesticides is increasing as farm size increases. So also the volume of pesticides moving down the channel from the manufactural to the end user. The concern however, is that virtually all the dealers are retailers selling to end users. But the most unfortunate thing is that only about 9% of the dealers had formal Agricultural Training. The retailers are expected to provide a net work of services to farmers; social, education, and skill sharing services to farmers. They are suppose to act as counselors to many farmers and are involve in training of farmers on safe use of the chemicals (Akinmade, 2010). Development of agro dealers is critical for accelerating small holder's access to quality agricultural inputs in Nigeria.

Because of lack of formal education on pesticides handling and safe use, majority of the dealers lack the technical knowledge require of them. Particularly in area that concern volume or mass of content of the pesticides. Direction for use, warning and precaution, symptoms of poising, first aid instruction, toxicological hazard, warranty and distributors details. These aspect are very crucial in handling and safe use of chemical, it is a prerequisite for every dealer to have adequate technical knowledge.

Conclusion

From the research, it can be concluded that specialized training is very important in pesticides handling .Only people who have undergone training should be licensed to sell and handle pesticides. Agrochemical Companies, NAFDAC, Crop LIFE, WAIDA,OSAIDA ,IFDC and other inputs related companies are requested to organize periodic training to dealers and should ensure that only certified dealers are allow to sell and handle pesticides

REFERENCES

AGI, 2010. Market Smart Subsidies, Analyzing the Agricultural Input Dealer Sector in Ghana. The Broking Institution, Stein Room, Massachusetts Ave. NW. Washington D.C

Akinmade Olayinka, 2010. Nigeria Tribune Tuesday 6th July, 2010. www.tribune.comng /agriculture/7794-experts-commend-input dealers contribution to Agric Development, Citizen Guide to pesticides and Toxic Substances .

Pesticide Program, 2007. Supervisor and pesticide specialist. South Akaska Street. Suite A Juneau A.K 99645

IFDC, 2005. Developing Agricultural Input Markets in Nigeria. End of Project Report Submitted to USAID, Muscle Shoals, Alabana, 35662, U.S.A.

Fred Whitford , C. Richard Edward, Johnathan, J. Neal, Andrew G. Martine, John Osumn and Robert Holling Worth, 2001. Pesticides and personal safety. Purde University Cooperative Extension Services Bulletin , pp20.

Marika Krausova and Afua Branoah Banful, 2009. Over view of Agricultural input Dealers Sector in Ghana.

EJF, 2003. What is your poison .Health Threat posed by insecticides in Developing Countries . Environmental Justice Foundation ,London,U.K.

Ibrahim, U., Mordi, M.O and Anyanu, L. 2009. West Business Review.

Igboro, S.B., Otun. J.A., Ajibike, M.A., Ibrahim F.B. and Nwude , M.O. 2007. Environmental and Industrial safety in a Nigeria Brewery .Proceeding of 3rd National conference of society for occupational safety and environmental health . Awka, M., pp20-23.

Langley, R. and Summer, D. 2002. Pesticides Mortality in the United State of America 1979-1998 *Vet. Hum-Toxico*., 44:101 105

Ibrahim, U., Ibrahim, F.B. and Mohammed, M.O. 2008 . Occupational and environmental safety in a seed company in Nigeria. *Journal of Environmental Research and Policies,* 4(1) :15-19.

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