

# Impacts of Fire Incidence on Agricultural Land-Use in Ekiti State, Nigeria.

Alo Moses Oluwafemi, Adelana Joel Oluwasogo, Ayeni Foluso Olayinka,

*Department of Urban and Regional Planning, School of Environmental Studies,  
The Federal Polytechnic Ado- Ekiti, Ekiti State, Nigeria.*

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## ABSTRACT

This paper examines the incidence of fire on agricultural land use in Ekiti State. Fire is one of environmental hazards that causes serious damage not only to properties but also to plants, animals and human lives as well. Data were generated on cocoa and oil palm produce for five consecutive years; however, questionnaires were also used to generate data on the respondents' experience and opinion about burning of cash crop plantation farmlands in the environment and its impact on their economy. Analysis of the data using both descriptive and inferential statistical methods revealed the causes of fire incidence on cocoa and oil palm farmlands in Ekiti State to include increased activities of dangerous agricultural practices, indiscriminate hunting activities and deliberate action of some disgruntled elements in the neighbourhood among others.. Some of the effects of farm fire in the environment include destruction of soil fertility, cash crop trees, exposure of soil surface to agents of erosion and reduction of both quality and quantity of farm produce. The paper recommends properly coordinated farming activities and effective environmental education as some of the measures for combating adverse effects of farm fire on agricultural land-use.

**Keywords:** farm fire environmental hazard, land-use, produce.

## I. INTRODUCTION

Fire hazard has contributed largely to the destruction of valuable resources (man-made and natural) globally. Yearly, billions of dollar worth of properties has been ravaged and lost to inferno.

In recent time, the rate at which farm fire ravages agricultural land use is alarming and calls for the attention of land managers coupled with environmentalists to quickly rise up to the occasion

in other to address the menace in due course. Hectares of land have been lost to fire incidence in Ekiti State; however, the most critical aspect of it is that the larger part of the land is used for the cultivation of either cereal crops or cash crops. About 1000 hectares of farmland gutted by fire on the 19th of February, 2021 at the Oya Quarters of Omuo-Ekiti. According to the State Environmental Management Agency (SEMA), about 1000 hectares of farmland has been burnt to the ground in Isinbode, Idogbe, Oya, Ijero-omu, Iludofin, and Iworo quarters in Omuo-Ekiti. Cash crops destroyed include cocoa, banana, oil palm and coffee.

## II. LITERATURE REVIEW

Fire has been used as a tool in agriculture from earliest times. Man has used fire to clear land, remove weeds, dispose of waste, and control disease. With improved technology, some of the older uses of fire are no longer needed. Some of these practices have proved detrimental to sound land management (Staffordt,C.B)

'The Chairman, Ido-Osi Local Government Area of Ekiti State, Mr Ayodimeji Adeola, on Friday cautioned farmers against burning bushes in their farms during the dry season. Adeola said this in an interview with the Newsmen in Ido-Ekiti. He said such practice could be disastrous as the fire could extend to other people's farms or property. The chairman urged farmers planning to clear their farms in preparation for the next planting season to be careful and wait to put out the fire before leaving their farms. Adeola added that hunters of grasscutters, rabbits and other wild animals should desist from setting fires on farms and bushes. " I want to appeal to farmers and hunters who are fond of burning bushes to desist from such habits. "Any farmer who wishes to burn bushes on their farms should ensure that he is careful and wait till the fire

goes out before leaving the farm. “We are passionate about the lives and property of our people in Ido-Ekiti and we do not want any carelessness on the part of any farmer to cause havoc in our community,” he said’. (Nigerian Newsdirect.14 March 2022).

Bunmi A (2021) revealed an octogenarian, Nicholas Komolafe, an indigene of Oya quarters, Omuo-Ekiti, Ekiti East Local Government Area of Ekiti State, has been a farmer, who engages Lawrence Ekunode, his peer, in a conversation recounted his great loss through farm fire on his cocoa plantation, “I inherited my farmland from my forefathers and that is my only farmland. The farm is my only source of income to cater for my wife and children. My survival now depends on God. I will appreciate any help that the government renders to us.” Komolafe’s farmland was among the about 1000 hectares of farmland gutted by fire on the 19th of February, 2021 at the Oya Quarters of Omuo-Ekiti, Ekiti State

In 2020, the annual fire disaster report collated by the State Environmental Management Agency (SEMA) shows that fire ravaged farmlands twice in 2020 on the 10th February, 2020 at Eemo Community, Efon Alaaye, Efon Local Government and 3rd December, 2020 at Oke Aso (Formerly Igbo-Aso) Ado Local Government in Ekiti State.

Prof. Olu Omotosho discouraged the practice of bush burning practiced by farmers and hunters. He urged environmentalists to take up the responsibility of sensitising the farmers. He said, “We can discourage farmers from bush burning by advising that after a portion of land is cleared, it should be allowed to decay. It will naturally decay if they could exercise a little patience instead of setting that portion of land on fire and wait till it decays. It will even serve as manure to the land and fertilize the soil. Hunting activities, especially hunting for bush meat, should be discouraged.”

Olalekan Olowoyo, an environmental economist and the executive director, Green Global Environmental Network, explained the myth surrounding soil fertility amongst local farmers. He explained, “The reason why people set bushes on fire is a result of the traditional way of farming. The farmers believe that there will be more

productivity as a result of the potassium from the ashes and that it enhances the productivity of that land. But unknowingly, when you set a place in your farm on fire and you burn it, though there will be production of potassium and some other elements that are useful but invariably you have destroyed the ecosystem.”

He further explained alternative means which farmers can deploy on their farmland. “The farmers can slash and then allow it to decay. When you allow it to decay, the decaying of that debris will have added to the organic content of that soil and then, there will be a resurfacing of other microorganisms that can enhance productivity. Another option is using machineries, tractors or any other machines you want to use just to incorporate the debris into the soil. There are a lot of other means that they can use instead of burning the bush,” he opined. With a note of finality, he noted, “We are discouraging the act, it is not good to set bushes on fire.”

### The study area

This paper covers five Local Government Areas in Ekiti State where farm fire has done its dastard act, namely: at Iloro Ekiti and Ikoro Ekiti in Ijero Local Government area, Omuo-Ekiti, Ekiti East Local Government, Omu Ekiti, Oye Local Government Area, Eemo Community, Efon Alaaye, Efon Local Government and at Oke Aso (Formerly Igbo-Aso) Ado Local Government Larson W. E. and. Beale O. W, "Using Crop Residues on Soils of the HumidArea," U. S. Dept. Agriculture, Farmers Bull

### Methodology

Data for this research work was collected from two main sources:

- Primary Source
- Secondary Source
- Primary source was through reconnaissance survey and questionnaire administration.
- Secondary source was through relevant books , journals, public lectures, written projects on fire incidence and public interest, government officials- ministries and agencies.

## III. FINDINGS AND DISCUSSION

**Table 1: Causes of farm fire in Ekiti State**

	frequency	percentage	Valid percentage	Cumulative percentage

Valid Hunting	49	19.3	19.3	19.3
Dangerous		52.9	52.9	72.2
Agricultural	98	23.8	23.8	96
practices		4	4	100
Herdsmen	30	100	100	
Others	25			
Total	202			

Source: Field survey, 2022

The table above shows that the highest percentage recorded was due to dangerous agricultural practices, followed by hunting and herdsmen.

bush by fire and dangerous hunting practices, in order to combat the menace of farm fire in due course.

#### Effects of burning on Agricultural Land

1. Reduction of nutrients in the soil
2. It exposes the top soil to agents of denudation
3. Destruction of wild animals
4. It reduces the GDP in agricultural produce
5. It leads to psychological effects on the side of farmers
6. It leads to reduction of income
7. Lost of agricultural resources like timbers, fibers etc

#### IV. CONCLUSION AND RECOMMENDATIONS

The study concluded that many factors were responsible for the incessant occurrence of farm fire in Ekiti State; however, the resultant effects were on farmers, soil, market, community and country's economy at large. Therefore, there is need to protect and preserve our agricultural resources from going into extinction. Farmers are to be educated and intimated with new technological innovations like planting of fire-resistant crops, avoidance of old method of clearing

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