

INTERNATIONAL CONFERENCE ON **MOUNTAINS IN THE CHANGING WORLD**

OCTOBER 27-28, 2017 KATHMANDU, NEPAL

CONFIRMATION OF PARTICIPATION & PRESENTATION

Mohammad Farzam

I confirm your participation in the International Conference on 'Mountains in the Changing World (MoChWo)' at Grand Hotel in Kathmandu, Nepal, October 27-28, 2017. The theme of the conference was "Air Pollution, Mechanisms and Consequences".

I acknowledge your poster presentation on "*Spiny and allelopathic shrubs conserve 40 percent of species richness in Binalud Mountain Iran.*"

Thank you for accepting our invitation.

THE SECOND INTERNATIONAL CONFERENCE ON
MOUNTAINS IN THE CHANGING WORLD
October 27-28, 2017, Radisson Hotel, Kathmandu, Nepal

Air Pollution: Mechanisms and Consequences



Dr. Basant Giri, Convener
October 28, 2017

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CONFERENCE PROGRAM & ABSTRACT



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farm size, family labor availability, affiliation to farmers' organizations, number of organic farms in the vicinity, availability of external support, relative price perception, cost of production of organic vegetables, availability of collection centers, distance to market center, availability of external inputs and amount of organic fertilizers. A small sample size and selection of variables are the major weaknesses of this study. Future researches should consider additional important variables for better results. Policy makers should consider provision of better education and raise farmers' awareness regarding the health and environmental benefits of organic farming to foster this sector.

Keywords: organic farming, adoption, logistic regression, socio-economic factors

Insect pest management of vegetable crops using different eco-friendly pesticides in Kathmandu valley (PA-SAP-1-20)

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The study was focused on management of insect pest of cauliflower using eco-friendly pesticides and the survey was conducted in commercially cauliflower growing farms of Kathmandu, Lalitpur and Bhaktapur district during October, 2016. A household survey was conducted with the random sampling method and interviewed with semi-structured questionnaire to assess the status of eco-friendly pesticides. It was found that, among 50 respondents, the major technical constraint was insect problem in cauliflower and broccoli followed by diseases, irrigation and technology. It was also found that majority of the farmers used chemical pesticides in vegetable crops for the management of insect pests. Overuse and misuse of chemical pesticides has developed resistance and results in increasing insects' population. Diamondback moth was found to be a major pest. Even the farmers were well known about botanical pesticide but they were not practicing it because of unavailability of botanical plants. The field experiment was also conducted to assess the efficacy of different botanicals against insect pest of cauliflower. Experimental plot was designed in Randomized Complete Block Design (RCBD) under five treatments and 4 replications. The treatments were homemade bio-fertilizer (T₁), Gitimal (T₂), Bajura pesticide (T₃), Cow urine (T₄) and Control (T₅). From the experiment it was found that homemade bio-fertilizer has causes more impact on height of plant (25.09±10.71) and number of leaves (11.75±1.95). Similar trend of impact was revealed in Canopy of cauliflower crops with the application of Gitimal (29.59±9.41) and homemade bio-fertilizer (29.39±12.9). Bajura pesticides showed highest reduction of insect pest population after first spray (7 DAT=85.82%, 14 DAT=66.35), second spray (7 DAT=93.92%, 14 DAT=74.03%) and third spray (7 DAT=96.71%, 14 DAT=92.70%). Similarly, another field experiment was carried out with the different concentration of Bajura pesticide to assess the appropriate dose of pesticide to apply in RCBD with 5 treatments and 4 replications. Treatments were in concentration of 1:5 and 1:10 which were sprayed in 7 days and 14 days interval which were indicated as 1:5 at 7 days (T₁), 1:5 at 14 days (T₂), 1:10 at 7 days (T₃), 1:10 at 14 days (T₄) and control (T₅). 1:10 at 7 days was found more effective against the health of plant and in terms of insect pest population reduction compared with other treatment. Our study focuses on the formulation and use of eco-friendly pesticides.

Keywords: randomized block design, pest population, dose, cauliflower

Plant community diversity-invasibility in the mountainous rangelands of northeast Iran (PA-SAP-1-100)

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Invasive plant species are from the major treats to the stability of mountainous ecosystems. High and selective livestock grazing create spaces for expansion of invasive plants in the expense of native rangeland species. Climate variability and species diversity may also cause contrasting effects on the invasibility of noxious plants. Relationship between plant community diversity and invasibility were studied at different distances from livestock resting points (LRP) and at three climatic regions i.e. arid (200 mm), semiarid (380 mm) and dry sub-humid (600 mm), in the mountainous rangelands of northeast Iran. 90 quadrates were established along 18 transects, which had been located within 9 macro-plots in 3 regions. Results indicate, positive relationship between species diversity versus invasibility along the rainfall gradient (abiotic factor) but negative relations along the livestock grazing (biotic factor) gradient. Both species diversity and invasibility increased along the rainfall gradient from the arid to dry sub-humid regions. However in each climatic regions, livestock grazing had negatively affected species diversity but increased community invasibility near LRP, where the livestock had induced highest grazing pressure. In conclusion, our results indicate high importance of species diversity for protecting the mountain ecosystems against the expansion of invasive plants. Nevertheless, high livestock grazing can diminish species diversity, by creating open spaces and providing more opportunities for expansion of invasive plants. Hence, it is a serious threat to stability of terrestrial vegetation in the mountainous ecosystems.

Keywords: ecosystems, invasive plants, climatic regions, livestock, grazing

