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**RATES OF FORMULATED ORGANIC LIQUID PLANT SUPPLEMENTS FOR  
CARROT (*Daucus carota*) GROWN IN FARM UNDER CONVERSION  
TO ORGANIC PRODUCTION**

**Carlito P. Laurean, Asuncion L. Nagpala**

College of Agriculture  
Benguet State University

**ABSTRACT**

The study was conducted to develop nutrient management strategies for carrot in farms under conversion to organic production. Specifically, the study determined: 1) the effects of formulated organic liquid plant supplements on the growth and yield of carrot in farm under conversion to organic production, 2) the best rate of the formulated organic liquid plant supplements for the production of carrot in farm under conversion to organic production, and 3) the effects of the formulated organic liquid plant supplements on some physical and chemical properties of the soil in farm under conversion to organic production. The effect of the different rates of formulated organic liquid plant supplements on carrot grown in a farm under conversion to organic production differed significantly in terms of the marketable and total yield of carrots. Application of formulated organic liquid plant supplements at the rate of 70:20:10, 20:70:10, and 10:20:70 during seedling, vegetative, and root bulking stage, respectively, produced the highest marketable and total yield. Application of formulated organic liquid plant supplements significantly affected the organic matter and total nitrogen content of the soil in farm under conversion to organic production wherein the rate 80:10:10 (SS)/ 10:80:10 (VS)/ 10:10:80 (RB) resulted to the highest organic matter content of the soil after harvest. The application of formulated organic liquid plant supplements at different rates did not differ significantly in terms of plant height, insect pest infestation, and powdery mildew infection, soil bulk density, soil pH, available phosphorus content and potassium content.

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**TIME USE STUDY EXPLORING THE LINKAGES BETWEEN WELL BEING  
AND CLIMATE CHANGE: A CASE STUDY OF FARMING COMMUNITIES  
IN NORTHERN PHILIPPINES**

**Ruth S. Batani**

Institute of Social Research and Development  
Benguet State University

**ABSTRACT**

The study looked at the work and well-being of women and their households in selected communities in the Cordillera Region., Northern Philippines. It employed gender analysis of paid and unpaid work using time use framework. Using time use diary and stylized time use questionnaire, coupled with focus group discussions and indepth interviews, finding shows that households are continuously exposed to health and well-being risks and heightening ‘unpaid work’ scenarios which extends to the bigger community through rendering of voluntary service. A detailed picture of how members of a household spend their time during the day is revealing of gender disparity. Another area where gender difference is aparent is in terms of leisure time. Leisure for women also means doing simultaneous work. The ‘integrative’ roles played by women- is that they are to assume roles that are ‘voluntary’ to enable the continuity of survival inside and outside the homes. Women consistently figure on taking on the responsibility of community care. Overall, certain climatic changes poses constraints and limitations to households. Crops planted by these farming communities are highly vulnerable to climate changes. It is also an area where women’s resilience are negotiated but at the same time where women’s vulnerabilities are heightened. The understanding of these complexities of a ‘normalized’ and ignored situation calls for a framework that do not take out the women’s work in the farm in isolation from the work women perform at home and in the community. These findings unpack layers of unpaid work yet necessary activities to sustaining lives of households and communities.

**Keywords:** *Climate change, perceptions, level of awareness, academe, survey*

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**MILK FEEDING PRACTICES AND KNOWLEDGE ON BREASTFEEDING  
AMONG NURSING EMPLOYEES IN SELECTED GOVERNMENT OFFICES  
IN BAGUIO CITY & LA TRINIDAD, BENGUET**

**Imelda P. Olati-Degay**

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Benguet State University

**ABSTRACT**

This research was conducted to determine the milk feeding practices and level of knowledge of the mother respondents on breastfeeding. A cross sectional survey was done among 87 nursing mothers in nine regional offices in the Cordillera Administrative Region, one from the academe and three from local government units in La Trinidad and Baguio City. While a few mothers practiced exclusive breastfeeding, mix feeding, which is, a combination of breast and bottle feeding, prevailed as the dominant milk feeding practice. The primary factor considered in selecting the feeding method was the child's health. Breastfeeding was initiated few hours after birth while bottle and mix feeding were initiated at varied times implying initial practice of breastfeeding. Cessation of milk feeding varied from a few months after birth to as long as 24 months or even beyond. Most nursing mothers are very knowledgeable on many aspects of breastfeeding. Breastfeeding within work hours is usually not achieved due to heavy workload and distance from home among breastfeeding mothers. Conversely, bottle and mix feeding are challenged by the expensive cost of infant formulas and painful breast due to engorgement arising from incomplete emptying of breasts. Hence, most breastfeeding mothers enjoy extended and compensable break time. One of the identified problems for complete breastfeeding among nursing mothers is that few workplaces have the comfort of lactation rooms or child care center.. Most nursing mothers who practice bottle feeding felt that they do not enjoy the benefits of being a mother at all. Common perceived needs range from extended maternity leave, breastfeeding periods during work hours, and provision of lactation rooms. The enhancement of breastfeeding campaigns and implementation of all the provisions of the Expanded Breastfeeding Act of 2009 (RA 10028) by all stakeholders may encourage more mothers to breastfeed.

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## CYTOLOGICAL EFFECTS OF MEDICINAL PLANT EXTRACTS USING THE *Allium* TEST

**Elizabeth T. Dom-ogen and Lorenza G. Lirio**

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Benguet State University

### ABSTRACT

Conducted from April to July 2009 this study determined the effect of the hot water extracts of medicinal plants *Centella asiatica*, *Plantago major*, *Sarcandra glabra* and *Smallanthus sonchifolia* on the cells of the *Allium cepa* L. root tips particularly on mitotic index, found out the possible cytological effects of the extracts on the occurrence of chromosome abnormalities, and determined the effects of the extracts on the gross morphological parameters of the roots. Onion root tips treated with *C. asiatica*, *P. major*, *S. glabra* and *S. sonchifolia*, plant leaf extracts showed high mitotic indices in the metaphase stage, 101.3%, 113.0%, 139.0% and 144.7%, respectively. Cells failed to divide at telophase as proven by mitotic index, 28.0% (*C. asiatica*), and 27.7% (*P. major*), 26.0% (*S. glabra*) and 18.3% (*S. sonchifolia*) respectively compared to the control with 49.3% indicating inhibition of cell division. Likewise, the plant extract-treated onion cells exhibited some abnormalities in the chromosomes such as: c metaphase or c-mitosis in *S. sonchifolia*, *S. glabra* and *P. major*-treated cells; and anaphase chromosome bridges in *C. asiatica*-treated cells. Extracts from *C. asiatica* and *P. major* showed lower degree of cytotoxicity as compared to that of *S. glabra* and *S. sonchifolia*. Comparing with the normal cell growth and development in the control (distilled water), macroscopic abnormalities were also observed such as root swellings or c-tumor in *C. asiatica*-treated root.

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**PHYTONUTRIENT ANALYSES OF *PANAWIL***  
**(*Leptosolena Haenkei*, C. PRESL)**

**Joyce N. Paing and Louisa P. Pladio**

College of Arts and Sciences,  
Benguet State University

**ABSTRACT**

*Panawil* (*Leptosolena haenkei* C. Presl) belongs to the family *Zingiberaceae* which is endemic to Northern Luzon, Philippines. It thrives in cluster in a very specific area of Benguet and Mountain Province. The phytonutrient analyses revealed that the indigenous vegetable *panawil* is a rich source of phytochemicals. These include the terpenoids, tannins, flavonoids, total phenolics, and antioxidants. The minerals found are phosphorus, potassium, iron, and zinc while are vitamins A ( $\beta$ -carotene) and C (ascorbic acid). With the observed many phytochemicals, the *panawil* plant is a rich source of phytonutrients. Phytonutrient analyses of the plant samples collected from different parts of Benguet and Mountain Province reveal that there is no significant difference. On the other hand, there is a high significant difference on vitamin C of *panawil* both from Benguet and Mountain Province.

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- \* To strengthen and enhance institutional capability in generating revenue towards self-reliance;
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