Journal of Agricultural Economics and Development
Vol. 26, No. 3, Fall 2012, p. 17

نشریه اقتصاد و توسعه کشاورزی (علوم و صنایع کشاورزی)
جلد ۲۶، شماره ۳، پاییز ۱۳۹۱، ص. ۱۷

Application Meta-Goal Programming in Agriculture Case Study: Neyshabour City

H. Sakhdari[1]- M. Sabuohi[2*]

Received: 8-6-2011
Accepted: 23-10-2012

Abstract

In a region, optimal allocation of lands to various agricultural products is one of the most important issue associated with optimal use of agricultural resources. Meta-Goal Programming is one of the multiple criteria decision models. This Programming provides more flexible decisions for decision makers than other goal Programming. In the current study, optimal cropping pattern was determined using Goal and Meta-Goal Programming for agriculture in Neyshabour district. Results showed that, the total cultivated area is estimated less in the Goal Programming than Meta-Goal Programming. Furthermore, the cultivated area of wheat was estimated as the largest area in the all optimal cropping pattern. Considering the huge changes in the policies associated with allocation of resource subsidies and a sharp reduction in the water resources during the recent years, the study recommends using the optimal cropping pattern by which goal deviation is assumed low.

Keywords: Meta-Goal Programming, Optimal cultivation pattern, Neyshabour

1,2- MSc Student and Assistant Professor, Department of Agricultural Economic, Faculty of Agriculture, University of Zabol
(*-Corresponding Author Email: saboohi@uoz.ac.ir)

Journal of Agricultural Economics and Development
Vol. 26, No. 3, Fall 2012, p. 18

نشریه اقتصاد و توسعه کشاورزی (علوم و صنایع کشاورزی)
جلد ۲۶، شماره ۳، پاییز ۱۳۹۱، ص. ۱۸

Analysis of The Cost Structure and Economies of Scale of Broiler Industry (Case Study: Kurdistan Province)

M. Haji Rahimi[1]*- M. Fahimzadeh [2] - M. Nemati[3]- R. Meshkat[4]

Received: 19-8- 2011
Accepted: 4-11- 2012

Abstract:

Demand for consumption of protein, as a result of improvement in the income and nutrition levels, has a rapid growth in developing countries. Broiler industry has a crucial role in providing protein. To design an optimal plan and to use the potential resources, analyzing cost structure of this industry is required. In this study, cost structure and economies of scale of broiler industry were analyzed using cost function. The data were collected from 68 broiler farms in Kurdistan province, in a simple stochastic random sampling method. Results showed that the cost of broiler feed had the largest proportion of product expenditure. Demand for all inputs was inelastic. Estimation of the economies of scale measure, showed increasing returns to scale; supporting development of the larger size of broiler farms for future in Kurdistan province. As a large proportion of the expenditure was to import products, to develop the industrial sector a priority should be given for producing food in the province.

Keywords: Cost function, Economies of scale, Broiler, Kurdistan province

1- Assistant Professor, Department of Agricultural Economics, Faculty of Agriculture, University of Kurdistan
(*- Corresponding Author Email: mhajirahimi@uok.ac.ir)
2,3,4- MSc Students of Agricultural Economics Department, Faculty of Agriculture, University of Tehran

Journal of Agricultural Economics and Development
Vol. 26, No. 3, Fall 2012, p. 19

نشریه اقتصاد و توسعه کشاورزی (علوم و صنایع کشاورزی)
جلد ۲۶، شماره ۳، پاییز ۱۳۹۱، ص. ۱۹

Factors Affecting On Bread Waste In Bahar County

K. Naderi Mahdei[1*]- M. Aazami [2]- H. Fathi[3]

Received:29-11-2011
Accepted:17-7-2012

Abstract

Food security in Iran has closely relation with wheat and flour and its waste. The study of food pattern in the Iran provinces shows that bread is the major source of calorie and protein in the country daily diet. The main purpose of this study was to analyze factors, affecting bread wastes in the Bahar county in the Hamedan province. The research was conducted based on the applied-descriptive. Data were collected by survey method and questionnaire. The research instrument was questionnaires that validity was confirmed by a panel of faculty members. Reliability was measured by Cronbachs' alpha. The coefficient at α=0.78 was considered acceptable. Using random sampling , the sample size was measured 150 based on the Cochran formula. SPSS16 software and factor analysis method was used for data analyzing. According to the findings of descriptive analysis, factors such as weak monitoring in the bakeries, low price of flour and low skill and experiences of workers were the major causes of bread wastes. Also results of factor analysis were extract five factors affecting on bread waste. The realized factors were technical factor related to production and bake, cultural factor, economical factor, consuming factor and governmental factor that explained 62 percentage of variation of waste. The study findings are useful to design appropriate strategies aimed at reducing bread wastes.

Keywords: Bread, Bread wastes, Effective factors, Socio-economic factors, Technical factor

1,2,3- Assistant Professors, and MSc Student, Department of Agricultural Extension & Education, Department of Agricultural Extension & Education, Faculty of Agriculture, University of Tehran, Iran.
(* - Corresponding Author: Email: knadery@yahoo.com)

Journal of Agricultural Economics and Development
Vol. 26, No. 3, Fall 2012, p. 20

نشریه اقتصاد و توسعه کشاورزی (علوم و صنایع کشاورزی)
جلد ۲۶، شماره ۳، پاییز ۱۳۹۱، ص. ۲۰

Optimal Replacement Strategy for Dairy Cows with Diverse Milk Production Capacity in Fars Province

M. Bakhshoodeh [1] - S.A. Seyed Salehi [2]*- M. Mohebbi Fani[3]

Received: 12-12-2011
Accepted: 10-10-2012

Abstract

The objective of this study was to determine the optimum replacement strategy using dynamic programming for dairy herds in Fars province. A dairy cow is kept several lactations for milk production in the herd. After spending several lactations, milk production gradually begins to decline, while animal health problems rises simultaneously. So one of the most important management decisions of dairy herd is optimal replacement of dairy cow with a young heifer. Dairy cows were described in terms of state variables that included parity, production capacity and reproductive status. The objective function was maximization of the net present value for cows over a 10 lactation planning horizon. Data was related to 406 cows from dairy herds in Fars province (2010). Optimal Replacement strategy was separately investigated for three group of production capacity. Results of dynamic programming model showed that the optimal dairy cows keeping in the herd is two, four and six lactation, respectively for low, medium and high producers. Marcov simulation under the optimal decision plan that is determined by dynamic programming showed an expected herd life (time from first calving until culling) of 4.32 yr. Finally, after running the basic scenario, sensitivity analysis demonstrated changes in the price of heifers, milk price and salvage value of dairy cow effects on average herd life and net present value of dairy cows. Optimal replacement strategy and culling dairy cow older than the optimum age is recommended to improve the profitability of dairy farm.

Keywords: Dairy cows, Replacement, Dynamic Programming, Fars Province

1, 2- Professor and MSc Student of Agricultural Economics, College of Agriculture, Shiraz University, Shiraz, Iran
(* - Corresponding Author Email: Salehi.abb@hotmail.com)
3- Associate Professor of Animal Health Management, Faculty of Veterinary Medicine, Shiraz University, Shiraz, Iran

Journal of Agricultural Economics and Development
Vol. 26, No. 3, Fall 2012, p. 21

نشریه اقتصاد و توسعه کشاورزی (علوم و صنایع کشاورزی)
جلد ۲۶، شماره ۳، پاییز ۱۳۹۱، ص. ۲۱

Water Resources Management and Food Security in Zayandeh Rud Basin: An Integrated River Basin Analysis

A. Nikouei[1*]- M. Zibaei[2]
Received: 21-4-2012
Accepted: 30-10-2012

Abstract

Irrigated agriculture is an important contributor to the expansion of national food supplies and is expected to play a major role in food security of developing countries. Such countries face water crisis for securing the food staples. Well designed water resource policies potentially can improve the water allocation and use efficiency as well as the food security objectives. This paper presents an hyrdro-economic model implemented through the development of an integrated basin framework for sustaining water resources uses and addressing the food security goals. The objective is to maximize the discounted net present value of the sum of both use and environmental economic benefits over a 10 year time horizon, subject to the basin's hydrological, agronomic, institutional, and economic structure. Using this approach, optimal water allocations and uses is examined in Zayandeh-Rud River Basin of central Iran. This policy is evaluated against a background of two alternative hydrologic supply scenarios. Three important data sources including survey data, incidental studies, reports, and selected expert knowledge were used to assign all needed data for the model. Results reveal that this program not only increases basin's irrigation efficiency, but also improves the food security through increasing proportional sharing of downstream irrigated districts in the food staple productions under reduced water supply. The study approach and the results contributes to realize effective policies toward sustainable management of water resources under water scarcity circumstances. We conclude that river basin analysis within an integrated framework would considerably enhance the effectiveness of sustainable water resource management as well as provide food security for current and future generations.

Keywords: Water resources management, Integrated basin model, Food security, Zayandeh rud
JEL classification: C6;Q25

1,2- PhD Student and Professor, Department of Agricultural Economic, Faculty of Agriculture, University of Shiraz
(*-Corresponding Author Email: anikooie@yahoo.com)

Journal of Agricultural Economics and Development
Vol. 26, No. 3, Fall 2012, p. 22

نشریه اقتصاد و توسعه کشاورزی (علوم و صنایع کشاورزی)
جلد ۲۶، شماره ۳، پاییز ۱۳۹۱، ص. ۲۲

Pistachio Production Structure in Damghan

M. Rashidghalam[1]* - Gh. Dashti[2]- Z. Rasooli[3]- F. Aminian[4]

Received: 16-4-2012
Accepted: 10-10-2012

Abstract

Implementation of effective input policies and technology consistent with production structure contributes to the economic use of the production. Understanding the price elasticity of input and relationship between inputs in the agricultural sector is helpful in choosing appropriate input policy. In this study we examine the production structure of pistachio in Damghan. To achieve the goal, Translog Cost Function and Derived Cost Share Equations were estimated using the theory of duality in a system of simultaneous equations within the framework of unrelated regression. Data were collected from 177 farmers in 1387. According to the results, price elasticities of inputs are negative. All of the cross- elasticities of inputs indicate complementary relationship between inputs, except for chemical fertilizer and labor as well as elasticity between chemical fertilizer and poison. Based on the calculated price elasticity, demand of labor, poison and animal fertilizer are inelastic. The results of study showed that the pistachio production has decreasing returns to scale at 0.72 percent. This indicates that farmers are not able to economize their products by increasing the size of their farms. The study recommends investigations on policies aimed at realizing the factors that increase production including pistachio fertilizer, poision and labour.

Keywords: Damghan, Pistachio, Production structure, Return to scale, Translog cost function

1,2,3,4- PhD Student, Associate Professor and MS of Agricultural Economics Department, Faculty of Agriculture, Tabriz University, Respectively
(* - Corresponding Author Email: M65_aes@yahoo.com)

Journal of Agricultural Economics and Development
Vol. 26, No. 3, Fall 2012, p. 23

نشریه اقتصاد و توسعه کشاورزی (علوم و صنایع کشاورزی)
جلد ۲۶، شماره ۳، پاییز ۱۳۹۱، ص. ۲۳

The Impact of Innovation on the Market Share Instability, Case study of the Iranian Food and Drinking Industries (LSTR Approach)

H. Asgharpour[1*] – F. Fallahi[2] A. Dehghani[3]

Received: 7-6-2012
Accepted: 3-12-2012

Abstract

The main objective of this paper is to investigate the effect of innovation on the market share instability in the Iranian Food and drinking industry with a 4- digit code. According to Schumpeter that states one of the most important hypothesis in this area, says there are a Non-linear and an inverse of U-shaped relationship between the two variables of innovation and market share instability. To test the Schumpeter's hypothesis for the Iranian food and drinking industries over the period of 1995:1-2009:4, we used the LSTR approach. The results show that there is a non-linear relationship between innovation and market share instability (or competitive dynamics) in the food and drinking industries in Iran. The Iranian government should inform the Firms, producing the food and drinking products, that research and development expenditures increase their market shares and thus raise their profits. Furthermore, financial incentives (such as tax exemptions or compensation income of enterprises manufacturing food and drinking in Iran, increased funding for industrial research, subsidies for startup or equipment R & D units of firms in the food and drinking industries, the exemption of customs duty on capital equipment of the research units and so on) provide circumstances for the firms to develop their R & D activities.

Keywords: Innovation, Market Share, Market Share Instability, Iranian Food and Drinking Industries, LSTR Approach.

JEL Classification**:** C22:L10:M37

1,2,3- Associate Professor, Assistant Professor and PhD Student of Economics, University of Tabriz, Respectively
(* - Corresponding Author Email: asgharpurh@gmail.com)

Journal of Agricultural Economics and Development
Vol. 26, No. 3, Fall 2012, p. 24

نشریه اقتصاد و توسعه کشاورزی (علوم و صنایع کشاورزی)
جلد ۲۶، شماره ۳، پاییز ۱۳۹۱، ص. ۲۴

The Effect of Production Subsidies Elimination on Agricultural Sector Using General Equilibrium Model

F. Alijani[1*]- M. Salarpour[2]- M. Sabouhi[3]

Received: 20-6-2012
Accepted: 4-11-2012

Abstract

Considering the importance of the impact of subsidy reform on the agricultural sector, the study aimed at understanding consequences of changes in the rates of production subsidy using General equilibrium model based on input-output table in the year 2001.The study conducted based on three scenarios containing step, down and finally removed rates of production subsidy. The effects on production, value added, employment, export and import activities in the agricultural sector were analyzed. Results showed that production, value added and export of cultivation, livestock and poultry activities have been reduced more than other activities in the field. Results also showed that employment in sub-sections of the agricultural sector and paltry activities have been reduced. Furthermore, elimination of production subsidies had a negative impact on the fish imports, while the impact was positive for imports of other products. Therefore, since the policy had negative impact on the agricultural products, supporting agricultural sector along with reduction in the government's expenditures is recommended.

Keywords: Agricultural sector, Production subsidy, Computable General Equilibrium

1,2,3- PhD Student, Assistant Professor and Associate Professor, Department of Agricultural Economic, Faculty of Agriculture, University of Zabol, Respectively
(*-Corresponding Author Email: alijani2004@gmail.com)