Journal of Agricultural Economics and Development
Vol. 26, No. 2, Summer 2012, p. 9

نشریه اقتصاد و توسعه کشاورزی (علوم و صنایع کشاورزی)
جلد ۲۶، شماره ۲، تابستان ۱۳۹۱، ص. ۹

Estimating Rate of Return on the Research and Development investment in the Iranian Agricultural Sector

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Received: 04-12-2010
Accepted: 19-06-2012

Abstract

Nowadays, agricultural R&D provides new and developed technologies to create modern agricultural producing methods. This paper investigates the relationship between TFP, domestic agricultural R&D, and foreign agricultural R&D during 1979 – 2009 by using Almon lag models. The results indicate that agricultural researches (both domestic and foreign R&D) have positive and significant impact on the agricultural TFP. According to the result, the long term coefficients for both domestic and international agricultural R&D were 0.16 and 0.19%, respectively. The Average of the internal rate of return (AIRR) was calculated up to 37 % for Iranian agricultural sector. The AIRR in Iran is low compared to the AIRR in developing countries, which is 54%. The results suggest that the government investment on the improvement in the human capital and the level of farmers' knowledge influence the AIRR and TFP, positively.Furthermore the government should pay attention to the selection of the partner countries

Keywords: TFP, Partner R&D, MIRR

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Journal of Agricultural Economics and Development
Vol. 26, No. 2, Summer 2012, p. 10

نشریه اقتصاد و توسعه کشاورزی (علوم و صنایع کشاورزی)
جلد ۲۶، شماره ۲، تابستان ۱۳۹۱، ص. ۱۰

The impact of government expenditure on the overall economic growth and the growth of the Agricultural Sector in Iran
Economic Growth in Iran

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Received: 09-06-2010
Accepted: 05-09-2012

Abstract

Considering the importance of the agriculture sector in Iran, this study investigated factors affecting economic growth and development of the agriculture sector in Iran over the period of 1967-2009 for short term and long term, using ARDL model. The results showed that the ratios of public investment expenditure to the GDP for short-term and long term have positive impacts on the economic growth. However, the dummy variables of revolution, war and the oil shock have negative effects on the economic growth. It is worth mentioning that in the short term the ratio of private investment expenditure to the GDP does not have a significant effect on the economic growth. Meanwhile, in the agricultural sector the ratio of private sector investment to the value added caused by the private sector has a positive effect on the agricultural growth. Furthermore, the ratio of the public sector investment to the value added, have positive effects on the agricultural growth. The employment rate, however, has a negative impact on the growth of the agriculture sector .Within a short-term, in the agricultural sector the ratio of private sector investment to the value added and the ratio of public sector investment to the value added, have positive. The dummy variable o war has a significant negative effect and the other variables have no significant effect. Error correction coefficient shows that the total effect of a government policy on the economic growth and the agricultural growth is observable in a short period of time. Ultimately, the economic growth in Iran is mainly nfluanced by the public setor nvestment the agricultural sector is mainly influenced by the private sector investment. A simultaneous development of public and private sector investment contributes to the total growth and the agricultural growth.

Keywords: Agriculture sector, Economoc, growth, Employment, investment, Iran

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Journal of Agricultural Economics and Development
Vol. 26, No. 2, Summer 2012, p. 11

نشریه اقتصاد و توسعه کشاورزی (علوم و صنایع کشاورزی)
جلد ۲۶، شماره ۲، تابستان ۱۳۹۱، ص. ۱۱

Canola Growers' Educational Needs Assessment in Zebarkhan County of Neyshabour
Indigenous and Scientific Knowledge Integration

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Received: 08-05-2011
Accepted: 27-08-2012

Abstract

In the recent years, increasing demand for products such as protein-rich meals and oilseeds has caused the food basket to shift towards the proteins and fats consumption. This change has been happening in Iran too. Shortage in oilseed productions has been a serious problem in Iran. To overcome the problem, the government planed some programs to encourage oilseed productions. Beside government's programs to encourage oilseed productions, educational programs are required. The educational programs should be organized based on the farmers' educational needs. To achieve the goal, an accurate educational model is required. This study attempted at assessing Canola growers' educational needs in Zebarkhan county of Neyshabour, using Ortiz's model. The survey was based on a structured questionnaire. To select the study interviewees, simple classified random sampling was used and eventually 60 farmers completed the study questionnaires. The results showed that canola grower's education needs differ between two canola growers groups. Those farmers who ceased canola cultivation needed 50% more training than those who continued canola production in the study year.. The practical programs were not effective and appropriate for farmers. As a result of that, farmers who ceased canola cultivation were not interested in re-cultivating the plant. Due that the canola cultivation is manageable, continuous studies on scientific and indigenous knowledge integration is suggested.

Keywords: Canola, Indigenous and scientific knowledge integration, Neyshabour, Iran

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Journal of Agricultural Economics and Development
Vol. 26, No. 2, Summer 2012, p. 12

نشریه اقتصاد و توسعه کشاورزی (علوم و صنایع کشاورزی)
جلد ۲۶، شماره ۲، تابستان ۱۳۹۱، ص. ۱۲

A welfare Analysis of the Government Interventions in the Wheat Market and Its Influence on the Barley Market in Iran, using a Game Theoretic approach

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Received: 02-07-2011
Accepted: 05-09-2012

Abstract

Iran achieved its self-sufficiency goal in wheat production a few years ago. Some opponents argue that the increased wheat production has happened at the expense of decreasing other grains specially barley. Considering the dependency of wheat and barley markets on each other, the study estimates policy preference functions for each market, separately. Using weights according to the political indicies, game theory approach was utilized to investigate welfare impacts of such attempt. Results not only justified the arguments but indicated that welfare has been transmitted from wheat producers to consumers and the government as well. Despite having producer and consumer surpluses in wheat market, the high expenses of government lead welfare losses, while the welfare surplus in the barley market was positive. Finally, overall Nash equilibrium as the best strategy occurs by 15% decrease in wheat-cultivated area and 20% decrease in barley production cost. These results undoubtedly imply that the optimal social welfare is associated with mitigating government role in the wheat market.

Keywords: Wheat market polices, Political weighs, Welfare change, Game theory, Wheat and barley markets

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Journal of Agricultural Economics and Development
Vol. 26, No. 2, Summer 2012, p. 13

نشریه اقتصاد و توسعه کشاورزی (علوم و صنایع کشاورزی)
جلد ۲۶، شماره ۲، تابستان ۱۳۹۱، ص. ۱۳

A Survey on the Efficiency of Greenhouse Cucumber: using the approach of Interval Data Envelopment

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Received: 03-10-2011
Accepted: 26-08-2012

Abstract

Analyzing the efficiency of agricultural productions plays an important role in raising their productions and performances without spending extra cost. This study evaluated the interval efficiency of greenhouse cucumber for some subsectors of Sistan region. The study conducted based on the approach of Data Envelopment Analysis (DEA). The data and information were collected in the year 2009 by the two organizations of Jihad Agriculture and Agriculture Bank. The two organizations attempted at completing 42 questionnaires responded by greenhouse cucumber farmers. The results showed that the average interval efficiency was between 0.033 and 0.908 . The average technical efficiency was 0.954. Of the total data, 53.33% have efficiency equal to 1. The highest and the lowest efficiency was 100% and 0.846 respectively. The results indicate that programs aimed at improving farmers' technical efficiency, such as performance of educational classes, causes the production to increase and the expenses to decrease without many changes at the level of technology and resource inputs.

Keywords: Interval Efficiency, DEA, Cucumber Greenhouse, Sistan

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Journal of Agricultural Economics and Development
Vol. 26, No. 2, Summer 2012, p. 14

نشریه اقتصاد و توسعه کشاورزی (علوم و صنایع کشاورزی)
جلد ۲۶، شماره ۲، تابستان ۱۳۹۱، ص. ۱۴

A Study of the business and development level associated with Job Skills of Agricultural Applied-Scientific Students of West Azerbaijan Province of Iran

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Received: 10-12-2011
Accepted: 19-09-2012

Abstract

Agricultural applied-scientific education that develops the practical skills of students to getter with theoretical education can development of job skills take steps with development of job skills in educational programs in reinforcing the specification, abilities and skills of students. The aim of the study was to investigate the rate of the Business and the development of job skills of agricultural applied-scientific students of West Azerbaijan province of Iran in 2010. The study was performed based on the general frame of research survey. The statistical community of the study was645 applied-scientific students. The sample were160 that were calculated by the Cochran formula. And the data was chosen through the random stratified sampling. The validity of the study instrument was confirmed by the professors of Tehran and Teacher Training Universities and agricultural applies-scientific specialists. The reliability of the study was calculated by Cronbachs' alpha coefficient (r=0/82) for the whole questionnaire variables . The coefficient shows that the instrument of the study was reliable. The data were analyzed by SPSS win software. The results of the spearmen's' correlation coefficient showed that there is positive and significant relationship between age, the level of father education, monthly family earnings, the application of entrepreneurship education methods and developing job skills of students. With consideration to the importance of the agricultural applied- scientific education and the need of agricultural sector to professional graduators in business and development of the job skills, the study suggests that the educational workshops should be considered as the most effective educational method. The priority should be given to the content of the major lessons. In different stages, the syllabuses should be designed at the purpose of training students to improve their skills for hunting jobs, professions and business.

Key Words: Development, job Skills, Students, Applied-scientific, Agriculture, Employment

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Journal of Agricultural Economics and Development
Vol. 26, No. 2, Summer 2012, p. 15

نشریه اقتصاد و توسعه کشاورزی (علوم و صنایع کشاورزی)
جلد ۲۶، شماره ۲، تابستان ۱۳۹۱، ص. ۱۵

Economic Pricing of Water in Agriculture using Ramsey Approach

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Received:17-01-2012
Accepted:25-08-2012

Abstract

The serious obstacles to improve water supply, has caused world debates, seeking some solutions to tackle the problem of shortages in water supply. t. Therefore, programs and policies have focused mainly on appropriate pricing approachof. Since the water industry in Iran has been monopolized by the government, an effective pricing approach is assumed to maximize the social welfare with consideration to the cost. . To consider the mentioned aspects to price water, this study used the Ramsey approach. Thy study estimated the Ramsey price of water used for the agricultural sector in Hamadan province of Iran.To determine the price, the Agricultural water demand function was estimated using time series data for the years 1370-88. Using the estimated demand function the price elasticity of demand was calculated. The water production function was also estimated using time series data for the years 1370-88.In order to estimate supply and demand functions, the ARDL model and Microfit econometric software were used. Using production function and demand function, the marginal cost and price elasticity were calculated. Applying the calculated ratios through MATLAB software, the Ramsey price of water for agriculture was measured. According to the results of this study, in the year 1388 the Ramsey price of water for agriculture was more than the paid price for industry.

Keywords: Pricing, Optimize Ramsey, Water, Agriculture

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Journal of Agricultural Economics and Development
Vol. 26, No. 2, Summer 2012, p. 16

نشریه اقتصاد و توسعه کشاورزی (علوم و صنایع کشاورزی)
جلد ۲۶، شماره ۲، تابستان ۱۳۹۱، ص. ۱۶

Investigating Importance of Iran and Main Country's market, Namely Soybean Importer Goal Countries and Soybean Production Relation with this State

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Received: 18-01-2012
Accepted: 26-08-2012

Abstract

According to amount of oil seeds import in Iran are more than 80% of domestic needs, in this study, import comparative advantage in soybeans using RCA and RSCA index is calculated in 1961-2008 periods for Iran and ten important importer countries. Iran's Competition state is investigated. Also long run relation between production and import comparative advantage index is estimated using Johansen test and Vector Error Correction Model (VECM). Results show that Iran has import comparative advantage in soybean import, but shock effects on amount of this index, adjusted in more time than others. Therefore, exporter countries will have less willingness for export to Iran. In this aspect, importance of domestic production's increase for domestic needs will be imperative. Also results showed that with increasing domestic production in long run, amount of Iran's import comparative advantage will be decreased and therefore with decreasing import to country, less exchange will be out of our country.

Keywords: Import Advantage, Domestic Production, Long Run Relation, Soybean, Iran

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