Original Contribution

ECONOMIC ANALYSIS YAGHOTI GRAPE PRODUCTION IN SISTAN AREA

M. Mohammad Ghasemi*, M. Reza Naroui Rad, S. Koohkan

Scientific member boards of Agriculture and Natural Resources Research Center of sistan-Iran

ABSTRACT

Grape production is important source for creation employment and income in sistan and Baluchistan province, especially in sistan area. Natural and geographical condition very suitable for production and export of grape if may be companation with reasonable production acts, marketing, will be high comparative advantage. This is at present that breeding formers face to face with different difficult that recent drought years had violent. this study performed with aim of economic analysis yaghoti grape production in sistan area with production function, one degree and cobb douglas method ordinary least square and Ewies software. Data of this investigation was collected in 2005-2004 year with questionnaire and with sampling method of random classification from breeding formers. Independent variable of production functions, costs: fertilizer of herbivorous animal, chemical fertilizer, labor, machinery, poison, another cost, land (m^2) and depended variable was production value include grape. The result showed that determine coefficients 0.63and 0.55 and all of calculated determine (except about chemical fertilizer) is positive. Negative coefficient of chemical fertilizer result of decrease rainfall, was perfect water and fertilizer and gardener difficult for adoption with drought condition. This subject obligation use from method of water consumption productivity. The sum of coefficient cobb douglas higher than one show increase return to scale. Production elasticizes except chemical fertilizer that is negative, all of positive and less than one and labor production elasticizes is higher than other inputs. With the attention to difficult violent unemployment in sistan and Baluchistan province, high labor production elasticizes can provide appropriate field for creation employment and decrease unemployment in province.

Key words: Economic analysis, production function,yaghoti grape, sistan

INTRODUCTION

Grape is a plant that arrival its arising biography according to tradition period nooh excellency. In Greece myths from this fruit had used for preparing to alcoholic liquors. Breeding this crop in the west Asian arrival to 2000-2500 years before the birth of Christ (B.C) and after than Islamic domination in Iran use from grape for nonalcoholic production (1). According to statistic of grape international institution in Paris area. Grape cultivation in continents to cause ecological condition and different production factor is to description one schedule furthermore grape production from area cultivation point of view consists of: Spanish 1740000 Italy 14060000 france13200000 and iran16200000 hectare 2/8 percentage world production of grape after

countries: Spanish. Turkey and argentine rests in Iran (2). Cultivation area in sistan surface was before drought 2200-2500 hectare and after drought is equal to 640 hectar (3).

Hasanpoor in economic analysis of grape estimation technical efficiency formers in kohkiloyeh and boyerahmad showed that amount of increase return to scale in water and dry farming in vineyard is 1/39 and0/65 and all of factor had rested to consumption farmers to object logical and economic. So without increase cultivation area and enjoyment from present technical alone with technical efficiency improvement can increase grape production of province about 35 percentage (4). Arsalanbod, in economic analysis of apple production in oromiyeh with use from one degree and cobb douglas method ordinary least square had resulted that the sum of coefficient cobb douglas higher than one and shown

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*Correspondence to: *M.Ghasemi,*
e-mail: m56ghasemi@gmail.com,
Tel number : 00989151424430

increase return to scale and also show that if increase garden activity, will economize in costs. Productions elasticity, except fertilizer is negative, all of positive and higher than one and labor production elasticity very higher from another inputs (1). Natural and geographical condition very suitable for production and export of grape if may be compensation with reasonable production acts, marketing, will be high comparative advantage from production mention and that more than creation employment and income can revenue to exports important item. Cultivars able to cultivation in area include: fakhri, yaghoti, sangak, amiri, shaste aros, cheshme gave and gholami, that more area cultivation related to yaghoti cultivate; yaghoti grape with characterize unique that in two decade may arrived that production to market. Yaghoti grape is the important product in province and one of the important resource creation employment and income in sistan area (3).

Limited investigation and studies , scattered and preliminary that from past about this production had performance in sistan and baluchistan province, specially in sistan area, showed that gardener in about mention production had was in very cases facing economic difficult, recent drought years had violent. Also this study, with aim of economic analysis grape production performance in sistan.

METHODS STUDY
Economic analysis of grape has performed with use from production function on degree and cobb Douglas (5, 6, 7, 8, 9). That generally function is follows:
$Y = a_0 + ax_1 + ax_2 + \ldots$
$Y = Ax_1{}^{a1} x_2{}^{a2} x_3{}^{a3}$

For estimate this function had used of regression method ordinary least square (10, 11, 12, 13, 14). And software that used for calculated has Ewies (13).

In grape garden, the main product is grape. Also the quality of grape production and result, that price not equal. In about inputs cases is in congruous and in result, different price also dependent variable of production function, is more value of output garden and independents variables (except land) more value of inputs that had used in garden calculation that has details is to description follows:
Y: value of garden production (grape)

X1: cost of domesticated fertilizer
X2: cost of chemical fertilizer
X3: cost of labor
X4: garden area (m^2)
X5: cost of machinery
X6: another cost
X7: cost of poison

Sample society was generated grape formers in sistan area. In each village selection sample with complete random. Data related to 2005 year that provide with questionnaire with submitting to sample garden and complete.

RESULTS AND DISCUSSION
Result of statistical calculated has come to two schedule. Numbers related to F about each function, was assumption zero reject of confidents. Adjustment determine coefficient in about one degree function showed that 63/78 percentage changes that observation in value of production in gardeners grape (dependent variables) was related to in dependent variable such as: value of fertilizer of herbivorous animal, chemical fertilizer and another cause and area garden . In about cob-douglas function this number is 55/18 percentage. Coefficient of DW in about each two function showed there was not auto correlation. Several coefficients in each two function except chemical fertilizer coefficient, is positive. Negative coefficient of chemical fertilizer result of decrease rainfall, was perfect water and fertilizer and gardener difficult for adoption with drought condition this subject obligation use from method of water consumption productivity.

In cob-douglas function each of coefficient variables is seem to production elasticity of that input . Production elasticity show that in equal one percentage change in independent variable, how mane percentage change dependent variable. For example coefficient 0/115244 in about fertilizer of herbivorous animal show that one percentage increase in value of fertilizer of herbivorous animal value of garden production increase higher than 0/11 percentage. Productions elasticity except about chemical fertilizer that is negative , all of is positive and small than one. The sum of coefficient cobb Douglas show return to scale. Because the sum of coefficient is higher than one. This condition have about agricultural activity and production of tree fruit in other point.

Interesting point that is productions elasticity cost of labor factor is very higher than other output. As condition has observation in production of date in bushier province and apple in Azerbaijan province (14).

This topic is seem to high potential capacity for employment in grape production. Also with pay attention to unemployment in sistan and baluchistan province and with pay attention to labor production elasticity can provide appropriate field for create increase employment and decrease unemployment in area province.

SUGGESTIONS
With pay attention to economic place and grape employment despite of water limitation in sistan area, has suggest while entrance water area, revenue of store waters with performance plans and performance projects are requirement, collection research plans, breeding and keeping of grape, decrease of damages packing, transportation, changing industrial, economic study, social and learn gardener scientific and operation steps in development and employment of area.

Schedule one: grape production from area cultivation

Total percentage	Million hectar	Continent name
73	7/409	Oropa
14/3	1/476	Asian
15	0/516	American
3/6	0/458	afrigha

Source fao production year book 2004

Schedule two: result of regression analysis related to productions function

cob-douglas function			one degree production function			Independent variable
Std.Error	t	coefficient	Std.Error	t	coefficient	
0/114101	1/010020	0/115244	2/646607	0/472475	1/250455	X1
0/081502	-1/200908	-0/024090	0/465409	-0/645588	-0/300469	X2
0/035390	9/582616	0/781098	0/0170080	6/850147	1/165070	X3
0/035390	1/578153	0/055851	620/7948	1/893665	1175/577	X4
0/012569	0/876063	0/048278	7/168047	1/75211	12/55921	X5
0/055119	1/266432	0/025418	1/198049	1/329775	2/92291	X6
0/061911	0/0256524	0/78406	4/385055	0/941454	4/1288	X7
0/72			0/80			R^2
0/55			0/63			R^2.Adj
4/20106			4/8158			F
1/507603			1/967664			DW

Source: obtained investigation

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