

Organic agriculture and production of medicinal plants

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ABSTRACT: According to the important role of medicinal plants in different industries, it is important to increasing production of biomass produced without the use of harmful chemical. The use of microbial symbiosis with species of medicinal plants and organic fertilizers and organic agriculture on yield and quality be effective. Studies on medicinal plants indicate that maximum yield and quality in the use of organic fertilizers and biological achieved. The global approach in medicinal plants as well as the establishment of the system of management and organic farming methods are applied. Few studies have compared the biological fertilizers and organic fertilizers on the growth and yield of medicinal plants has been done. To achieve sustainable development and the realization of the goals agricultural policies and the use of a solution suitable for providing food in the form of needs of organic agriculture will be necessary that the use of the fertilizer and biological organic solution can be effective. This study examines the production of medicinal plants and produce high quality products using organic farming practices are discussed.

Keywords: organic agriculture, medicinal plants, bio fertilizers, organic fertilizers

INTRODUCTION

The simplest definition of organic agriculture as "farming without adding chemical and industry material" is defined. Organic farming is known by different names in different countries including 16 named for its biological agriculture, sustainable farming and agriculture creator is mentioned. Organic farming has led to the implementation of economic and social benefit, and this despite the fact that conventional farming patterns irreparable damage to the country's biological resources. At the beginning of the implementation of organic agriculture, the creation and maintenance of the same and the costs and agricultural productivity are significantly reduced. Potential effects on the public health system can, natural resources, livestock, water and enrichment of soil fertility and etc.

Medicinal Plants - The plant is said that all of its components are either fresh, dried or processed for diagnosis, treatment, prevention, helping to maintain the health of humans or animals and other physiological functions of the plant used process. Due to the important role of medicinal plants in different industries, it is important to increasing production of biomass produced without the use of skins. The use of organic farming methods, improving yield and quality, they will be effective. In the last decade, agricultural production, which is mainly based on the use of chemical material is causing environmental problems. One of the pathways to resolve this problem, apply the long-term strategies based on the principles of ecological agriculture in agricultural professionalism. Organic agriculture, an integrated system based on ecological principles of professionalism.

In this system, instead of foreigners such types of fertilizers and crop rotation with legumes, crop residue, manure types, organic and biological can be used, in addition to food storage in soil, grass Inserts weed and pest control and increase biodiversity on farms. The use of biofertilizers is an ecological way to keep active and soil in organic farming systems is critical. In addition to providing nutrients to be fully compatible with the natural nutrition of plants,

contributing to biodiversity, escalate critical activities, improve the quality and maintain the overall health of the environment and protect the National the reason is the application of biofertilizers.

Soil microorganisms and their role in increasing the solubility of phosphorus

Soil microorganisms are the primary metabolites production and secretion of inorganic minerals and organic compounds in the soil can affect the results in the release of phosphorus and dissolved phosphorus in the soil to be. The soil microorganisms using organic compounds containing phosphorus-carbon sources, leading to mineralization of organic phosphorus in the tissues. Mineralization process is usually done using enzymatic response. It combines the most effective enzymes are alkaline, acidic and alkaline phosphatase are mainly two ways. These processes lead to the release of P by a variety of other microorganisms and plants are consumed (Subba Roa, 1988). Research results is the ability of different strains of bacteria to dissolve the insoluble inorganic phosphates such as tricalcium phosphate, dicalcium phosphate, rock phosphate and hydroxyapatite-D show (Goldstein, 1986). Organic acids produced by bacteria in solubilizing inorganic phosphates is well-established as the main mechanism of dissolution of mineral phosphates by soil bacteria has been detected (Rodríguez and Reynaldo, 1999). Among the organic acids, acid Gliconice as on of the most important factors is the dissolution of inorganic phosphates (Dalal, 1977). The production of organic acids by phosphate solubilizing bacteria belonging to the genera, *Rhizobium*, and *Bvrkvldrya Arvynya* been reported. Organic acids produced both through an increase in available phosphorus by lowering the pH of the rhizosphere-the one and the other of the ions from chelated aluminum in acid soils and calcium ions in alkaline soils (Rodríguez and Reynaldo, 1999). The phosphate solubilizing bacteria belonging to the genus *Pseudomonas* and *Thiobacillus*.

All the industrial production of biological fertilizers, a mixture of several types of bacteria, the addition of phosphate to stimulate plant growth and increase yield potential solutions are being developed. Examples of this type of development in mixed microbial fertilizer -my name is. It is a fertilizer containing *Bacillus* and increase in uptake of nitrogen and phosphorus in the plants (Rodríguez and Reynaldo, 1999). Jat and Shaktawa test results in 2003 showed that results of biological phosphate fertilizer compared with triple superphosphate fertilizers in corn, soybean and wheat revealed that the amendments were satisfactory, as the specified biological phosphate fertilizer, an increase considerable performance in elderly people. The results showed that the use of phosphorus fertilizer treatments and the interaction between bacteria of the genus *Bacillus* and phosphorus in agricultural and biological fertilizers were significant (tanvar, 2002). Other researchers have also reported that the combined and phosphate nutrients to improve crop yield in poor soil (Singh and Kapoor, 1998). Goenadi (1998) reported the use of biofertilizers along with 50 to 75% of fertilizer production, production and yield performance similar to that obtained use 100 percent of fertilizer. The glucoside of crocin (color saffron) in the treatment of consolidated 2.5 kg and 75 kg urea was Nitroxin biofertilizer (Omidi , 1388). This may be because of biofertilizers on providing compounds, materials, hormones and vitamins soluble in water, creating a state of mutual cooperation with other microorganisms produce compounds affecting the biosynthesis glucoside and analysis of the secondary composite involved Nieto and Frankenberger, 1989). Gikhanh test conducted on corn indicated that if the rock phosphate, phosphate solubilizing microorganisms was added, as well as the treatment of sulfur and sulfur-oxidizing bacteria are used, the results obtained in terms of dry weight and uptake of nitrogen, and P, no significant difference in the use of triple superphosphate (Nurgoli Pour , 2004). Use of rock phosphate, organic matter, sulfur and *Thiobacillus* the farm, forage maize production in the 6/84 tons per hectare reduced, while the performance of triple superphosphate 7/76 tons per acre have been reported (Lotf olahi etal, 2004). Effect of phosphate solubilizing bacteria and phosphorus (in 3 levels of 0, 50 and 150 kg ammonium phosphate ha) on growth and yield parameters Agria potatoes in the Arak region of Karaj. Application of 50 and 100 kg per hectare of fertilizer phosphorus and phosphate solubilizing bacteria gave the highest yield in Karaj and Arak (Madani, 2006). During the 90's many successful investigations on phosphate solubilizing bacteria in Taiwan took place. Crops such as peanuts, ornamental plants and vegetables was significantly after inoculation, the production yield (Chabot ., 1996). The experiment indicated that the bacteria not only increases the performance and quality of products, but also chemical and organic fertilizers decreased by half to one-third (Antoun, 2005). The use of biological fertilizers containing the bacteria *Azotobacter* and *Azospirillum* in medicinal plant *Salvia* (*Salvia officinalis*) increased plant height and shoot dry weight (Vande Broek, 1999 and Youssef ., 2004). The medicinal plant garden thyme (*Thymus vulgaris*) caused a significant increase in the use of biological fertilizers, plant growth (Youssef ., 2004).

Effect of Organic Fertilizer on Morphological Characteristics of plants

Today wrong use of natural resources and use artificial materials with explosives like all kinds of mineral fertilizers in order to produce and more units of agricultural lands and the existing as a basic problem of destruction of the environment and the biological balance is known (Mishra and Nayak, 2004).

Therefore compost production can be as a suitable method of management for removing superfluous materials solid into materials with value and is considered as a tool in controlling different types of debris and the reduction in fertilizer consumption in agricultural products and mineral absorption elements increase low consumption by plants. Research done in this field, some of the positive effects this article in organic growth and improved quality characteristics plants has shown that. (Razvie kord mahale, 2001)

In this context, vermicomposting is a valuable technique, fast and effective (in terms of cost and time) for the management of organic residues have been reported in the literature (Garg, 2006). The production of compost successful technique to recover the remains of the food chain, even in small places like soil. The resulting material is known to be a substance called vermicompost completely different appearance and condition of the material itself (Dickerson, 1994). Vermicompost have nutrients such as phosphorus, potassium, calcium and magnesium in a form that is readily available for plant uptake, respectively (Atiyeh, 2002). It was also reported that vermicompost containing biologically active substances that act as growth regulators (Tomati, 1983, 1987). In the case of weeds (*Tripura bispinosa*), the results showed that application of vermicompost alters the soil pH to the neutral concentration of nitrogen, phosphorus, potassium and calcium are available (Chaudhuri, 2001). The growth tomato even in conditions with low replacement swelling of physical factors and nutrition like the growth created by swelling for that growth in and under conditions full access to food elements active (Atiyeh, 2000).

The results showed that the rates and quality of essential oil of basil (Azizi, 2004) and Roman chamomile (Liuc and Pank, 2005), was the application of vermicompost. This style of manure, no odor and is free of weed seeds. Processing is easier than takes a short time (Atiyeh, 2002). Vermicompost beneficial aerobic microorganisms such compost the other containing the other hand, the absence of anaerobic bacteria, fungi and microorganisms are pathogenic. Vermicompost pit-like materials with pores, capacity, aeration, drainage and water holding capacity was built to absorb high levels of nutrients are. In comparison with the original parent material, vermicompost contains less soluble salts, humic acid and the cation exchange capacity of most concern (Atiyeh, 2000). During in compost production the swelling by worms smell of organic materials and the remnants of the destroyed, the speed of analysis they increased and physical and chemical change these materials and organic materials to unstable oxide aerobic exercises and a lasting comes in (Albanell, 1988). Materials and leftovers warm mostly have the nitrogen and phosphorus to the amount of 5 to 11 times more than the earth and other elements and micro elements also in which more than the typical and secretions in digestion system Worms, food elements to elements with the capability to access (Bachman and Metzger, 1998). The result of data showed that vermicompost results by increasing the water-holding capacity, nutrient supply and production of plant hormones that have beneficial effects on seed germination, plant growth and development could be improved, especially ornamental plants (Tomati, 1987). Singh (2003) Effect of compost on the increased production of some medicinal plants such as PP and Arugula studied. By increasing the proportion of compost in the soil, plant biomass and increased fruit yield components also showed substantial increases. Khandan (2004) Increased plant height *Psyllium* (*Plantago ovata* L.) reported on the use of compost. Singh (2003) reported that biomass components of medicinal herbs such as *psyllium*, (*Hyoscyamus niger* L.) and rue (*Ruta graveolens* L.) by increasing the amount of compost in the soil increased. Application of organic matter in manure organic carbon levels in the soil increases the direct and indirect effects on soil properties and processes (Prakash, 2007). One sign of the stability of soil organic carbon production system under a series of management operations, for soil quality by improving soil structure, nutrient retention and increased biological activity (Ghosh, 2002). use of the manure cattle along with phosphorus mineral percent phosphorus recycling increase Fertilizer use a trap along with phosphorus causes the increase in amount of phosphorus in part CBC (citrate-Carbonate-Tionat). This career can be due to the formation of complex organic phosphorus with metallic oxides iron. use of the manure cattle in comparison with phosphorus treatment in addition to organic matter caused the increase in phosphorus part NaCl-NaOH existing soils are mixed (Hajnia and, 2006). Azizi (2008) showed that the increasing consumption organic fertilizers improve Significant Digit height shrubs, soon flowering, and the diameter receptacle and the function of Gaul. Studies has shown that the effect that organic fertilizers due to changing physical conditions and chemical and biological characteristics and bio cultivation environment (Brussard for research, 1997) and also the Significant Digit pH and the increase in capacity and maintenance elements moisture in food cultivation environment (McGinnis, 2003). a trap with fertilizers improve soil physical characteristics led to the rise and better root to increase its plant growth and biological performance of. An increase in consumption by biomass produced in organic fertilizers in *santolina* also has been reported (Scheffer and Koehler, 1993). Use of organic materials and fertilizers a trap in the

plant medicine green cumin on component performance of plant has had a considerable influence in such a way that the most attendance wormicompost component affected by the performance of plant like number of umbrella in the crucible and the number of seed in umbrella (Saeed nejad and Rezvani mogadam, 2009). The increase in performance of grain consumption of fertilizer organic cultivation system in a trap plant medicine also has been observed (Akbari Nia and , 2002). Yadav in research (2003) increase plant height medications by a trap fertilizer consumption report. other researchers also reported that growth height and vegetative plant fertilizer consumption by a trap in the plant strawberries will increase (Norman and arancon, 2006). environmental conditions are the same in providing elements for Plant Food by different fertilizers can increase the number of plant growth and subsequently secondary branch plant. In an experiment using 30 tons of fertilizer in hectares a trap caused the increase secondary metabolites(*Matricaria chamomilla*)(Jahani and Kuchki, 2001). In another test in order to study the plant of manure cattle was done by different levels of the performance of a trap fertilizer seed but the bushes height, the number of cluster, weight thousand seed, and performance of straw and stubble of sighnificant (Tabrizi, 2004). In an experiment on fertilizer use in organic mint pepper plant performance was done in organic cultivation about 80% of current Cultivation (Kalra, 2003). Moradi (2009) in the study of organic fertilizers and biological characteristics of the quantitative and qualitative plant medicine applying fennel juice report to use organic materials has increased the number of seeds in an umbrella. It seems that improving the situation plant and increase plant available water in the soil physical properties improve consumption of fertilizers in organic cattle and increase power plant growth, increasing the number of umbrellas in the crucible and the number of seed in umbrella and consequently the number of seeds in the crucible has increased. In the plant the most green medicine cumin seed weight thousand in attendance achieved and after that swelling, fertilizer and manure cow sheep most thousand seed weight were produced (Saeed nejad and Rezvani mogadam, 2009). Use organic fertilizers and cattle caused the increase in green performance of cumin seed biological performance of, the number of umbrellas in the crucible, the number of seed in umbrella height and bushes. While thousand seed weight and the index of treatment took effect under the soil. In the treatment also care swelling have the highest performance of biological (1065 Kg in hectares) and performance of the most seed (477 Kg in hectares). In the majority of attributes of care swelling have the highest quantities of it was (Saeed nejad and Rezvani mogadam, 2009). Delate (2000) effect to increase the plant dry weight beebalm (*officinalis Melissa go*) to report. The increase in dry weight figure air plant pepper with the increase in swelling levels has been reported (Arancon . , 2004). One of the main factors determining plant height, providing food elements needed plant, treatments organic fertilizer with slow elements provide food as a good and caused the increase plant height. In a test on Basil, use fertilizers combined inorganic and mineral plant height increased the to use mineral fertilizers alone (Kandeel , 2002). Attendance swelling height most shrubs in cumin plant green showed and after that a cow manure ,and manure sheep the most height bushes to produce (Saeed nejad and Rezvani mogadam, 2009). With regard to the higher of the amount of the food elements especially nitrogen in swelling compared to other compounds and use in stimulating the growth vegetative plant height bushes in this attendance increased. Delate (2000) will increase height bushes by adding compost report. Khandan (2005) stated that different quantities of chemical fertilizers were the number of cluster in the crucible in the plant not, but different levels meaningful compost . Drazi and in the year 2010 an experiment on plant medicine anise (*Pimpinella anisum*) under treatments swelling compost and biological phosphate manure. The results from this study showed that the highest Height shrubs, performance of seed performance of biological and number of umbrella in the crucible with the use 10 of swelling compost but weight under the influence of wormicompost. also have a biological phosphate manure influence height bushes and weight, but it means-you have had on other qualities in a way that the most number of umbrella in the crucible, the function of biological and performance of seed with two use biological phosphate manure . Bio-fertilizers, plant growth increased with increasing bacterial activity, the effect of organic and chemical fertilizers to increase agricultural production (Zhang . , 2007 and Shata . , 2007). With the use of organic manure and chemical fertilizer and organic fertilizer Integrated ideal conditions for plant growth is provided, not only there is no effect of the antagonism between them, but they complement each other. Humus, organic fertilizer production and fertilizer use efficiency to reduce the harmful effects of chemical fertilizers to increase location. Bio-fertilizers and plant growth enhancing effects by increasing bacterial activity of chemical and organic fertilizers in agricultural production increase (Shata . , 2007). Manure increased from 5 to 20 tons per hectare from 7.13 to 9.14 cm in diameter and increased sunflower seed weight was 4.4 to 7.7 g. The researchers report that the highest seed yield and oil yield of combined treatment with fertilizer (50% nitrogen fertilizer + 20 tons of manure per hectare) were produced (Utayasoorian . , 1991). Ram and Patel in 1992 to investigate the effect of organic fertilizers and chemical Sunflower stated that the application of chemical fertilizer can yield the manure obtained in the treatment of animal manure and chemical fertilizer on grain yield than the application of animal manure only because application of manure and chemical fertilizer increased grain weight from 4/40 to 64/43 was hot. The organic carbon and nitrogen available in the soil

increases. The similar results by Munir in 2007 for evaluation of organic fertilizer on sunflower production (poultry and livestock) and chemical and combined, respectively. Highest yield in the combined treatment (50% fertilizer + poultry manure) were obtained in 100% yield compared to chemical fertilizer is 100% organic fertilizers (manure, poultry manure) were produced.

Effect of organic and bio fertilizer on secondary metabolites of medicinal plants

Studies on medicinal plants indicate that maximum yield and quality in the use of organic fertilizers and biological achieved (Anwar ., 2005). The global approach in the production of medicinal plants to the system deployment and utilization management techniques such as biological fertilizers.

The highest essential oil content in Badrshbv (*Dracocephalum moldavica* L.) in phosphate-fertilized plots Nitroxin + phosfat 2 and the highest essential oil yield and harvest index, leaf dry matter was obtained in the treatment Nitroxin (Rahim Zadeh , 1390). Kapoor (2004) also reported that the use of mycorrhiza and organic phosphate was increased anethole in fennel essential oil. They said they have a favorable bio-fertilizer treatments compared with chemical fertilizer, far conditions for microbial activity in the soil provide useful and adequate whilst providing for the macro and micro minerals FENNEL to increase the quality of this essential oil It was. Leithy (2006) also tested the effect of Azotobacter biofertilizer for increasing oil plant rosemary (*Rosmarinus officinalis* L.) were noted. The results indicate that the use of phosphate solubilizing bacteria and nitrogen fixation in Marjoram herbs and essential oil yield is the percentage increase (Gharib ., 2008). They increase the oil content of these fertilizers inoculation due to the increase in number of gland secretion and biosynthesis monoterpenes stated. The results show that increase in available phosphorus in the soil can significantly increase the concentration of chlorophyll A (28%) and total chlorophyll (19%) is (Smith and Read, 1997). The medicinal plant Vinca (*Caharanthus roseus*) plants inoculated with the bacterium *Pseudomonas fluorescens* increased biomass production and alkaloid content of the plant was under stress conditions (Abdul-Jaleel ., 2007). Containing organic matter, increasing soil water holding capacity, improving plant hormone-like activity, increase nutrient uptake by plants, and generally improve the chemical and physical structure of plant litter, including the reasons for increasing the yield of organic fertilizers it has been reported (Bachman and Metzger, 1998). In the study, were grown under organic basil essential oil yield has more than doubled compared to conventional chemical fertilizers were fed Basil (Khalid ., 2006). In another study chamomile essential oil content and the amount of compounds in organic farming conditions were far higher than conventional farming (Vildova ., 2006). Scheffer and Koehler (1993) reported that increased production and use of organic fertilizer in Yarrow essential oil is also increasing. During research on rosemary plant, were compared to inoculation with nitrogen, phosphorus and potassium fertilizer treatments microorganisms, higher oil yield showed the highest oil yield was related to a combination of compost and microorganisms that cause these increasing effect on increasing growth characteristics and chemical composition of microorganisms as and also mentioned that this effect may be due to the increased number of secretory glands (Abdelaziz ., 2007). Anwar (2005) Effect of vermicompost and vermicompost on basil observed that in addition to the oils of the plant to increase the amount of linalool and methyl kavykol was the essence of. Hashemi majd (2004) also showed that application of vermicompost increases the amount of iron, zinc, manganese, copper and other nutrients compared to the control treatment.

Weeds control in organic agriculture

Heavy cost and consuming poisons caused farmers less than these materials used and with the use of appropriate methods and costs less that they can increase their profits. Based on experiences of the farmers and results of research done by researchers in it is clear that in a series of the agricultural and physical killers tend to control of weedy grass that there is can be while decreasing dependence on farmers to grass tanker are area of improving environmental conditions and gain appropriate in the production also provide for user.

The main alternative would be to implement crop rotation, intercropping system use, cover plants with allelopathic properties, the use of pathogens, insect pests and weeds in tillage implement specific methods cited in this paper in of each of these methods and their impact on weed control and reduce population dialogue (Kuchaki , 1998).

Term crop rotation

Use the alternation farming the main framework sustainable control of weedy grass of any agricultural genome a few with the execution of the problem due to the interactions of the weedy grass will not be on the way but we can expand it to limited and the changes in the array of more as we are. There farming of plants special to the particular of the weedy grass that synonymous in the habit with their growth under the influence are so different products with alternate cropping in investigation time and history in cultivation, can be competitive and the need for food with different, can be and the production of a certain grass of the weedy virtue (Kuchaki and , 1998). Aldrich (1984)

reported in corn genome-wheat and soya in comparison with each successive cultivation of these products of the grass population still has been reduced by the he concluded that successive cultivation a product the most opportunity for such of the weedy grass well with compatible environment have been provided in the performance of sequencing using the such opportunities for the have been mentioned with the limitations faced.

The system mixed cultivation by relying on the use of plants or a suffocating cover properties with alopatic advantages of using the alternation of the various farming and long, attention to short term economic output may be farmers to use the systems of cultivation single-product plants encourage minimal. Mixed planting one of the ways that the possibility of using farmers use the canvas without knowledge that it does not need to be modified implant products cash (Kuchaki and , 1998). In general it can be said that in mixed cultivation with shadow of operation and strangled the weedy grass farming plants by the rapid growth of weedy grass farm without the slightest damage environmental control and spending a lot. Also the qualities alopatic farming some plants can be as a means to overcome the grass of the weedy used(Kuchaki and , 1998).

Use of plants cover

In this farming method of plants in a field which the plant covered with operations and plow on it has been cultivated in these plant farming method in are the result of the previous plant by grass ground like public gliaifosit or dry or the remains of the previous harvest of special stage in harvest and farm level in distributed planting. As an example Shilling (1985) reported despite plant covers, live weight weeds vegetables and cock crown red and the amount of the 96 percent reduced. In another test by Brasko in the year 1987 was done on land that was under the cover the remains of rye was killed. In this test when to plant flowering stage and by reaper and cut in farm level was broadcast and soya in soil with the remains of rye was covered, was killed. With the implementation of such a method of weedy grass growth broad leaf by the amount of much decreased and only for the control of the car bushes rye grass and some are a little bit tanker grass be used. Pantam in 1983 reported that in Crete that kinds of bean not to plow under the remnants of rye cultivation was in comparison with the Crete without to common method were plowed by growth of weedy Grass about 80 percent. For raasons the decrease sprouting and growth of weedy grass in the land under the cover of the alopatic effects. Materials alopatic right from the dismemberment of the country plant remnants of sprouting and growth of many weeds especially the broad front leaf. On this basis many of the grass of the weedy conditions compatible with that in it always was rolling over. Do not respond with plow in such systems that an agent for change environmental conditions necessary for sprouting seeds of this such as the weedy grass can it reduced.

use of insects and pest disease elements for weedy grass

insects and disease factors breeding plant as the agent of the biological control of weedy grass to is playing a role in the system a little bit of agriculture have played. Of the insects as the agent of the weedy grass control in cultivation of a few years with more success has been used for environmental resistance more in cultivation of a few years it will be possible to provide that kind of bug can with the number of the at least in the field has been abandoned then the crowd so much to remain in the field to host plant abundance (grass weedy) low. Use of insects in cultivation of a year with problem seated, for enough time to raise insects. To solve this problem must be insects at high compliance with laboratory, to be able to farm under the cover. Due to cost limitations compliance with insects and their proliferation in the fields generated limitations for the Use insects in cultivation year. To solve this problem can be with the change in environmental fields effect insets native on the grass of the weedy on the issue. For example Lasteth and Hus (1988) showed that some kinds of native beetle in the system without the plow agriculture soya spread System Balance the plow has been introduced and in such systems the weedy grass more by animals that have been attack.

disease factors that can be in control of weedy grass used mushrooms. Mushroom cultivation in the year and a few years old ability a lot in controlling grass weedy. production cost mushrooms to insects and less to choose host insects in more specialized. According to the these factors useful in the control of weedy grass Come (Chrudatan and Dloch1988). For example it is possible to control *Cyperus esculentus* by mushrooms *canalicuicu*; ated as the agent of disease is called. use of this fungus in the early spring on the farm growth host *Cyperus esculentus* and the formation of lymph nodes to 46 and 66 percent and reduced the voting flowers to completely stop. Of course so far has been prepared for mushrooms (Fanak and · 1987) *Alternaria cassaiiae* as a tanker bio grass control in some parts of the grass as the weedy fields important soya in the southeast united states used. reports about the weedy grass control farms corn and cotton by factors disease generator have been given (Kuchaki and · 1998). In using this method should be the important point that insect or disease agent opportunities that use the plant as the host farming does not use. use this method to control the weedy grass and plant family farming can be danger of invasion

to energy plant farming along with. To prevent this danger and a conscious select useful and should Billaud and Loozi the period of life, diet, reproduction and the manner of voting and the host damage of the pest or disease agent was sufficient knowledge generator.

Using the special flame plow and bombers

to use the time means like claw ghazi, recision and cog that cut grass and root Out the weedy, can still be effective and grass to a large extent replaced the grass use tanker are, especially those that cost of producing and consuming grass tanker for a hectares farm about 8-4 use of the instruments is plow (Kuchaki and ' 1998). In the case such as product of grain granule to be killed too, can be the tools such as used provided that such use of the instruments and the rise of the sprouting plant the main negative effect. With this method can be the grass establishment of weedy young yet to control can be provided after the seed bed if you have enough plant cultivation farming was delayed resumption to the weedy grass in green by rain or irrigation and as a tool with claw like industry, recision or discs that style he destroyed this point should be that only use mechanical instruments of control of weedy grass a year and the grass was still a few years old and with his body might say underground cannot be with this method of control (Kuchaki and ' 1998). The weedy grass burning by fire one other method control of the weedy grass. The essence of this method is the tissue of the plant exposed to heat about 100-90 degrees centigrade to a short time about a tenth to two tenth of second is burning plant but also for cell of watering, the conclusion cheap cell and destroy the wall. use of the rays bombers for the weedy grass control on when the row is still agricultural product of the soil and grass is not taken out of the weedy green in stage 2-3 cm-meter (Kuchaki and ' 1998).

Conclusion

Using the organic agriculture in land with regard to the status of soils are mixed dry regions is a necessity. At the present time the unbalanced and the chemical fertilizer caused firstly quality products not only inferior but also in some cases of stores compounds toxic to enter the food chain to be health threatening human and other creatures. Therefore control for the conditions and the environment using a biological fertilizer solution constitution. study lasting for optimal use biological fertilizers in agricultural lands of the needs of other and macro programming to support of biological fertilizers production and consumption in fertile conditions is a necessity. Old control like the implementation of alternation and plow and also methods of the new use of the rays like bombers and pests and disease factors generator against the weedy grass farm can be substitution suitable for grass tanker, provided that enough research about them and all aspects should be considered.

REFERENCES

- Abdelaziz M, Pokluda R and Abdelwahab MM. 2007. Influence of compost, microorganisms and NPK fertilizer upon growth, chemical composition and essential oil production of *Rosmarinus officinalis* L. *Notulae Botanicae Horti Agrobotanici*, 35: 86-90.
- Abdul-Jaleel C, Manivannan P, Sankar B, Kishorekumar A, Gopi R, Somasundaram R and Panneerselvam R. 2007. *Pseudomonas fluorescense* enhance biomass yield and ajmalicine production in *Catharanthus roseus* under water deficit stress. *Colloids and Surfaces B: Biointerfaces*, 60:7-11.
- AkbryNya O, Ghalavand O, Blade P, Tahmasbi G, Noble OR and Rezaei M. 2002. Ajowan yield and active ingredients in conventional farming systems, organic and integrated. Abstracts of Crop Science Congress. Seed and Plant Improvement Institute, Karaj. Page 52.
- Albanell E, Plaixats J and Cabrero T. 1988. Chemical changes during vermicomposting (*Eisenia fetida*) of Sheep manure mixed with cotton industrial wasres. *Biology and Fertility of soils*, 6: 266-269
- Antoun H. 2005. Field and greenhouse trials performed with Phosphate solubilizing bacteria and fungi. Departement of soil and agri food engineering. *Jurnal of faculty of agriculture and food Science*. Canada, Pp: 8.
- Anwar M, Patra DD, Chand S, Alpesh K, Naqvi AA and Khanuja SPS. 2005. Effect of organic manures and inorganic fertilizer on growth, herb and oil yield, nutrient accumulation and oil quality of French basil. *Communications in Soil Science and Plant Analysis*, 36(13): 1737-174.
- Arancon NQ, Edwards CA, Bierman P, Welch C and Metzger JD. 2004. Influences of vermicomposts on field emergence, development and grain yield of winter wheat (*Triticum aestivum* L.) and winter barley (*Hordeum vulgare* L.). *Seed Science and Technology*, 21: 159-178.
- Atiyeh RM, Arancon N, Edwards CA and Metzger JD. 2002a. Incorporation of earthwormprocessed organic wastes into greenhouse container media for production of marigolds. *Bioresource Technology*, 81(2)103-108.
- Atiyeh RM, Arancon N, Edwards CA and Metzger JD. 2002b. The influence of humic acids derived from earthworm processed organic wastes on plant growth. *Bioresource Technology*, 84(1): 7- 14.
- Atiyeh RM, Edwards CA, Subler S and Metzger JD. 2000. Earthworm-processed organic wastes as components of horticultural potting media for growing marigold and vegetable seedlings. *Compost Science and Utilization*, 8(3): 215-223.
- Azizi M, Lkzyan D and Baghani D. 2004. Effects of different doses of vermicompost on growth and essential oil content of basil modified. Abstract Proceedings of the Second International Conference on Medicinal Plants, Tehran. Page 32.
- Azizi MRF, Hassanzadeh Khayyat M, Lkzyan OR and blessing H. 2008. effects of vermicompost and irrigation on morphological characteristics of the Gvral German chamomile essential oil. *Journal of Medicinal and Aromatic Plants Research*. 24 (1): 82-93.
- Bachman G. 1998. The use of vermicompost as a media amendment growth of tomatoes. *Plant Nutrition*, Pp: 1107-1123.
- Brussard L and Ferrera-Cenato R. 1997. Soil ecology in sustainable agricultural systems. New York: Lewis. Pp: 45.

- Chabot R, Antoun H and Cescas MP. 1996. Growth promotion of maize and lettuce by phosphate solubilizing Rhizobium leguminosarum biovar Phaseoli. *Plant and Soil*, 184(2): 311-321.
- Chaudhuri P, Pal TK, Bhattacharjee G and Dey SK. 2001. Nutrient Changes during vermicomposting by perioyx excavatus of the aquatic weed *Trapa bispinosa*. *Journal of Soil Biology and Biochemistry*, 130(2): 257-262.
- Dalal RC. 1977. Soil Organic Phosphorus. *Journal of Agron*, 29: 83-117.
- Darzi MT and statesmen P. 2010. biological effects of vermicompost and phosphate fertilizer on yield and yield components of anise herbs. (*Pimpinella anisum* L.) Scientific-Research Quarterly of medicinal and aromatic plants. 26 (4): 465 452-.
- Delate K. 2000. Heenah mahyah student from herb trail. Leopold center for sustainable agriculture. Annual Reports, Jowa State University. Ames. Pp: 142.
- Dickerson GW. 1994. Plant Nutrition and Fertilizers. pp: 111-114.
- Garg P, Gupta A and Saya S. 2006.. Vermicomposting of different types of waste using *Eisenia foetida*. A comparative study. *Bioresource Technology*, 97:391-395.
- Gharib FA, Moussa LA and Massoud ON. 2008. Effect of compost and Bio-fertilizers on growth, yield and essential oil of sweet marjoram (*Majorana hortensis*) plant. *International Journal of Agriculture & Biology*, 10(4): 381-387.
- Goenadi DH. 1998. Fertilization efficiency of oil palm through biofertilizer application. In: Proceedings of International Oil Palm Conference, Nusa Dua, Bali. Pp. 370-376.
- Ghosh PK, Mandal KG, Wangari RH and Hati KM. 2002. Optimization of fertilizer schedules in corn production. *Journal of Plant Nutrition*, 2: 287-296.
- Goldstein AH. 1986. Recent progress in understanding the molecular genetics and biochemistry of calcium phosphate solubilization by gram negative bacteria. *Biological Agriculture and Horticulture*, 12: 185- 193.
- Haj nia T, hag Nia GHH, Chivalry OR and Khorasani R. 2006. influence of organic matter on phosphorus availability in calcareous soils. *Journal of Science and Technology of Agriculture and Natural Resources*. 10 (4): 121-132.
- Hashemimajid K, Kalbasi M, Golchin A and Shariatmadari H. 2004. Comparison of vermicompost and composts as potting media for growth of tomatoes. *Plant Nutrition*, 27: 1107-1123.
- Jahan D and Kuchaki A. 2001. fertilizers and biological effects of chamomile (*Maricaria chamomilla* L.). *Journal of Agricultural Sciences and Natural Resources*. 3 (3): 48-54.
- Jat BL and Shaktawat MS. 2003. Effect of residual phosphorus, sulphur and biofertilizers on productivity, economics and nutrient content of pearl millet (*Pennisetum glaucum* L.). *Indian Journal of Agricultural Sciences*, 73(3): 134-137.
- Kalra A. 2003. Organic cultivation of medicinal and aromatic plants. *Journal of Organic Production of Medicinal plant*, 24: 35-42.
- Kandeel AM, Naglaa SAT and Sadek AA. 2002. Effect of biofertilizers on the growth, volatile oil yield and chemical composition of *Ocimum basilicum* L. plant. *Annual Agriculture. Science. Cairo*, 1: 351-371.
- Kapoor R, Giri B and Mukerji KG. 2004. Improved growth and essential oil yield and quality in *Foeniculum vulgare* Mill on mycorrhizal inoculation supplemented with P-fertilizer. *Bioresource Technology*, 93: 307-311.
- Khalid AKH, Hendawy SF and El-Gezawy E. 2006. *Ocimum basilicum* L. Production under Organic Farming.12: 4-9.
- Khandan A. 2004. The effect of organic fertilizers and soil chemical and physical chemical properties of medicinal plants in PP. Soil MA thesis, Ferdowsi University of Mashhad. 112 pages.
- Khandan A, Starayy AS and Nasiri neighborhoods D. 2005. effects of chemical fertilizers and manure on yield, and herbs *Psyllium* (*Plantago ovata* Forsk). *Iranian Journal of Field Crop Research*. 3 (2): 246-253.
- Kuchaki A and Khlqany V. 1998. Sustainable Agriculture in Temperate Zones, Mashhad Press SID.
- Kuchaki AR. 1997. Organic Agriculture, Ferdowsi University of Mashhad.
- Leithy S, El-Meseiry TA and Abdallah EF. 2006. Effect of biofertilizers, cell stabilizer and irrigation regime on Rosemary herbage oil yield and quality. *Journal of Applied Research*, 2: 773-779.
- Liuc J and Pank B. 2005. Effect of vermicompost and fertility levels on growth and oil yield of Roman chamomile: *Scientia Pharmaceutica*, 46: 63-69.
- Lotf olahi C, Malacooti D, Khavazy K and evangelism H. 2004. Evaluation of rock phosphate for direct application on corn forage yield increase in Karaj. Fertilizer consumption path for sustainable agricultural production. Educational publishing. Page 67.
- Madani H. 2006. The Effects of phosphate solubelizing Bactria (PSB) on potato yield at Iran Environment. 18th. world congress of soil science. Julie.9.15. Phi1ade1phia Pennsylvania. Pp: 12.
- Mcginis M, Cooke A, Bilderback T and Lorscheider M. 2003. Organic Fertilizers for basil transplant Meadow Bromegrass. *Crop Sci*, 30:967-970.
- Mishra BB and Nayak KC. 2004. Oraganic Farming for Sustainable Agriculture. Orissa Review, pp: 42-45.
- Moradi B. 2009. Effect of organic fertilizers and biological yield, grain yield and essential oil of fennel. (*Foeniculum vulgare*) MA thesis. Faculty of Agriculture, Ferdowsi University of Mashhad. 104 pages.
- Munir MA, Malik MA and Saleem MF. 2007. Impact of integration of crop manuring and nitrogen application on growth, Malik,yield and quality of spring planted sunflower (*Helianthus annuus* L.). *Pakistan Journal of Botany*, 39(2): 441-449.
- Nieto KF and Frankenberger WT. 1989. Biosynthesis of cytokinins in soil. *Soil. Sci. Soc. Am. J*, 53: 735- 40.
- Norman Q and Arancon C. 2006. Effects of humic acids from vermicomposts on plant growth. *Europian Journal*, Pp: 89-103.
- Nvrqly Pur H, malacooti D and Khavazy P. 2004. survey conducted in the manner Brkarhay direct use of rock phosphate in calcareous soils. Fertilizer consumption path for sustainable agricultural production. Tehran educational publishing. 139 pages.
- Omid H, Nagdi niya HAS, Glzad AS, Torabi H and Fotokian DH. 2009. effect of fertilizer and organic nitrogen on the yield and quality of saffron (*Crocus sativus* L.). *Journal of Medicinal Plants*. 8 (2): 12-34.
- Prakash V, Bhattacharyya R and Selvakumar G. 2007. Long-term effects fertilization on some production. *Acta Horticulturea*, 491: 213- 218.
- Ram G and Patel JK. 1992. Single and combined effect of bio, organic and in organic fertilizers on yield of sunflower and soil properties under rainfed condition. *Advance Plant Science*, 5: 161-167.
- Rahim Zadeh SA, Sohrab OR, Haidar GHR, Eivazi ASR and Tahir H. 2011. effects of biological and chemical fertilizers on yield and essential oil content of herbs *Badrshbv* (*Dracocephalum*
- Razavi kord mahale I, Asgharzadidh O and Kingdom D. 2003.-enriched compost with rock phosphate and multi-purpose compost with some useful microorganisms. Proceedings of the Third National Conference on Applications of biological development and use of pesticides and fertilizers in agriculture. 310 pages.
- Rodríguez H and Reynaldo F. 1999. Phosphate solubilizing bacteria and their role in plant growth promotion. *Biotechnol*, 17: 319-339.

- Scheffer MC and Koehler HS. 1993. Influence of organic fertilization on the biomass, yield and yield composition of the essential oil of *Achillea millefolium*. *Acta Horticulture*, 331:109-114.
- Shata SM, Mahmoud A and Siam S. 2007. Improving calcareous soil productivity by integrated effect of intercropping and fertilizer. *Reacerch Journal of Agriculture and Biological Sciences*. Pp: 123-165.
- Shilling DG, Liebl RA and worsham AD. 1985. RYE(*Secale cereal*)and Wheat(*Triticmaestivum*)mulch:The suppression of certain broad leaved weeds and the isolation and identification of phytotoxins. In the chemistry of allelopathy:Biochemical interactions among plants. Pp 247-271.American chemical society,Washington.D.C
- Singh S and Kapoor KK. 1998. Inoculation with phosphate solubilizing microorganisms and a vesicular arbuscular mycorrhizal fungus improves dry matter yield and nutrient uptake by wheat grown in a sandy soil. *Biology of Fertility Soils*. 22: 134- 145.
- Singh S and Kapoor KK. 1999. Inoculation with PSM and a VAM fungus improves dry matter yield and nutrient uptake by wheat grown in a sandy soil. *Biology of Fertility Soils*. 28: 139-144.
- Smith SE and Read DJ. 1997. Mycorrhizal Symbiosis. Academic Press, Pp: 2281-2283.
- Subba Roa WS. 1988. Phosphate solubilizing microorganisms. *Biofertilizer in Agriculture*, 133- 142.
- Sydnzhad OH and Rezvan Moghaddam C. 2009. evaluate the effect of compost, vermicompost and manure on yield, yield components and essential oil of cumin (*Cuminum cyminum*). *Journal of Horticultural Science (Agricultural Sciences and Technology)*. 24 (2): 142-148.
- Tabrizi I. 2004. Effects of water stress and manure on yield and quality of psyllium, psyllium. MSc Thesis, Faculty of Agriculture, Ferdowsi University of Mashhad. 123 pages.
- Tanwar SPS, Sharma GL and Chahar MS. 2002. Effects of phosphorus and biofertilizers on the growth and productivity of black gram. *Annuals of Agricultural Research*. 23(3): 491-493.
- Tomati U, Grappelli A and Gall E. 1987. The hormone-like effect of earthworm castson plant growth. *Biology and Fertility of Soils*, 5:288-294.
- Tomati U, Grappelli A and Galli E. 1983. Fertility factors in earthworm humus. In *Proceedings of the International Symposium on Agricultural Environment. Prospects in Earthworm Farming*. Publication Ministero della Ricerca Scientifica e Tecnologia, Rome, pp. 49-56.
- Utayasoorian C, Balamurgan P and Muthuvel P. 1991. Direct and residual effect of FYM in fenugreek (*Trigonella foenum-graecum* L.) pearl millet cropping sequence. *Indian Journal of Agricultur Science*, 43: 42-56.
- Vande Broek A. 1999. Auxins upregulate expression of the indol-3-pyruvate decarboxylase gene in *Azospirillum brasilense*. *Journal of Bacteriology*, 181: 1338-1342.
- Vildova A, Stolcova M and Orsak PM. 2006. Quality Characterization of Chamomile (*Matricaria recutita* L.) in Organic and Traditional Agricultures. *International Symposium on Chamomile Research*.10: 123-150.
- Yadav RL, Keshwa GL and Yadav SS. 2003. Effect of integrated use of FYM and sulphure on growth and yield of isabgol. *Journal of Medicinal and Aromatic Plant Sciences*, 25:668-671.
- Yossef BB, Rogers RD, Wolfram JH and Richman E. 1999. *Soil sci soci of America*, 63: 1703-1708.
- Youssef AA, Edris AE and Gomaa AM. 2004. A comparative study between some plant growth regulators and certain growth hormones producing microorganisms on growth and essential oil composition of *Salvia officinalis* L. *Plant Annals of Agriculture Science*, 49:299-311.
- Zhang XL, Jiang B, Li ZB, Hao S and An LJ. 2007. Catalpol ameliorates cognition deficits and attenuates oxidative damage in the brain of senescent mice induced by D-galactose. *Pharmacol Biochem Behav*, 88:64–72.