RESEARCH REVIEW JOURNALS
Volume-05
Issue-05
May-2020

ISSN: 2455-3085 (Online)
RESEARCH REVIEW International Journal of Multidisciplinary
www.rrjournals.com[Peer Reviewed Journal]
DOI: https://doi.org/10.31305/rrijm.2020.v05.i05.012

Effects of Gibberellin Hormone for Developing Grape Productivity

Sadaat Latifa

Researcher

ARTICLE DETAILS

Article History
Published Online: 15 May 2020

Keywords
Gibberellin Hormones, Vineyard, Grapes.

***Corresponding Author**
Email: latifasadaat30[at]gmail.com

ABSTRACT

The aim of this study is to focus about the use of gibberellin hormones for the controlling of the vineyard. Gibberellin helps the grapes to grow faster. Mostly gardeners use it for having heavy grapes and for their benefits. In Afghanistan most of the peasants are not aware of gibberellin us and its effects. In this study I have used mix methods (Qualitative and Quantitative) for collecting of the data. Literature review par discuss how it help the people for the growth of their grapes and vineyards. Finding explains that how many percent of the people are aware of using gibberellin hormone. Discussion parts describes about the use of the others and how they should use it.

1. Introduction

This research presents how and when to use the Gibberellin hormones for changing or controlling of the vineyard. And what is the effect of using gibberellin hormone on grapes products.

Gibberellins controls good the produce and grows of all the physiologic acts as plants too. The clearest effects of gibberellins are from the growths of the plants by long intervals between nods of its stems. This effect is usually with the temporary paleness of the leaves which mostly becomes normal after ten days. Gibberellins are able to enforce the two years plants without stems which need to change into flowers in the cold to become pedicel without any cold. The action is based on the stem terminals which are imbued with the gibberellin, from one side the partition of cells become much, and from other side each of cell becomes larger. So, stem grow and plants change to flower. By importance effects of gibberellins breaks of periods rest in the most of seeds are from the kinds of botanic. However, these seeds are not capable of growing without completing the specific periods of cold, but, wetting of these seeds with gibberellin cause to leaf.

2. Problem Statement

Lack of peasants' awareness from the effects of gibberellin hormone in developing of grape productivities, also vagi implements of this hormone based on scientific bases as a challenge is exist to peasants.

3. Research gap

This research is important because of effects an amount of gibberellin hormone on growth of grapes in weathers is known in Parwan province. It is broadcasted in Parwan province for the peasants who suffered reductions of grapes productivities that how applicable amounts of gibberellin hormone is used or implement in the vigi time to prevent from the reductions of grapes productivities which is a big shock for the national economic portraits.

4. Research Objectives and Questions OR (testable) Hypothesis

1- Vagi implement of Gibberellin hormone for produce of grape products.2- Receiving applicable amounts of using Gibberellin based on scientific bases for vines productivities. 3- Finding the effects of Gibberellin hormone in decreasing of allergy in Fungis of Botrytis.

5. Literature Review

Commercial uses for gibberellins on grapes include elongation of cluster parts to decrease rotting, enlargement of berries, and increasing berry set. Other possible uses are under study (http://pubs.acs.org/doi/abs/10.1021/ba-1961-0028.ch010?src=recsys.)

Also, the important use of this hormone is on the growth of grape production based on the periods of the time. It's divided on two parts:

1- Use of solution before productivity, which develop the quality of the productions.
2- Use of SOLUTION after productivity which makes the grains to be strong and develop the best productivity.

Based on the Mansour's ideas (1390) gibberellin increase the fruit on the plants that naturally have the abilities of producing the best fruits with a higher quality.

According to M. Ajmal (1391) gibberellin cause to increase the grains. I agree with his idea because I have experienced such work in my life when once I went to the vineyard for seeing of the grapes. On that time I observed that a gardener used the hormone on his vineyards.

Also, he added that gibberellin helps in the growths of stems.

The based productivity of grapes is after use of gibberellin hormones, because, it makes the stems to be strong and work for a long time. Gibberellin hormones change the tendrils to the grape bunch.

Developing seeds produce gibberellins hormones that stimulate their growth. Seedless grapes are smaller than seeded ones. Farmers spray them with gibberellins to get normal large grapes. (Arasani, 1387).

Gibberellins are widespread and ubiquitous in angiosperms and gymnosperm as well as ferns. Their physiological effect is dependent in the type of gibberellin present as well as the specis of plant. There are currently 136 gibberellin identified from plants, fungi and bacteria. Some physiological processes stimulated by gibberellins are the bolting/flowering response to long days, delay of senescence in leaves and citrus fruits, stem elongation and cessation of seed dormancy in some plants. It is a common commercial practice to apply gibberellin to seedless cultivars to control both bunch size and berry size.

Arasani (1387) also explained that in the 1930s, Japanese scientists succeeded in extracting crystalline active compounds of fungal growth, called gibberellin A. But due to communication barriers and World War II, information did not reach the West. It was not until the mid-1950s that the two groups headed by Brian Cross at the Royal Institute of Biochemistry Research (ICI) in England and the Stadula Department of the United States Department of Agriculture (USDA) managed to discover the structure of the materials purified from the culture of fungus cultivation which they called these compounds Jebrayl Acid.

According to the Allah Dad (1386) explanations in the 1950s, the second group of hormones was identified as gibberellins. Gibberellins are a large group of related compounds. More than 80types have been identified that are not identified by their chemical structure, and in fact some of them are biological compounds inactive. The main effect of these compounds is their role in the plant, in which the stalks of the tall plants, in comparison with the clover, contain more volumes active biotin, which is biologically active.

Therefore, the use of jaybrilins could be effective in increasing the height of the plant; it was a question of whether the plant itself contains jaybrilins (Sasaam, 1360).

Based on the Dawatyar (1391) ideas in the 1950in, the second group of hormones was identified as jabberillins. Jibberillins are a large group of related compounds. More than 80types have been identified that are not identified by their chemical structure, and in fact some of them are biological compounds inactive. The main effect of these compounds is their role in the plant, in which the stalks of the tall plants, in comparison with the clover, contain more volumes Active biotin, is biologically active.

6. Physiological Effects of Gibberellins

The main effect of gibberellins is the longitudinal growth of the stem. This is done by increasing the spacings of the stem internodes. Most of the two-sixths and some of the leeches are quick to grow due to the trade in gibberellin. So the plant height of the plant is generally influenced by gibberellins (Hussaini, 1391).

The most important effect of gibberellins is on plant height. Spreading plant grows with this material in a routine or very tall form.

Majabi, (1383) claimed that there are innumerable reports in the sources that gibberellin stimulate the growth of healthy plants. As yet, there are 90known types of jabbrilins that are nowadays stimulating the growth or longitudinal growth of the stem, the proliferation of divisions, or both, but the effect of these variables is different. The difference in the responsiveness of a plant to a chemical material depends on a number of factors, and it is not common for a gibberellin that the substance in one plant is more active than other materials. As shown. Different jaybrilins have different effects on the longitudinal growth of lettuce sub-cotyledons.

7. Gebberillins accelerate flowering

Experience has proved that gebberellin has been used to accelerate flowering in a large number of excellent plants. They have been the subject of many studies (Asnashry, 1389)). In leafy plants, the growth of leaves and delayed internodes have been delayed, but just before the breeding period, stem lengths rise by 4-5times higher than the initial height. Plants that have a honeymoon habit tend to have long days or cold before flowering. If Gebberillins are not used on grasses, they stimulate stemming and fluttering. The role of jaybrilins in flowering stimulation has been somewhat discussed. Because it has been documented that the use of jibralylin in the lower seams of stemming ....., it stimulates flowering. Preventing the growth of plants prevents the biotinization of jibralin, thus preventing the proliferation of mosquitoes in the region of the mursite, and may lead to the development of the lateral head of the stem (Asnashry, 1389).

8. Gebbrillins and fruit

Behdani (1386) stated that the seeds are rich in gebbrillins, or in the same way as auxin, it was expected that the material would be used in some way in the growth of the fruit. The abilities of the gebbrillins to stimulate the partionopapy when have been used externally and in growth. It has been shown that parietal fruit produced by the external use of gebbrillin is closely related to the patterns stimulated under normal conditions for fruits, including shalevas, grapes and other products. The duration of use of gibberillen has a profound effect on its ability. It accelerates the growth of fruits and the shape of the grain.

The use of gibberelnins increases the seeds at the time of flowering and, later than this time, makes the seeds more coarse (Behdanis, 1386).

9. The main stages of the production of Gebbrillin and its effect on non-essential hydrolyzate are as follows

Gebbrillin is produced in the embryo and transferred to the Oliver layer of the cellar, where alfa-emylaz also contains other hydrolysis anzymes produced in response to GA3. Amylase is produced by reintroduction and thus converts starch into sugar. Sugar is used to grow seedlings. Endosperm in cereals, which begins with the production of alpha-emalaz by GA3, can be stopped by the APA. In addition to alfa-emalase,

there are also other hydrolyzate enzymes that are produced in response to GA3. Gebbrillins have been shown to exhibit the same effect of light-emitting dye in the germination of the egg and to replace low temperatures or high days to break apart. It has now been widely accepted that jaybrilins have been widely accepted as potent stimulants in the treatment of germs and the destruction of hatching eggs in a variety of agricultural crop (Beybordi, 1360).

10. Commercial use of gebberillins

Gebberillins have a lot of commercial uses, which are referred to hereafter:

1- Delay in the processing of fruits:

Sometimes it is necessary to delay the arrival of fruit in some trees, because there is no time to put it on the market, or the fruit will quickly become soft after washing. For example, persimmons, cherries and some of the estrus when they are green in bright green, with gebberellic acid spray, can be kept for a few weeks in green places and on the tree, and in addition to some cases of size the fruit is also thicker (Qareeb, 1352).

2- Increase in grapes:

The gebberillic acid spray application in the production of grape grains has been promoted since 1960. The physiological effects resulting from the spraying of grapes, the longitudinal growth of the cellars, the thinning of the flowers and the cluster clustering are. Usually, if the foliar application is carried out at a concentration of 50-30ppm and from the instillation of the petals, there is a great deal of loss in the gels and the clusters are opened. So, for grapes with a dense cluster, this time is appropriate. However, if the foliar application takes place after induction, it can only increase the size of the seeds and clusters. This practice has had a large effect on grape varieties (Morteza,1390).

3- Use in Plant Improvement:

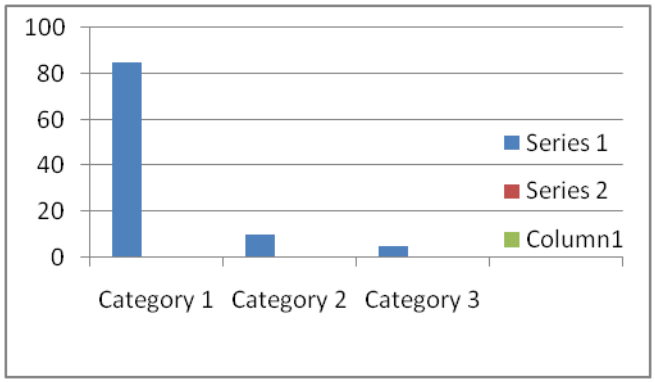
A young age in the people because it can prevent sexually productive trees from desirable trees for several years can be considered a harmful trait. The use of GA 4+ 4can reduce the time it takes to produce eggs through the formation of fruits on very young trees (Mir Bagheri,1370).

Mir Bagheri (1370) gebrillins, like auxins, are well controlled by all the processes of plant growth and production, such as plants. The most striking effect of gebberlilin is to increase plant growth by lengthening the spacing between the nodes of their stems. This effect is commonly associated with temporary patches of leaves that usually return to normal after about 10days. A special case of this effect of gebbrillins can be seen in tiny plants that are sufficiently inherited without the ability to produce gebberillin. Dissolving the gebberillin solution on the branches of these plants causes the stalk to lengthen and the height of the crop is normalized.

11. Findings

The research which has been done is about the effects of gibberellin hormone on grapes growth in the climate condition of the Parwan province. The results are presented in the bellow graph:

Limited effect of gebberillin hormone



Graph number (1) gives the effect of the gibberellin hormone to the growth rate of the grapevine.

Regarding the fact that the excessive use of gibberellin hormone has negative effects on growth, 85% of the participants responded positively. Three of the farmers in Parwan province confirmed the statements of these peasants. Observations from the gardens under investigation also showed that the rate of evolution of the vine has been reduced and caused by diseases such as fungi and the like. How much gibberellin hormone affects the quality of grape seeds?

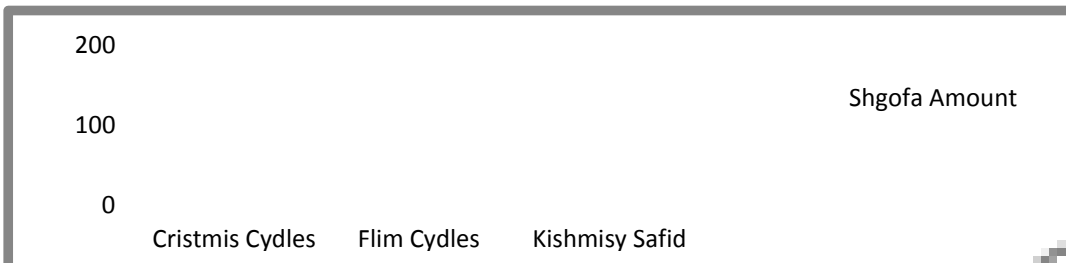
85 % of the respondents provided positive comments. Regarding the fact that the maximum amount of gibberellin hormones is effective over the grape color, %85of the research found that the use of gibberellin hormone has a positive effect on its color and is extremely high in reducing the taste of grapes. How are the gibberellin hormones high on the growth of clusters? %100of the researchers said that the use of gibberellin hormone has great effects on the development of clusters. As far as the use of gibberellin hormone is concerned over the duration of the onset, the %95of the studies examined the effect of gibberellin on the development of various parts of the crop. The results of this questionnaire are presented in a separate section in the village, Chaharikar, in the table of issue (3of Appendix 4) and in full in the table (4citation and 5).

• The results of this study indicate that the Parwan province people were not aware of the effects such as temperature, humidity, strength, wind, and experience in the concentration of activated dihydropyridine. The observational results of the research show that a percentage of the practicing practitioners of each type of gibrolic acid adapted to different concentrations.

White Raisins or Kishmishi Safid: 3-2times as much as -5 7.5ppm when it reaches .%50

Flame Sydlice: 1– 2 times as much as 10ppm when it reaches 50% .

Cristmis Siydlice: 1times as much as 2.5ppm when it reaches .%110



Graph (2) shows the matching of gibrolic acid in each vine to a different concentration.

Research findings indicate that excessive use of gebbrillin hormone has increased the incidence of black fever and other diseases of leaf diseases.

Interviews suggest that the first griberic acid spray solution in grape production is promoted 20 years ago. The physiological effects are resulting from the spraying of grapes, the longitudinal growth of the cellars, the narrowing of the flowers and clamping of the clusters. Usually, if the foliar application is carried out at a concentration of 50-30 ppm and from the instillation of the petals, there is a lot of flushing in the gels and the clusters are opened. So, for grapes with a dense cluster, this time is appropriate.

12. Discussion

The results of a study on the effects of gibberellin hormone on growth and livelihood in the climatic conditions of the center of the Parwan Province have been discussed.

The observational results of this study show. Farmers from the center of Parwan province were also using the spraying process to grate the grapes, because there was not enough time to deliver to the market, and the fruit quickly became soft as it went. . These findings came with Asnashry (1389) to the extent that they are consistent. He writes: Sometimes it is necessary to delay the arrival of fruit in some trees, because there is no suitable time for supply to the market, or the fruit will quickly become soft as it is afterwards. For example, persimmons, cherries and some of the estrus when they are green in bright green, with gibberellic acid spray, can be kept for a few weeks in green and green on the tree, and in addition to some cases of size the fruit is also thicker.

The observational results of this study show. Which farmers in the center of Parwan province use gibberellin hormone to accelerate the growth of fruits and the shape of grape grains without considering grape plots? These findings are consistent with Esmaili (1390) findings that he wrote: The use of external gibberellin is closely related to the stimulated patterns under natural conditions for fruits, including shalevelo, grapes and other products. The duration of use of gibberellin has a profound effect on its ability to accelerate the growth of fruits and grain form.

Interviews indicate that the first griberly acid spray solution in the production of grape seed has been promoted since 1991. The physiological effects resulting from the spraying of grapes, the longitudinal growth of the cellars, the thinning of the flowers and the cluster clustering are. Usually, if the foliar application is carried out at a concentration of 30-50ppm and from the inoculation (petals fall), there is a lot of flushing in the gels and the clusters are opened. So, for grapes with a dense cluster, this time is appropriate.

As I studied and learned about I knew that the use of gibberellins increases the seeds at the time of flowering and, later than this time, makes the seeds more coarse. The accelerating effects of gibberellin on fruit growth in the grape nucleus appear at the lowest level, only increased when the size of the nucleated cultivars increases, with fewer fetal seeds, which acknowledges that the internal concentration of gibberellin increases fruit size gets. This is when the high percentage of gibberellin is not affected by external use. This study has shown that auxins and gibberellins have similar effects on the growth of Romanized eggplant fruit.

13. Conclusion

The following results are based on the results of the study on the effects of hormonal hormones on the growth and yield of grapes in the climatic conditions of the center of Parwan province. The results of this study clearly show that further degradation of seeds can occur when Glycogenic acid to be used incorrectly. The temperature is higher than 35 centimeters. Strong winds and the relative humidity is lower**.**

The results of this study make it clear that until now, the chromatography laboratory is not in the possession of the center of Parwan province, and inexperienced casualties, without the need for sufficient information, use inappropriate concentrations in different parts of the country in the country. Experience of the farmers in general is education or training, and the problems of agriculture, which the doctor Inherit themselves and follow the same methods for cultivating, breeding and producing various agricultural products and cultivating them in the same way.

14. Suggestions

1- Vineyard, where gibrolic acid is used, should be strong and have horizontal and semi-horizontal systems of silage.

2- Grape clusters should be dispersed easily by high volume sprayers (300liters of acres) 6-5times.

3- Different types of gibrolic acid are available in the market. Therefore, different concentrations require solutions of different strengths. Adequate levels of false infliction are very dangerous.

15. The following steps should be considered during the implementation.

1-Beak for two weeks before shagofef when the branches are 12to 15cm in size.

2-Implement the process when it is 50

3- When %50of the baby is poured.

4- The final adaptation is done to change the grain size of the grapes.

5-Treatment is done when the grains are 4to 5 millimeters in diameter.6- What matters most is: Jebralic acid does not affect anything after it reaches 8millimeters in diameter.

References

1. Allah Dad, A. (1386). *Plant Physiology.* Iran: Tehran. Awai Noor Printing Press.
2. Arasani, Ahmad. 1387. *Reprographic planting.* Isfahan: Isfahan University of Technology.
3. Asnashry, M. (1389). *Vine Biology.* Iran: Tehran. Bo Ali University Press.
4. Behdani, M, A. (1386). *Basics of Agriculture.* Iran: Tehran. Azher Press
5. Beybordi, Mohammad. (1360). *Soil Formation and Classification.* Tehran: Tehran Publications.
6. Dawatyar, Ajmal. M. (1391). *General agriculture.* Kabul. Hamid Printing Press.
7. Ghulami, M. (1390). *Growth Physiology.* Iran: Tehran. Bo Ali Sina University.
8. Hussaini, W. (1391). *Environment Protection and Protecting Natural Resources.* Iran: Tehran. Tehran University.
9. Majabi, I. (1383). *Plant Cultivation Organization.* Iran: Tehran. Razi University
10. Mir Bagheri, Firouz. (1370).*Culture of Agricultural Sciences.* Tehran: Tehran Foundation Publications.
11. Morteza, Ismaili .(1390). *Important pests of fruit trees.* Tehran: Sepehr Networks
12. Qareeb, Abdolreza .(1352). *Sweet Griffin and Siri Garlic.* Ahuaz: Jandi Shapourahuaz Publishers
13. Sasaam.Shareyat, Haadi. (1360). *Treatment with Plants.* Esfahan: Mashal Press.

