

Signs of God in Plants from the Quranic Perspectives

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Abstract

The Quran is very comprehensive that conveyed messages of various themes where it includes botanical and geological theme. Botany or to be specific plants, in its creation and nature lies many signs of the magnificence of God. The plants from the smallest to the biggest, fruits or not, have many scientific secrets that need more to be discovered. It becomes proof for the believers about the divine wisdoms. Hence, this study focuses on the Quranic verse from Surah Ar-Ra'd verse 4 (13:4). The verse mentions how trees of the neighbouring tracts, watered with the same water can be very differently growth. This study aims to understand the deeper meaning of the verse and the scientific explanation behind it. A library research method is used in this study. All the data and information required for the importance of this study are acquired mostly through reading of the previous writings that were available to the researcher. The researcher has found that even from the same soil, plants can grow differently due to many scientific factors that more focusing to the soil where plants were planted, as the particular verse mentioned about the soil (land). The result also shows that this particular verse is not the only verse that mentions about the sign of God through plants but there are also many other verses from other surah that touch on the same topic. Abstract text must be in one column and Arial font, 10 point, normal, justified alignment with single-spaced interline spacing.

Keywords: Quran, plants, soil

Introduction

Al-Quran was revealed as guidance to the mankind through the prophet Muhammad SAW. It contains messages that are all beneficial and needed for human to live in this world as His servants. Even though it was revealed more than 1400 years ago, the messages conveyed in the Quran are all clear and will remain valid as it is protected from any kind of changes until the day of Qiamah. The contents are very holistic in mentioning every aspect of life; from ibadah, Islamic believes, Islamic law, Hereafter, muamalah, and many more. In addition, Allah also mentions about the reward for those who believe and the punishment for those who don't. Besides, there are many issues in the Quran mentioned about the 'signs' and design of divine wisdom. For example, the noble Quran did mentions about life. The signs of Allah are indicated in the life of creatures, different stages of life, system involved in the creation of living creatures and also the effects of life such as perception, hearing, sight, guidance, inspiration, instinct, intelligence, etc. which constitutes an interesting subject. Allah creations are created with very great details to an extent that nobody could ever create the same.

The miracle of the Quran can be seen through its scientific information. The facts that were revealed more than 1000 years ago in the Quran were discovered and proven by the scientist only recently. In the time of the prophet or also known as the revelation period, insufficient of scientific means has cause the human unable to study certain data contained in the Quranic verses. It is shows without doubt about the greatness of His knowledge and the prophetic of Prophet Muhammad SAW that conveyed the words of Allah through the Quran. Apart from the topic of life

that has been mentioned in the previous paragraph, there is also scientific information about astronomy (the sun and moons, stars and planets, orbits), geology (water cycle and mountains), embryology (fertilization, embryo) and also biology (physiology and botany) (Bucaille, n.d). Besides, Allah SWT mentioned in the Quran:

“And within the land are neighbouring plots and gardens of grapevines and crops and palm trees, [growing] several from a root or otherwise, watered with one water; but We make some of them exceed others in [quality of] fruit. Indeed in that are signs for a people who reason” (Surah Ar-Ra’d: 4).

In this verse, we can see that Quran expresses the concepts that were way ahead of this current time of its revelation in the theme of botanical. This once again becomes the clear proof of the truthiness of the revelations. Nowadays, many factors can affect the growth of the plants such as the soil and other substances are revealed as well as discovering many amazing facts particularly plants, through the scientific discoveries of what Quran has mentioned more than 1400 years ago.

Literature Review:

Reviews of considerable number of writings related to the topic have been conducted by researcher. The reviews are to identify related studies and academic works that have been done to prevent any repetition of this topic before further study can be conducted.

The previous scholars and academic researchers have shown a great interest in understanding the Quranic verses (*tafsir*) over the years. This circumstance contributes to the production of various writings on the particular topic. “Tafsir al-Quran al-Azim” or well known as “Tafsir Ibn Kathir” is a book written by Ibn Kathir (774H). His real name is Ismail bin Umar bin Kathir. In addition, Tafsir Ibn Kathir is one of hundreds *tafsir* books that have been written again by many Islamic scholars. It is also one of the famous *tafsir* books with the topic in Quranic *tafsir* because it uses the prophetic hadiths to explain the Quranic verses (Ibn Kathir, 1996).

Besides, there is also another book that is significant with Quranic *tafsir* which is “Tafsir al-Jalalayn”. As how it was named, this book was composed by two ‘Jalal’ which are Jalal ad-Din al-Mahalli (864H) and his student Jalal ad-Din al-Suyuti (911H). Its simple style and consist of only one volume has regarded it as one of the most easily accessible Quranic *tafsir*. Tafsir al-Jalalayn also has been translated into various languages (Al-Jalalyn, 2007).

On the other hand, there are also scientific journals written in understanding the growth factors of plant. Passioura (2002) wrote an article entitled “Soil conditions and plant growth” to understand how plants reacted to the different types of soils. In this context, it is the ability of the roots to take up water and nutrients for the plants. Soils play a vital role in the growth of plant where the root will automatically adapt to the soil condition as the roots can sense the hard condition of the soils.

Ward (2015) was also write about how soil can affect the growth of the plant. The main factor highlighted in the article is the pH balance of the soil. Bacteria that change and release nitrogen from organic matter and some fertilizers operate best in a particular pH level which explains why some soils seem to be unsuitable for the growth of a plant. Even though this article did not directly mentions about plant in the Quran, but it was discusses on the same topic as mentioned in the verse 4 Surah Ar-Ra’d about soil. Last but not least, a journal written by Heinze, Gensch, Weber and

Joshi (2017) entitled "Soil temperature modifies effects of soil biota on plant growth" stated that there are a significant of abiotic and biotic factors in the soil the affect the growth of the plant.

Methodology:

The main methodology used in this writing is library research method where it is adopted and required information mostly from secondary sources. The data were collected from the available materials in Islamic Science University of Malaysia (USIM) library which includes book, theses, articles, reports and published scientific research. All the data were acquired through readings as the researcher used a library research approached. Besides, all the available materials were reviewed in order to get the theories, concepts or point of views to evaluate how it were related with the topic.

Discussion and Result:

Understanding the Quran Surah Ar-Ra'd Verse 4

"And within the land are neighbouring plots and gardens of grapevines and crops and palm trees, [growing] several from a root or otherwise, watered with one water; but We make some of them exceed others in [quality of] fruit. Indeed in that are signs for a people who reason" (Surah Ar-Ra'd: 4)

Al-Jalalyn (2007) stated in Tafsir al-Jalalayn for this verse: "And on the earth are tracts, diverse terrains, neighbouring each other, joined side by side, some good, some briny, some of little yield and some fruitful and these constitute proofs of His power, exalted be He and gardens, orchards, of vines and sown fields (read zar'un, in the nominative, as a supplement to jannātun, 'gardens', or read zar'in, in the genitive, [as a supplement] to a'nābin, 'of vines'); similarly [constituting proofs of His power are] His words: and date-palms sharing one root (sinwān is the plural of sinw, which are date-palms belonging to the same root, but with many offshoots) and date-palms otherwise, [each] of 257 individual root, watered (read tusqā as [referring to] jannāt, 'gardens', and what is in them, or read yusqā as [referring to] the mentioned [date-palms]) by the same [source of] water; and We make some of them to excel (wa-nufaddil, or read wa-yufaddil, 'and He [God] makes [some of them] to excel') others in flavour (read fī'l-ukul or fī'l-ukl): and so some are sweet, others, bitter and these are [also] proofs of His power, exalted be He. Surely in that, which is mentioned, are signs for a people who understand, [who] reflect"

From this Quranic verse, we can understand that there are differences between plants and fruits. It's have differences in shape, colour, taste, scent, blossom and shape of the leaves. Some of the plants are very sweet or sour while the other are bitter or mild. In addition, it can also have a combination of these attributes and with Allah's will, the taste can change into another taste. All of the variances and complex diversities which can be seen in plants somehow are watered by the same water. Some plants have a yellow colour or red or black or white and that are also the case for its flowers. In this verse surely have the signs of the existence of Allah and His power in creating all these variances. It is surely the signs for those who believes and have a strength reasoning (Ibn Kathir, 1996).

This noble verse shows a series of geological and botanical issues which are the signs of predetermined system created by Allah SWT and it is a very interesting topic to be discussed. The Quran first mentions that there are different tracts side by side in the earth and there are gardens and trees which have different kinds of grapes and different plantations as well as palm trees. The trees and their various types take the roots from one basic stem and sometime from different stems. In addition, it is also amazing that some trees have excelled over others in its type of fruit. What is more amazing is that they are all watered with one type of water. Each of these proves provide us with enough reasons to the leadership which is unique in its origin and knowledgeable in its system. It is the reason why the Quran declares that there are signs in these matters of Allah at the end of the verse for those who contemplate (Group of Muslim Scholars [GOMS], 1997).

Scientific Explanations

The explanation from the Islamic scholars about the meaning of verse 4 Surah Ar-Ra'd has been discussed. The verse has surely made us realised about how great the power of Allah who can create a diversity of plants through one source of irrigations. Hence, it is now to look through the scientific explanation on how can plants of the neighboring tracts grow differently each other.

From the scientific views, we can see that there are actually many factors affecting the growth of plant, even the same fruit type. One of the main factors that were mentioned is the soil itself. As we all know, soil is a major medium for plants to grow. Some plants may grow in water without soil, but majority of the plants need soil as main medium to grow. Hence, soils play a very crucial role in this matter as plants depend on soil for nitrogen in most cases. Soils acidity is a key factor to ensure the healthy grow of plant (Bryant, 2017). As any living things, plants also adapt to its surrounding to survive. The roots and the shoots will react differently to different types of soils. Desert soils for example, contain deficient of organic matter while the addition of mineral fertilizers is not beneficial (Sharma, Daiya & Chawan, 1980).

The hardness of soil is one of the factors that affecting the root growth and the hardness usually refers to the pressure required to push into the soil a cylindrical probe with a conical tip (Passioura, 2002). The water content, soil compaction and even the movement of the large roots are some of the reasons which affect the hardness of the soil. In addition, the soil will also affect the shoots growth. This is the result when the roots cannot provide the shoots with enough water and nutrients. The scientific experiments also measure the leaf area of plant which grow in different soils hardness because the resistance of the soil is closely related to the leaf area.

Besides, the temperature of the soil also modifies the plants growth. Amazingly, plants have a very complex interaction with its surrounding soils. What visible to human eyes during the growth of a plant is only part of the whole complex process. Surely, this is the proof of the magnificence of Allah's creations. In addition, the plant roots are directly or indirectly influenced by the interactions of abiotic and biotic factors (Heinze et al., 2016). Fortuna (2012) explained that several of microorganisms (bacteria & fungi), soils animals (nematode, insects & earthworms) and plants that live all or part of their lives in soil are what made the soil biota (biotic). If biotic factors are related to the living things in the soil, the abiotic factors on the other hands are the non-living things components such as temperature, humidity, water and compositions. The soil biota can affects the plants either positively, neutrally, or even negatively. Thus, the soils biotic, abiotic and the plant itself are closely related to each other. Any changes made to the abiotic soil for example

changes in temperature, could changes the soil biota effects on plant growth. This is proven through a scientific research where an increase of 10°C in temperature has significantly changes the effects on the plant growth (Heinze et al., 2016).

In addition, the acidity of the soil or specifically pH level contributes in the plant growth. There are several soil factors that affecting the plant growth which are soil bacteria, nutrient leaching, nutrient availability, toxic elements and soil structure (Perry, n.d). These factors in the meanwhile are influenced by the soil pH which explains why the correct soil pH is very important to the plants. The nutrients that are needed by the plants to growth are most available in an optimum range of 5.5 to 7.0 (Ward, 2015). The fertilizers that provided to the plants also operate the best in the same range of pH levels.

From the explanations that were given from the scientific perspectives, we ought to realise that Allah has created the plants with a very complex, magnificent, and perfect creation. Even the discussion only about the soil which are needed the most by the plant to grow is already a very long discussion. The smallest plants could have a very complicated system that cannot be seen with naked eyes. Besides, soil that are considered as dirt somehow play a major role in the growth of the plants itself. How can we deny the power of Allah SWT with all of these evidences and proofs? Therefore, it is something for us to ponder and become a grateful Muslims for all the blessings that have been given to us.

Other Related Quranic Verses

Surah Al-An'am Verse 99

Apart from verse 4 Surah Ar-Ra'd, there are also other Quranic verses that confronted with the same topic. The first example is in Surah Al-An'am verse 99:

"And it is He who sends down rain from the sky, and We produce thereby the growth of all things. We produce from it greenery from which We produce grains arranged in layers. And from the palm trees - of its emerging fruit are clusters hanging low. And [We produce] gardens of grapevines and olives and pomegranates, similar yet varied. Look at [each of] its fruit when it yields and [at] its ripening. Indeed in that are signs for a people who believe" (Surah Al-An'am: 99).

This verse from Surah Al-An'am addressed for human as servants of Allah to think deeply about the creator of the fruits that were mentioned in the verse, Who has brought them into existence after they were dry wood, that later become grapes and dates (Ibn Kathir, 1996). This verse has a discussion that is almost similar to what we have discussed in verse 4 Surah Ar-Ra'd. Allah has sent down to human the rain which the living things have benefited a lot from it. From the rain, Allah has made the plants to grow healthy. And from the plants, the living things get a source of food. Who else would have the power to create a very systematic cycle like this? For those who believe, surely we would admit that it was Allah who has created them all and realise that this should make us more grateful as a servant.

Surah Al-An'am Verse 141

Allah said in the Quran:

"And He it is who causes gardens to grow, [both] trellised and untrellised, and palm trees and crops of different [kinds of] food and olives and pomegranates, similar and dissimilar. Eat of [each of] its fruit when it yields and give its due [zakah] on the day of its harvest. And be not excessive. Indeed, He does not like those who commit excess" (Surah Al-An'am: 141)

Surah Al-A'raf Verse 58

"And the good land - its vegetation emerges by permission of its Lord; but that which is bad - nothing emerges except sparsely, with difficulty. Thus do We diversify the signs for a people who are grateful" (Surah Al-A'raf: 58)

The verse above stated that vegetation will be produced proficiently on a good land and vice versa. This verse is a comparison for those which *mu'minun* and *kafirun* (Ibn Kathir, 1996). Besides, Ibn Kathir (1996) in his *tafsir* book also stated a hadith to explain this verse. Narrated by Abu Musa:

"The Prophet said, "The example of guidance and knowledge with which Allah has sent me is like abundant rain falling on the earth, some of which was fertile soil that absorbed rain water and brought forth vegetation and grass in abundance. (And) another portion of it was hard and held the rain water and Allah benefited the people with it and they utilized it for drinking, making their animals drink from it and for irrigation of the land for cultivation. (And) a portion of it was barren which could neither hold the water nor bring forth vegetation (then that land gave no benefits). The first is the example of the person who comprehends Allah's religion and gets benefit (from the knowledge) which Allah has revealed through me (the Prophets and learns and then teaches others. The last example is that of a person who does not care for it and does not take Allah's guidance revealed through me (He is like that barren land.)" (Sahih Bukhari).

Surah An-Nahl Verse 11

Allah SWT also mentioned in the Quran Surah An-Nahl verse 11:

"He causes to grow for you thereby the crops, olives, palm trees, grapevines, and from all the fruits. Indeed in that is a sign for a people who give thought" (Surah An-Nahl: 11)

Allah once again said that He has made the earth sprout plants with varieties of colours, taste, scents and shapes with one type of water, that become the evidence of His oneness and there is no God besides Allah (Ibn Kathir, 1996).

Therefore, the four Quranic verses that are mentioned above are the examples of verses where Allah has mentioned about plants apart from verse 4 Surah Ar-Ra'd. There are actually many other verses in the Quran that has mentioned about plants. From all the verses given, the messages are very clear. Allah did not create the plants as something insignificant. With plants, human can continue survive in life and clearly see the divine wisdom and the magnificence power of Allah, The Almighty. There is no other God besides Allah.

Conclusion

As a conclusion, the Quranic verses which are the words of Allah SWT are the great *mu'jizat*. It contains various miracles in the messages that were revealed more than 1400 years ago. Verse 4 Surah Ar-Ra'd that has discussed in this writing is very significant that Prophet Muhammad SAW has revealed to his companions and the people of the time. Nowadays, with the advanced technology and the development of scientific knowledge, people can understand and unveiled the secrets and miracles that contains in this verse. Besides, the amazing of plants nature can be understand and has revealed.

As this writing mainly focuses on the signs of Allah in plants, we are able to see many miraculous creation and system in plants. One of the lessons that we can take is of course the magnificence power of Allah SWT. His great magnificence are not only can be seen through a bigger creations such as the formation earth or the universe, but can also be seen through the small creations such as the plants or trees. Even the soil, where we walked on every day consists of various complicated components that are just mind-blowing. For those who believe, it is more than clear that those creations and proves are the power of Allah SWT and only Allah can create something as perfect as what have been discussed.

In addition, another lesson that can be found through this research is every creations that has been created by Allah SWT, there are actually purposes for each of it and need to complete each other. As what has been mentioned in the discussion part of this paper, the scientific perspectives had shown how soils condition actually affect the plants growth. Good soil grow good plants and vice versa. When a slight change is made to the soil, it also made change to the plants. That is also exactly how we live in this world. Humans, animals, plants and environments need each other to survive. Humans need the plants and animals as food sources as well as humans need plants to provide oxygen and plants need human for carbon dioxide that we exhale. Any damages made to the plants or animals could also affected human directly or indirectly, small or big, as we actually complete each other. Once again, this matter brings us back to remember the power of Allah who has created all these great creation. In conclusion, all these blessings that were given to us as a human, such as the world we are living and the life that we live, also for everything that exist around us, should make us a better human who always be grateful to Him and always ask Him for the goodness in this world and the Hereafter.

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