INTERNATIONAL JOURNAL OF ACADEMIC RESEARCH IN BUSINESS & SOCIAL SCIENCES

Vol 13, Issue 11, (2023) E-ISSN: 2222-6990

Bibliometric On Date Palm (Phoenix Dactylifera.L) In Journal Article From 2017 Until 2021

Syed Najihuddin bin Syed Hassan.
Faculty of Quranic & Sunnah Studies, Universiti Sains Islam Malaysia (USIM), Nilai, Negeri Sembilan, Malaysia. Email: syednajihuddin@usim.edu.my (Corresponding Author)

Abdulloh Salaeh.
Faculty of Quranic & Sunnah Studies, Universiti Sains Islam Malaysia (USIM), Nilai, Negeri Sembilan, Malaysia. Email: abdulloh@usim.edu.my

Nidzamuddin bin Zakaria.
Faculty of Quranic & Sunnah Studies, Universiti Sains Islam Malaysia (USIM), Nilai, Negeri Sembilan, Malaysia. Email: nidzamuddin@usim.edu.my

Walid bin Mohd Said.
Faculty of Quranic & Sunnah Studies, Universiti Sains Islam Malaysia (USIM), Nilai, Negeri Sembilan, Malaysia. Email: walid@usim.edu.my

Amran bin Abdul Halim.
Faculty of Quranic & Sunnah Studies, Universiti Sains Islam Malaysia (USIM), Nilai, Negeri Sembilan, Malaysia. Email: amranabdulhalim@usim.edu.my

Nurul Izzatul Huda Mohamad Zainuzi.
Faculty of Quranic & Sunnah Studies, Universiti Sains Islam Malaysia (USIM), Nilai, Negeri Sembilan, Malaysia. Email: hudazainuzi@raudah.usim.edu.my

Nurul Izzah binti Jusoh.
Faculty of Quranic & Sunnah Studies, Universiti Sains Islam Malaysia (USIM), Nilai, Negeri Sembilan, Malaysia. Email: nurulizzah@raudah.usim.edu.my

To Link this Article: http://dx.doi.org/10.6007/IJARBSS/v13-i11/19373 DOI:10.6007/IJARBSS/v13-i11/19373

Published Date: *12 November, 2023*

Abstract

The date palm is the major output, and several processing methods, including drying, may be used to make it and give advantages to human. The quantity of journal articles about dates

has increased every year. In 2006, a bibliometric analysis of date palms was completed. In order to complete the prior bibliometric study, this research was conducted, and it gathered significant journal articles from 2017 to 2021. Finding the demographic review and research area on Date Palm in journal papers for future research objectives was the main goal of the study. The results of earlier studies on research linked to date palms are examined in this study using bibliometric analysis. A total of 154 journal articles were gathered and examined based on a number of criteria, including language, informational reliability, publication year, subject coverage, and journal publishing. The study's findings revealed that English research articles predominated over Malay ones. The best website to find scientific studies about dates is sciencedirect.com. While 2020 collected 42 journal articles (27% of the total), that year. This study has conducted a number of studies on the application of date palms in a variety of industries, including science, technology, agriculture, nutrition and medicine.
Keywords: Bibliometric Analysis, Date Palm, Journal Articles Analysis, Phoenix Dactylifera.L, Scoping Review.

INTRODUCTION

Studies based on publication can be used to evaluate the output of research across a range of fields. In addition, by creating research on publishing, researchers can decide which study is most important. This study will evaluate date palm based on articles by field or discipline research from 2017 to 2021. Numerous valuable items for humans are produced by date palms. The primary product is the date palm, which may be eaten both fresh and dry as well as processed in various ways. The use of date palms in science, technology, cosmetics, or medicine has indeed always been subject of numerous studies by researchers.

Any research that is created and used as scholarly materials in an article published in any profession must have a reliable scientific reference. Researchers will assess and conduct further research on this article as they explore deeper into the subject of dates. This is due to the fact that going through the screening and expert review processes to ensure that the content is published not only complies with the requirements for publishing scholarly materials or journals, but also guarantees that the data is published.

Many different questions in the sciences and humanities can be answered using this method of research, both statistically and qualitatively. For instance, bibliometrics can be used to analyse the content of literature. As a result, these publications will help society obtain access to knowledge based on a compilation of journal articles about date palms throughout a five-year period. (Phoenix Dactylifera L).

PROBLEM STATEMENT

Dates have a long history of being prized for both their nutritional value and their unique phytomedicinal properties, which can be used to treat a wide range of ailments. Researchers in the fields of nutrition, medicine, aesthetics, or even health have published articles. Date fruits are high in alkaloids, protein, carbohydrate, fatty acids (linoleic, lauric, palmitic, and stearic acid), carotenoids, vitamins, polyphenolic compounds, flavonoids, and tannins in addition to several minerals like potassium, calcium, magnesium, and phosphorus. (Qadir, Shakeel, Ali, & Faiyazuddin, 2020).

It has been the subject of numerous bibliometric research to examine the features of various literary collections. This method can be used to spot trends in publishing, knowledge expansion across numerous domains, and research tendencies. The various definitions of the term "bibliometrics" that have been used in the literature are examined and rated. By

examining citations that demonstrate the flow of documentary material across many domains, we can gain a better understanding of the production and exchange of knowledge in the scientific realm. Therefore, the primary themes, areas of interest, and potential future developments of a body of literature can be identified by a demographic analysis of that body of literature. (Anwar, 2006).

The date palm, however, was the subject of the 2006 bibliometric analysis's concluding conclusion. The literature review of those studies revealed that starting in 1971, research on Phoenix dactylifera L grew quickly, peaked in 1989, and then stabilised (Anwar, 2006). This assertion demonstrated the ten-year-old study of date palm bibliometrics. Therefore, this article tends to determine the demographics review of the journal articles on the Date Palm from 2017 until 2021, and identify the research areas on Date Palm in journal articles from that period of time.

LITERATURE REVIEW

Among studies that have emphasised the date palm (Phoenix Dactylifera L). Qadir et al., (2020) stated that date palm is a source of alkaloids, protein, carbohydrates, fatty acids (linoleic, lauric, palmitic, and stearic acid), carotenoids, vitamins, polyphenolic compounds, flavonoids, and tannins, as well as various nutrients like potassium, calcium, magnesium, and phosphorus. They have a larger impact on human health since they include a variety of phytochemicals.

In Adeosun et al. (2016), date palm seed is high in flavonoids, a category of polyphenolic anti-oxidants that are presumably responsible for the substantial free radical scavenging properties. This study aimed to examine the phytochemical, mineral, and antioxidant profiles of the date palm seed based on documented relationships between plant composition and their medicinal or biological effects. Their findings show that date seeds contain a wide range of phytochemicals and essential minerals such as potassium and calcium and are capable of eliciting notable free radical buffering effects.

On the other hand, Abuelgassim et al. (2020) clarified that palm date seeds (PDS) extracts possess good antioxidant and antibacterial activity, and therefore could be effectively used as a natural source of antioxidants and to be detected against gram-positive bacteria. Their findings clearly showed that PDS extracts possess a powerful antioxidant potential and potentially scavenged different sources of free radicals. PDS extracts also exerted good antibacterial activity, especially against gram-positive bacteria.

In Karra et al. (2020), indicated that male date palm flowers (MDPF) could be an excellent source of minerals and amino acids, given its wealth in macro and microelement satisfying the human body requirements and in essential amino acids that exceed the references values. Indeed, the MDPF was rich in glutamate. This research used the quantitative and qualitative analysis (LC-ESI-MS) of phenolic acids and flavonoids led to the identification of 18 phenolic compounds that were dominated by quinic acid (84.52%). Results showed that MDPF is an excellent source of minerals especially regarding its high potassium and phosphorus contents (2684.23 and 318.66 mg/100 g, respectively).

The research by Asim et al. (2020) observed that incorporation of 50% DPF loading improved tensile modulus and impact properties but reduce tensile strength, flexural strength, and modulus. The obtained results concluded that 50% DPF composites have better mechanical and thermal properties with better interfacial bonding between fibres and matrix. Other research by Mia et al. (2020) stated that in vitro, in vivo, and human study-based evidence of date palm as an anti-diabetic fruit is summarized using different databases,

including PubMed, Scopus, and Google Scholar. These results suggest that date leaves have potential roles in lowering plasma glucose, HbA1c, regulating lipid profile, protecting haematological parameters and, subsequently, improving diabetes and diabetes-associated complications in animal models. Świąder et al. (2020) studied about date varieties, their characteristics, and stages of ripening by using qualitative analysis had found the cultivation of dates in the regions of the Arabian Peninsula, North Africa, and the Middle East and the main source of income, and dates are the basis of nutrition for local populations

BIBLIOMETRIC

On particular subjects related to agriculture, chemistry, biology, and medicine, several bibliometric investigations have been carried out. Diane Cooper (2015) explained the extent of its influence and how we may measure the effect of an article once it has been published. Bibliometrics is becoming more popular. It included finding downstream citations, developing thesauri (taxonomies) to assess the influence across disciplines and to enhance automated searches, assisting in the identification of the most pertinent score source, and assisting in the interpretation of various scoring models. A selection of the research that is pertinent to this topic is provided below.

For the objective of identifying the most appropriate study scope for upcoming research goals, Mohammad Fauzi et al., (2020) examined trends connected to Sus scrofa in existing research papers. While research on the analysis method used in earlier studies revealed that the majority of studies on Sus scrofa domesticus focus on scientific analysis, from 2015 to 2019 the majority of the themes studied in the research connected to Sus scrofa domesticus revolve around Islamic studies. Research on Ziziphus Mauritian from Ainul et al., (2020) focused on content analysis, especially in the field of primary research on Ziziphus Mauritian. researchers found that the majority of previous research on Ziziphus Mauritian dominated by journal articles is 90.0%. Additionally, researchers discovered that 94% of previous studies on goat's milk were published in article publications. The biotechnology field is where most of the subjects examined in goat milk research are centred. Ikmal Hafiz et. al (2020) focused on statistical analysis of word zakat in Sahih al-Bukhari which can be discussed in several themes related to linguistic s well as hadith related notion.

METHODOLOGY

A bibliometric analysis was used in this study to quantify and gather data from the literature review. The term "bibliometric" refers to the statistical methods used to assess bibliometric publication data, including reviews, reports, peer-reviewed journal articles, books, conference proceedings, journals, and related documents. It is frequently employed to demonstrate the connections between various study topics and quantitative techniques (Kulakli, 2020).

This research will concentrate on three factors, including the language, the information source, and the year that journal articles were published, in order to ascertain the demographics and date palm review. Additionally, two components—journal subject dispersion and journal publication on date palm-related publications—will be used to pinpoint the research area. These three concepts and words were chosen because date palm research heavily rely on their respective contents. Both of these are centred on the date palm and include unambiguous information regarding scientific investigations and their value to human life.

Bibliometric analysis will be used as the data gathering technique to assess the results of the last five years of date palm study. In summary, there are four crucial phases that researchers must complete to make sure the data gathering process goes properly. Several procedures must be completed before the data collection process can be carried out. Identifying the issue and the reason for data collecting is the first step. The selection of sources was then done by gathering as many journal articles from 2017 to 2021 that were relevant to date palms as possible. The next stage is to determine the most recent journal publications and pinpoint the date palm research field. Last but not least, the data was split up into various field studies and assessed using categories, frequencies, and percentages. Additionally, a chart with the analysed data is shown for better understanding. In searching for relevant articles related to the topis, these are the keywords used:

Table 2: Keywords on scope of research method

Keyword
Kurma
Date palm
Phoenix dactylifera
Phoenix dactylifera + Date palm

FINDINGS

Collected Journals

Initially, the researcher discovered 154 journals articles was analyzed after extensive research. The list of articles listed in table 3:

Table 3: Collected Journal

NO	TITLE
1	Abass, M. H., Al-Utbi, S. D., & Al-Samir, E. A. (2017). Genotoxicity assessment of high concentrations of 2, 4-D, NAA and Dicamba on date palm callus (Phoenix dactylifera L.) using protein profile and RAPD markers. Journal of Genetic Engineering and Biotechnology, 15(1), 287-295. DOI: https://doi.org/10.1016/j.jgeb.2016.12.003
2	Abdeen, A., Samir, A., Elkomy, A., Aboubaker, M., Habotta, O. A., Gaber, A., ... & Abdelkader, A. (2021). The potential antioxidant bioactivity of date palm fruit against gentamicin-mediated hepato-renal injury in male albino rats. Biomedicine & Pharmacotherapy, 143, 112154. DOI: https://doi.org/10.1016/j.biopha.2021.112154
3	Abdel-Salam, A. M., Al Hemaid, W. A., Afifi, A. A., Othman, A. I., Farrag, A. R. H., & Zeitoun, M. M. (2018). Consolidating probiotic with dandelion, coriander and date palm seeds extracts against mercury neurotoxicity and for maintaining normal testosterone levels in male rats. Toxicology reports, 5, 1069-1077. DOI: https://doi.org/10.1016/j.toxrep.2018.10.013
4	Abdul-Hamid, N. A., Abas, F., Ismail, I. S., Tham, C. L., Maulidiani, M., Mediani, A., ... & Umashankar, S. (2019). 1H-NMR-based metabolomics to investigate the effects of Phoenix dactylifera seed extracts in LPS-IFN-γ-induced RAW 264.7 cells. Food Research International, 125, 108565. DOI: https://doi.org/10.1016/j.foodres.2019.108565
5	Abdul-Hamid, N. A., Mustaffer, N. H., Maulidiani, M., Mediani, A., Ismail, I. S., Tham, C. L., ... & Abas, F. (2020). Quality evaluation of the physical properties, phytochemicals, biological activities and proximate analysis of

	nine Saudi date palm fruit varieties. Journal of the Saudi Society of Agricultural Sciences, 19(2), 151-160. DOI: https://doi.org/10.1016/j.jssas.2018.08.004
6	Abuelgassim, A. O., Eltayeb, M. A., & Ataya, F. S. (2020). Palm date (Phoenix dactylifera) seeds: A rich source of antioxidant and antibacterial activities. Czech Journal of Food Sciences, 38(3), 171-178. DOI: https://doi.org/10.17221/269/2019-CJFS
7	Abu-Reidah, I. M., Gil-Izquierdo, Á., Medina, S., & Ferreres, F. (2017). Phenolic composition profiling of different edible parts and by-products of date palm (Phoenix dactylifera L.) by using HPLC-DAD-ESI/MSn. Food Research International, 100, 494-500. DOI: https://doi.org/10.1016/j.foodres.2016.10.018
8	Adel, A., El-Shafei, A., Ibrahim, A., & Al-Shemy, M. (2018). Extraction of oxidized nanocellulose from date palm (Phoenix dactylifera L.) sheath fibers: Influence of CI and CII polymorphs on the properties of chitosan/bionanocomposite films. Industrial Crops and Products, 124, 155-165. DOI: https://doi.org/10.1016/j.indcrop.2018.07.073
9	Ahmed, H. S., & Coquet, Y. (2018). Water uptake by date palm on Haplic Luvisols in the Djibouti coastal plain. Geoderma Regional, 15, e00189. DOI: https://doi.org/10.1016/j.geodrs.2018.e00189
10	Ait-El-Mokhtar, M., Laouane, R. B., Anli, M., Boutasknit, A., Wahbi, S., & Meddich, A. (2019). Use of mycorrhizal fungi in improving tolerance of the date palm (Phoenix dactylifera L.) seedlings to salt stress. Scientia Horticulturae, 253, 429-438. DOI: https://doi.org/10.1016/j.scienta.2019.04.066
11	Akhavan, F., Kamgar, S., Nematollahi, M. A., Golneshan, A. A., Nassiri, S. M., & Khaneghah, A. M. (2021). Design, development, and performance evaluation of a ducted fan date palm (Phoenix dactylifera L.) pollinator. Scientia Horticulturae, 277, 109808. DOI: https://doi.org/10.1016/j.scienta.2020.109808
12	Al Alawi, R., Alhamdani, M. S. S., Hoheisel, J. D., & Baqi, Y. (2020). Antifibrotic and tumor microenvironment modulating effect of date palm fruit (Phoenix dactylifera L.) extracts in pancreatic cancer. Biomedicine & Pharmacotherapy, 121, 109522. DOI: https://doi.org/10.1016/j.biopha.2019.109522
13	Alahyane, A., Harrak, H., Ayour, J., Elateri, I., Ait-Oubahou, A., & Benichou, M. (2019). Bioactive compounds and antioxidant activity of seventeen Moroccan date varieties and clones (Phoenix dactylifera L.). South African Journal of Botany, 121, 402-409. DOI: https://doi.org/10.1016/j.sajb.2018.12.004
14	Al-Alawi, R. A., Al-Mashiqri, J. H., Al-Nadabi, J. S., Al-Shihi, B. I., & Baqi, Y. (2017). Date palm tree (Phoenix dactylifera L.): natural products and therapeutic options. Frontiers in plant science, 8, 845. DOI: https://doi.org/10.3389/fpls.2017.00845
15	Alam, M. Z., Alhebsi, M. S., Ghnimi, S., & Kamal-Eldin, A. (2021). Inability of total antioxidant activity assays to accurately assess the phenolic

	compounds of date palm fruit (Phoenix dactylifera L.). NFS Journal, 22, 32-40. DOI: https://doi.org/10.1016/j.nfs.2021.01.001
16	Alansi, S., Al-Qurainy, F., Nadeem, M., Khan, S., Tarroum, M., Alshameri, A., & Gaafar, A. R. Z. (2019). Cryopreservation: A tool to conserve date palm in Saudi Arabia. Saudi journal of biological sciences, 26(7), 1896-1902. DOI: https://doi.org/10.1016/j.sjbs.2019.02.004
17	Al-Asmari, F., Mereddy, R., & Sultanbawa, Y. (2018). The effect of photosensitization mediated by curcumin on storage life of fresh date (Phoenix dactylifera L.) fruit. Food Control, 93, 305-309. DOI: https://doi.org/10.1016/j.foodcont.2018.06.005
18	Al-Asmari, F., Nirmal, N., Chaliha, M., Williams, D., Mereddy, R., Shelat, K., & Sultanbawa, Y. (2017). Physico-chemical characteristics and fungal profile of four Saudi fresh date (Phoenix dactylifera L.) cultivars. Food chemistry, 221, 644-649. DOI: https://doi.org/10.1016/j.foodchem.2016.11.125
19	Alatawi, F. J. (2020). Field studies on occurrence, alternate hosts and mortality factors of date palm mite, Oligonychus afrasiaticus (McGregor)(Acari: Tetranychidae). Journal of the Saudi Society of Agricultural Sciences, 19(2), 146-150. DOI: https://doi.org/10.1016/j.jssas.2018.08.003
20	Alawad, M. N., & Fattah, K. A. (2019). Superior fracture-seal material using crushed date palm seeds for oil and gas well drilling operations. Journal of King Saud University-Engineering Sciences, 31(1), 97-103. DOI: https://doi.org/10.1016/j.jksues.2017.01.003.
21	Al-Bagmi, M. S., Khan, M. S., Ismael, M. A., Al-Senaidy, A. M., Bacha, A. B., Husain, F. M., & Alamery, S. F. (2019). An efficient methodology for the purification of date palm peroxidase: Stability comparison with horseradish peroxidase (HRP). Saudi journal of biological sciences, 26(2), 301-307. DOI: https://doi.org/10.1016/j.sjbs.2018.04.002
22	Alem, C., Ennassir, J., Benlyas, M., Mbark, A. N., & Zegzouti, Y. F. (2017). Phytochemical compositions and antioxidant capacity of three date (Phoenix dactylifera L.) seeds varieties grown in the Southeast Morocco. Journal of the Saudi Society of Agricultural Sciences, 16(4), 350-357. DOI: https://doi.org/10.1016/j.jssas.2015.11.002
23	Alghamdi, A. A. (2021). Impact of the invasive plant species “Nicotiana glauca” toxins on the larvae of the invasive insect species “Rhynchophorus ferrugineus”: A damaging pest of date palm trees in Saudi Arabia. Saudi Journal of Biological Sciences, 28(1), 1154-1157. DOI: https://doi.org/10.1016/j.sjbs.2020.11.051
24	Alghamdi, M. A., Hussein, A. M., Al-Eitan, L. N., Elnashar, E., Elgendy, A., Abdalla, A. M., ... & Khalil, W. A. (2020). Possible mechanisms for the renoprotective effects of date palm fruits and seeds extracts against renal ischemia/reperfusion injury in rats. Biomedicine & Pharmacotherapy, 130, 110540. DOI: https://doi.org/10.1016/j.biopha.2020.110540
25	Alikhani-Koupaei, M., & Aghdam, M. S. (2021). Defining date palm leaf pruning line in bearing status by tracking physiological markers and expression of senescence-related genes. Plant Physiology and Biochemistry, 167, 550-560. DOI: https://doi.org/10.1016/j.plaphy.2021.08.035

26	Alikhani-Koupaei, M., Aghdam, M. S., & Faghih, S. (2020). Physiological aspects of date palm loading and alternate bearing under regulated deficit irrigation compared to cutting back of bunch. Agricultural Water Management, 232, 106035. DOI: https://doi.org/10.1016/j.agwat.2020.106035
27	Al-Kindi, K. M., Kwan, P., Andrew, N. R., & Welch, M. (2017). Modelling spatiotemporal patterns of dubas bug infestations on date palms in northern Oman: A geographical information system case study. Crop protection, 93, 113-121. DOI: https://doi.org/10.1016/j.cropro.2016.11.033
28	Al-Kutti, W., Islam, A. S., & Nasir, M. (2019). Potential use of date palm ash in cement-based materials. Journal of King Saud University-Engineering Sciences, 31(1), 26-31. DOI: https://doi.org/10.1016/j.jksues.2017.01.004
29	Almadini, A. M., Ismail, A. I., & Ameen, F. A. (2021). Assessment of farmers practices to date palm soil fertilization and its impact on productivity at Al-Hassa oasis of KSA. Saudi Journal of Biological Sciences, 28(2), 1451-1458. DOI: https://doi.org/10.1016/j.sjbs.2020.11.084
30	Al-Mayahi, A. M. W., Ali, A. H., & Shareef, H. J. (2018). Influence of cold pretreatment on shoot regeneration from callus in date palm (Phoenix dactylifera L.) cv. 'Barhee'. Journal of Genetic Engineering and Biotechnology, 16(2), 607-612. DOI: https://doi.org/10.1016/j.jgeb.2018.07.002
31	Al-Mssallem, M. Q., Alqurashi, R. M., & Al-Khayri, J. M. (2020). Bioactive compounds of date palm (Phoenix dactylifera L.). Bioactive Compounds in Underutilized Fruits and Nuts, 91-105. DOI: https://doi.org/10.1007/978-3-030-30182-8_6
32	Al-Muaini, A., Green, S., Abou Dahr, W. A., Kennedy, L., Kemp, P., Dawoud, M., & Clothier, B. (2019). Water use and irrigation requirements for date palms on commercial farms in the hyper-arid United Arab Emirates. Agricultural Water Management, 223, 105702. DOI: https://doi.org/10.1016/j.agwat.2019.105702
33	Al-Muaini, A., Green, S., Dakheel, A., Abdullah, A. H., Abou Dahr, W. A., Dixon, S., ... & Clothier, B. (2019). Irrigation management with saline groundwater of a date palm cultivar in the hyper-arid United Arab Emirates. Agricultural Water Management, 211, 123-131. DOI: https://doi.org/10.1016/j.agwat.2018.09.042
34	Al-Muaini, A., Green, S., Dakheel, A., Abdullah, A. H., Sallam, O., Abou Dahr, W. A., ... & Clothier, B. (2019). Water requirements for irrigation with saline groundwater of three date-palm cultivars with different salt-tolerances in the hyper-arid United Arab Emirates. Agricultural Water Management, 222, 213-220. DOI: https://doi.org/10.1016/j.agwat.2019.05.022
35	Almusallam, I. A., Ahmed, I. A. M., Babiker, E. E., Al Juhaimi, F. Y., Fadimu, G. J., Osman, M. A., ... & Alqah, H. A. (2021). Optimization of ultrasound-assisted extraction of bioactive properties from date palm (Phoenix dactylifera L.) spikelets using response surface methodology. LWT, 140, 110816. DOI: https://doi.org/10.1016/j.lwt.2020.110816

36	Almusallam, I. A., Ahmed, I. A. M., Babiker, E. E., Al-Juhaimi, F. Y., Saleh, A., Qasem, A. A., ... & Al-Shawaker, A. S. (2021). Effect of date palm (Phoenix dactylifera L.) spikelets extract on the physicochemical and microbial properties of set-type yogurt during cold storage. LWT, 111762. DOI: https://doi.org/10.1016/j.lwt.2021.111762
37	Alothman, O. Y., Jawaid, M., Senthilkumar, K., Chandrasekar, M., Alshammari, B. A., Fouad, H., ... & Siengchin, S. (2020). Thermal characterization of date palm/epoxy composites with fillers from different parts of the tree. Journal of Materials Research and Technology, 9(6), 15537-15546. DOI: https://doi.org/10.1016/j.jmrt.2020.11.020
38	Alothman, O. Y., Kian, L. K., Saba, N., Jawaid, M., & Khiari, R. (2021). Cellulose nanocrystal extracted from date palm fibre: Morphological, structural and thermal properties. Industrial Crops and Products, 159, 113075. DOI: https://doi.org/10.1016/j.indcrop.2020.113075
39	Alqahtani, N., Alnemr, T., & Ali, S. (2021). Development of low-cost biodegradable films from corn starch and date palm pits (Phoenix dactylifera). Food Bioscience, 101199. DOI: https://doi.org/10.1016/j.fbio.2021.101199
40	Alshabanat, M. (2019). Morphological, thermal, and biodegradation properties of LLDPE/treated date palm waste composite buried in a soil environment. Journal of Saudi Chemical Society, 23(3), 355-364. DOI: https://doi.org/10.1016/j.jscs.2018.08.008
41	Al-Zoreky, N. S., & Al-Taher, A. Y. (2019). In vitro and in situ inhibition of some food-borne pathogens by essential oils from date palm (Phoenix dactylifera L.) spathe. International journal of food microbiology, 299, 64-70. DOI: https://doi.org/10.1016/j.ijfoodmicro.2019.03.018
42	Anli, M., Kaoua, M. E., Boutasknit, A., ben-Laouane, R., Toubali, S., Baslam, M., ... & Meddich, A. (2020). Seaweed extract application and arbuscular mycorrhizal fungal inoculation: a tool for promoting growth and development of date palm (Phoenix dactylifera L.) cv «Boufgous». South African Journal of Botany, 132, 15-21. DOI: https://doi.org/10.1016/j.sajb.2020.04.004
43	Asim, M., Jawaid, M., Khan, A., Asiri, A. M., & Malik, M. A. (2020). Effects of date palm fibres loading on mechanical, and thermal properties of date palm reinforced phenolic composites. Journal of Materials Research and Technology, 9(3), 3614-3621. DOI: https://doi.org/10.1016/j.jmrt.2020.01.099
44	Ayu, W., Prabowo, W. C., & Indriyanti, N. (2020, December). Potensi Sari Kurma (Phoenix dactylifera) sebagai Peluruh Kristal Kalsium Oksalat Secara In Vitro. In Proceeding of Mulawarman Pharmaceuticals Conferences (Vol. 12, pp. 1-6). DOI: https://doi.org/10.25026/mpc.v12i1.400
45	Aziz, M., Zainabun, Z., & Karim, A. (2019). Penilaian Lahan untuk Budidaya Tanaman Kurma (Phoenix dactylifera L.) di Lembah Barbatee, Aceh Besar. Jurnal Ilmiah Mahasiswa Pertanian, 4(4), 610-617. DOI: https://doi.org/10.17969/jimfp.v4i4.12718
46	Azmi, S. N. H., Al-Balushi, M., Al-Siyabi, F., Al-Hinai, N., & Khurshid, S. (2020). Adsorptive removal of Pb (II) ions from groundwater samples in Oman using

	carbonized Phoenix dactylifera seed (Date stone). Journal of King Saud University-Science, 32(7), 2931-2938. DOI: https://doi.org/10.1016/j.jksus.2020.07.015
47	Bazrafshan, O., Zamani, H., Etedali, H. R., Moshizi, Z. G., Shamili, M., Ismaelpour, Y., & Gholami, H. (2020). Improving water management in date palms using economic value of water footprint and virtual water trade concepts in Iran. Agricultural Water Management, 229, 105941. DOI: https://doi.org/10.1016/j.agwat.2019.105941
48	Bedjaoui, H., & Benbouza, H. (2020). Assessment of phenotypic diversity of local Algerian date palm (Phoenix dactylifera L.) cultivars. Journal of the Saudi Society of Agricultural Sciences, 19(1), 65-75. DOI: https://doi.org/10.1016/j.jssas.2018.06.002
49	Bensidhom, G., Hassen-Trabelsi, A. B., Alper, K., Sghairoun, M., Zaafouri, K., & Trabelsi, I. (2018). Pyrolysis of Date palm waste in a fixed-bed reactor: Characterization of pyrolytic products. Bioresource technology, 247, 363-369. DOI: https://doi.org/10.1016/j.biortech.2017.09.066
50	Ben-Youssef, S., Fakhfakh, J., Breil, C., Abert-Vian, M., Chemat, F., & Allouche, N. (2017). Green extraction procedures of lipids from Tunisian date palm seeds. Industrial Crops and Products, 108, 520-525. DOI: https://doi.org/10.1016/j.indcrop.2017.07.010
51	Bijami, A., Rezanejad, F., Oloumi, H., & Mozafari, H. (2020). Minerals, antioxidant compounds and phenolic profile regarding date palm (Phoenix dactylifera L.) seed development. Scientia Horticulturae, 262, 109017. DOI: https://doi.org/10.1016/j.scienta.2019.109017
52	Bouallegue, K., Allaf, T., Besombes, C., Younes, R. B., & Allaf, K. (2019). Phenomenological modeling and intensification of texturing/grinding-assisted solvent oil extraction: case of date seeds (Phoenix dactylifera L.). Arabian Journal of Chemistry, 12(8), 2398-2410. DOI: https://doi.org/10.1016/j.arabjc.2015.03.014
53	Bouhlali, E. D. T., Ben-Amar, H., Meziani, R., & Essarioui, A. (2021). Development of a fungicide-based management strategy of inflorescence rot disease caused by Mauginiella scaettae Cavar on date palm (Phoenix dactylifera L.) in Morocco. Journal of the Saudi Society of Agricultural Sciences, 20(3), 173-179. DOI: https://doi.org/10.1016/j.jssas.2021.01.003
54	Bouhlali, E. D. T., Derouich, M., Hmidani, A., Bourkhis, B., Khouya, T., Filali-Zegzouti, Y., & Alem, C. (2021). Protective Effect of Phoenix dactylifera L. Seeds against Paracetamol-Induced Hepatotoxicity in Rats: A Comparison with Vitamin C. The Scientific World Journal, 2021. DOI: https://doi.org/10.1155/2021/6618273
55	Boulal, A., Atabani, A. E., Mohammed, M. N., Khelafi, M., Uguz, G., Shobana, S., ... & Kumar, G. (2019). Integrated valorization of Moringa oleifera and waste Phoenix dactylifera L. dates as potential feedstocks for biofuels production from Algerian Sahara: An experimental perspective. Biocatalysis and Agricultural Biotechnology, 20, 101234. DOI: https://doi.org/10.1016/j.bcab.2019.101234
56	Boumediri, H., Bezazi, A., Del Pino, G. G., Haddad, A., Scarpa, F., & Dufresne, A. (2019). Extraction and characterization of vascular bundle and fiber

	strand from date palm rachis as potential bio-reinforcement in composite. Carbohydrate polymers, 222, 114997. DOI: https://doi.org/10.1016/j.carbpol.2019.114997
57	Chaari, A., Abdellatif, B., Nabi, F., & Khan, R. H. (2020). Date palm (Phoenix dactylifera L.) fruit's polyphenols as potential inhibitors for human amylin fibril formation and toxicity in type 2 diabetes. International Journal of Biological Macromolecules, 164, 1794-1808. DOI: https://doi.org/10.1016/j.ijbiomac.2020.08.080
58	Chaari, R., Khlif, M., Mallek, H., Bradai, C., Lacoste, C., Belguith, H., ... & Dony, P. (2020). Enzymatic treatments effect on the poly (butylene succinate)/date palm fibers properties for bio-composite applications. Industrial Crops and Products, 148, 112270. DOI: https://doi.org/10.1016/j.indcrop.2020.112270
59	Chaluvadi, S. R., Young, P., Thompson, K., Bahri, B. A., Gajera, B., Narayanan, S., ... & Bennetzen, J. L. (2019). Phoenix phylogeny, and analysis of genetic variation in a diverse collection of date palm (Phoenix dactylifera) and related species. Plant diversity, 41(5), 330-339. DOI: https://doi.org/10.1016/j.pld.2018.11.005
60	Cherif, S., Le Bourvellec, C., Bureau, S., & Benabda, J. (2021). Effect of storage conditions on 'Deglet Nour'date palm fruit organoleptic and nutritional quality. LWT, 137, 110343. DOI: https://doi.org/10.1016/j.lwt.2020.110343
61	Daoud, A., Malika, D., Bakari, S., Hfaiedh, N., Mnafgui, K., Kadri, A., & Gharsallah, N. (2019). Assssment of polyphenol composition, antioxidant and antimicrobial properties of various extracts of Date Palm Pollen (DPP) from two Tunisian cultivars. Arabian Journal of Chemistry, 12(8), 3075-3086. DOI: https://doi.org/10.1016/j.arabjc.2015.07.014
62	Daoud, A., Mnafgui, K., Turki, M., Jmal, S., Ayadi, F., ElFeki, A., ... & Gharsallah, N. (2017). Cardiopreventive effect of ethanolic extract of date palm pollen against isoproterenol induced myocardial infarction in rats through the inhibition of the angiotensin-converting enzyme. Experimental and toxicologic pathology, 69(8), 656-665. DOI: https://doi.org/10.1016/j.etp.2017.06.004
63	Dawood, N. (2021). Surface modification of date palm leaves by cold plasma treatment. Journal of King Saud University-Science, 33(5), 101465. DOI: https://doi.org/10.1016/j.jksus.2021.101465
64	Derouich, M., Meziani, R., Bourkhis, B., Filali-Zegzouti, Y., & Alem, C. (2020). Nutritional, mineral and organic acid composition of syrups produced from six Moroccan date fruit (Phoenix dactylifera L.) varieties. Journal of Food Composition and Analysis, 93, 103591. DOI: https://doi.org/10.1016/j.jfca.2020.103591
65	Dhakal, H., Bourmaud, A., Berzin, F., Almansour, F., Zhang, Z., Shah, D. U., & Beaugrand, J. (2018). Mechanical properties of leaf sheath date palm fibre waste biomass reinforced polycaprolactone (PCL) biocomposites. Industrial crops and products, 126, 394-402. DOI: https://doi.org/10.1016/j.indcrop.2018.10.044
66	Di Cagno, R., Filannino, P., Cavoski, I., Lanera, A., Mamdouh, B. M., & Gobbetti, M. (2017). Bioprocessing technology to exploit organic palm date

	(Phoenix dactylifera L. cultivar Siwi) fruit as a functional dietary supplement. Journal of functional foods, 31, 9-19. DOI: https://doi.org/10.1016/j.jff.2017.01.033
67	Djaoudene, O., Mansinhos, I., Gonçalves, S., Jara-Palacios, M. J., & Romano, A. (2021). Phenolic profile, antioxidant activity and enzyme inhibitory capacities of fruit and seed extracts from different Algerian cultivars of date (Phoenix dactylifera L.) were affected by in vitro simulated gastrointestinal digestion. South African Journal of Botany, 137, 133-148. DOI: https://doi.org/10.1016/j.sajb.2020.10.015
68	El Hilaly, J., Ennassir, J., Benlyas, M., Alem, C., Amarouch, M. Y., & Filali-Zegzouti, Y. (2018). Anti-inflammatory properties and phenolic profile of six Moroccan date fruit (Phoenix dactylifera L.) varieties. Journal of King Saud University-Science, 30(4), 519-526. DOI: https://doi.org/10.1016/j.jksus.2017.08.011
69	El Kadri, N., Mimoun, M. B., & Hormaza, J. I. (2019). Genetic diversity of Tunisian male date palm (Phoenix dactylifera L.) genotypes using morphological descriptors and molecular markers. Scientia Horticulturae, 253, 24-34. DOI: https://doi.org/10.1016/j.scienta.2019.04.026
70	El-Gharabawy, H. M., Leal-Dutra, C. A., & Griffith, G. W. (2021). Crystallicutis gen. nov.(Irpicaceae, Basidiomycota), including C. damiettensis sp. nov., found on Phoenix dactylifera (date palm) trunks in the Nile Delta of Egypt. Fungal Biology, 125(6), 447-458. DOI: https://doi.org/10.1016/j.funbio.2021.01.004
71	El-Sayyad, H. I., El-Shershaby, E. M., El-Mansi, A. A., & El-Ashry, N. E. (2018). Anti-hypercholesterolemic impacts of barley and date palm fruits on the ovary of Wistar albino rats and their offspring. Reproductive biology, 18(3), 236-251. DOI: https://doi.org/10.1016/j.repbio.2018.07.003
72	Elseify, L. A., Midani, M., Hassanin, A. H., Hamouda, T., & Khiari, R. (2020). Long textile fibres from the midrib of date palm: Physiochemical, morphological, and mechanical properties. Industrial Crops and Products, 151, 112466. DOI: https://doi.org/10.1016/j.indcrop.2020
73	Faci, M., & Benziouche, S. E. (2021). Contribution to monitoring the influence of air temperature on some phenological stages of the date palm (cultivar 'Deglet Nour') in Biskra. Journal of the Saudi Society of Agricultural Sciences, 20(4), 248-256. DOI: https://doi.org/10.1016/j.jssas.2021.02.004
74	Fang, C., Thomsen, M. H., Frankær, C. G., Bastidas-Oyanedel, J. R., Brudecki, G. P., & Schmidt, J. E. (2019). Factors affecting seawater-based pretreatment of lignocellulosic date palm residues. In Biorefinery (pp. 695-713). Springer, Cham. DOI: https://doi.org/10.1007/978-3-030-10961-5_31
75	Farooq, S., Maqbool, M. M., Bashir, M. A., Ullah, M. I., Shah, R. U., Ali, H. M., ... & Wang, Y. F. (2021). Production suitability of date palm under changing climate in a semi-arid region predicted by CLIMEX model. Journal of King Saud University-Science, 33(3), 101394. DOI: https://doi.org/10.1016/j.jksus.2021.101394
76	Fuziawatie, A. S. (2021). Susu Steril Kurma Minuman Sehat untuk Masa Pandemi Covid-19: Studi Takhrij dan Syarah Hadis Pendekatan Bidang

	Kesehatan. Jurnal Riset Agama, 1(1), 209-222. Retrieved from: https://journal.uinsgd.ac.id/index.php/jra/article/view/14404/6174
77	Galiwango, E., Rahman, N. S. A., Al-Marzouqi, A. H., Abu-Omar, M. M., & Khaleel, A. A. (2019). Isolation and characterization of cellulose and α-cellulose from date palm biomass waste. Heliyon, 5(12), e02937. DOI: https://doi.org/10.1016/j.heliyon.2019.e02937
78	George, N., Andersson, A. A., Andersson, R., & Kamal-Eldin, A. (2020). Lignin is the main determinant of total dietary fiber differences between date fruit (Phoenix dactylifera L.) varieties. NFS Journal, 21, 16-21. DOI: https://doi.org/10.1016/j.nfs.2020.08.002
79	Gheith, M. H., Aziz, M. A., Ghori, W., Saba, N., Asim, M., Jawaid, M., & Alothman, O. Y. (2019). Flexural, thermal and dynamic mechanical properties of date palm fibres reinforced epoxy composites. Journal of Materials Research and Technology, 8(1), 853-860. DOI: https://doi.org/10.1016/j.jmrt.2018.06.013
80	Ghnimi, S., Al-Shibli, M., Al-Yammahi, H. R., Al-Dhaheri, A., Al-Jaberi, F., Jobe, B., & Kamal-Eldin, A. (2018). Reducing sugars, organic acids, size, color, and texture of 21 Emirati date fruit varieties (Phoenix dactylifera, L.). NFS journal, 12, 1-10. DOI: https://doi.org/10.1016/j.nfs.2018.04.002
81	Gocke, M. I., Roland, B. O. L., Berns, A. E., Fuhrmann, I., & Brahim, N. (2019). Soil organic matter composition in coastal and continental date palm systems: insights from Tunisian oases. Pedosphere, 29(4), 444-456. DOI: https://doi.org/10.1016/S1002-0160(19)60814-3
82	Hachani, S., Hamia, C., Boukhalkhal, S., Silva, A. M., Djeridane, A., & Yousfi, M. (2018). Morphological, physico-chemical characteristics and effects of extraction solvents on UHPLC-DAD-ESI-MSn profiling of phenolic contents and antioxidant activities of five date cultivars (Phoenix dactylifera L.) growing in Algeria. NFS journal, 13, 10-22. DOI: https://doi.org/10.1016/j.nfs.2018.10.001
83	Haj-Amor, Z., Acharjee, T. K., Dhaouadi, L., & Bouri, S. (2020). Impacts of climate change on irrigation water requirement of date palms under future salinity trend in coastal aquifer of Tunisian oasis. Agricultural Water Management, 228, 105843. DOI: https://doi.org/10.1016/j.agwat.2019.105843
84	Hakkoum, S., Kriker, A., & Mekhermeche, A. (2017). Thermal characteristics of Model houses Manufactured by date palm fiber reinforced earth bricks in desert regions of Ouargla Algeria. Energy Procedia, 119, 662-669. DOI: https://doi.org/10.1016/j.egypro.2017.07.093
85	Hernawan, B., Sofro, Z. M., & Sulistyorini, S. L. (2019). Pengaruh konsumsi sari kurma (Dates syrup) terhadap konsentrasi lipid peroksida selama latihan aerobik akut bagi pemula. Biomedika, 11(1), 30-34. DOI: https://doi.org/10.23917/biomedika.v11i1.7129
86	Hilary, S., Tomás-Barberán, F. A., Martinez-Blazquez, J. A., Kizhakkayil, J., Souka, U., Al-Hammadi, S., ... & Platat, C. (2020). Polyphenol characterisation of Phoenix dactylifera L.(date) seeds using HPLC-mass spectrometry and its bioaccessibility using simulated in-vitro

	digestion/Caco-2 culture model. Food chemistry, 311, 125969. DOI: https://doi.org/10.1016/j.foodchem.2019.125969
87	Hmidani, A., Bourkhis, B., Khouya, T., Ramchoun, M., Filali-Zegzouti, Y., & Alem, C. (2020). Phenolic profile and anti-inflammatory activity of four Moroccan date (Phoenix dactylifera L.) seed varieties. Heliyon, 6(2), e03436. DOI: https://doi.org/10.1016/j.heliyon.2020.e03436
88	Hosseini, M., Dizaji, H. Z., Taghavi, M., & Babaei, A. A. (2020). Preparation of ultra-lightweight and surface-tailored cellulose nanofibril composite cryogels derived from Date palm waste as powerful and low-cost heavy metals adsorbent to treat aqueous medium. Industrial crops and products, 154, 112696. DOI: https://doi.org/10.1016/j.indcrop.2020.112696
89	Husanah, E. (2020). Asuhan Kebidanan Pada Ny P Dengan Masalah Produksi ASI Melalui Terapi Kurma. Jurnal Komunikasi Kesehatan (Edisi 20), 11(01), 71-77. https://doi.org/10.56772/jkk.v11i1.163
90	Ibourki, M., Azouguigh, F., Jadouali, S. M., Sakar, E. H., Bijla, L., Majourhat, K., ... & Laknifli, A. (2021). Physical Fruit Traits, Nutritional Composition, and Seed Oil Fatty Acids Profiling in the Main Date Palm (Phoenix dactylifera L.) Varieties Grown in Morocco. Journal of Food Quality, 2021. DOI: https://doi.org/10.1155/2021/5138043
91	Intha, N., & Chaiprasart, P. (2018). Sex determination in date palm (Phoenix dactylifera L.) by PCR based marker analysis. Scientia horticulturae, 236, 251-255. DOI:https://doi.org/10.1016/j.scienta.2018.03.039
92	Issa, S., Dahy, B., Ksiksi, T., & Saleous, N. (2020). Allometric equations coupled with remotely sensed variables to estimate carbon stocks in date palms. Journal of Arid Environments, 182, 104264. DOI: https://doi.org/10.1016/j.jaridenv.2020.104264
93	Isworo, A. (2020). Anti-inflammatory activity of date palm seed by downregulating interleukin-1β, TGF-β, cyclooxygenase-1 and-2: a study among middle-aged women. Saudi Pharmaceutical Journal, 28(8), 1014-1018. DOI: https://doi.org/10.1016/j.jsps.2020.06.024
94	Jabeen, A., Parween, N., Sayrav, K., & Prasad, B. (2020). Date (Phoenix dactylifera) seed and syringic acid exhibits antioxidative effect and lifespan extending properties in Caenorhabditis elegans. Arabian Journal of Chemistry, 13(12), 9058-9067. DOI: https://doi.org/10.1016/j.arabjc.2020.10.028
95	Jamil, F., Ala'a, H., Al-Haj, L., Al-Hinai, M. A., & Baawain, M. (2017). Phoenix dactylifera kernel oil used as potential source for synthesizing jet fuel and green diesel. Energy Procedia, 118, 35-39. DOI: https://doi.org/10.1016/j.egypro.2017.07.006
96	Jana, G. A., & Yaish, M. W. (2020). Genome-wide identification and functional characterization of glutathione peroxidase genes in date palm (Phoenix dactylifera L.) under stress conditions. Plant gene, 23, 100237. DOI: https://doi.org/10.1016/j.plgene.2020.100237
97	Jana, G. A., & Yaish, M. W. (2020). Isolation and functional characterization of a mVOC producing plant-growth-promoting bacterium isolated from the date palm rhizosphere. Rhizosphere, 16, 100267. DOI: https://doi.org/10.1016/j.rhisph.2020.100267

98	Jana, G. A., & Yaish, M. W. (2021). Genome analysis of a salinity adapted Achromobacter xylosoxidans rhizobacteria from the date palm. Rhizosphere, 19, 100401. DOI: https://doi.org/10.1016/j.rhisph.2021.100401
99	Kadri, K., Elsafy, M., Makhlouf, S., & Awad, M. A. (2021). Effect of pollination time, the hour of daytime, pollen storage temperature and duration on pollen viability, germinability, and fruit set of date palm (Phoenix dactylifera L.) cv" Deglet Nour". Saudi Journal of Biological Sciences. DOI: https://doi.org/10.1016/j.sjbs.2021.09.062
100	Kadum, H., Hamid, A., Abas, F., Ramli, N. S., Jaafar, A. H., Dek, M. S. P., ... & Ibrahim, S. A. (2021). Using dates (Phoenix dactylifera L.) to improve energy metabolism in fatigue-induced Sprague Dawley rats. Future Foods, 4, 100077. DOI: https://doi.org/10.1016/j.fufo.2021.100077
101	Khallouki, F., Ricarte, I., Breuer, A., & Owen, R. W. (2018). Characterization of phenolic compounds in mature Moroccan Medjool date palm fruits (Phoenix dactylifera) by HPLC-DAD-ESI-MS. Journal of Food Composition and Analysis, 70, 63-71. DOI: https://doi.org/10.1016/j.jfca.2018.03.005
102	Kharrat, F., Khlif, M., Hilliou, L., Haboussi, M., Covas, J. A., Nouri, H., & Bradai, C. (2020). Minimally processed date palm (Phoenix dactylifera L.) leaves as natural fillers and processing aids in poly (lactic acid) composites designed for the extrusion film blowing of thin packages. Industrial Crops and Products, 154, 112637. DOI: https://doi.org/10.1016/j.indcrop.2020.112637
103	Khattak, M. N. K., Shanableh, A., Hussain, M. I., Khan, A. A., Abdulwahab, M., Radeef, W., & Samreen, M. H. (2020). Anticancer activities of selected Emirati Date (Phoenix dactylifera L.) varieties pits in human triple negative breast cancer MDA-MB-231 cells. Saudi journal of biological sciences, 27(12), 3390-3396. DOI: https://doi.org/10.1016/j.sjbs.2020.09.001
104	Khouane, A. C., Akkak, A., & Benbouza, H. (2020). Molecular identification of Date palm (Phoenix dactylifera L.)" Deglet noor" pollinator through analysis of genetic diversity of Algerian male and female ecotypes using SSRs markers. Scientia Horticulturae, 274, 109668. DOI: https://doi.org/10.1016/j.scienta.2020.109668
105	Laghouiter, O. K., Benalia, M., Gourine, N., Djeridane, A., Bombarda, I., & Yousfi, M. (2018). Chemical characterization and in vitro antioxidant capacity of nine Algerian date palm cultivars (Phoenix dactylifera L.) seed oil. Mediterranean Journal of Nutrition and Metabolism, 11(2), 103-117. DOI: 10.3233/MNM-17185
106	Mahdi, E., Ochoa, D. R. H., Vaziri, A., Dean, A., & Kucukvar, M. (2021). Khalasa date palm leaf fiber as a potential reinforcement for polymeric composite materials. Composite Structures, 265, 113501. DOI: https://doi.org/10.1016/j.compstruct.2020.113501
107	Maina, N., Baraket, G., Salhi-Hannachi, A., & Sakka, H. (2019). Sequence analysis and molecular evolution of Tunisian date palm cultivars (Phoenix dactylifera L.) based on the internal transcribed spacers (ITSs) region of the nuclear ribosomal DNA. Scientia Horticulturae, 247, 373-379. DOI: https://doi.org/10.1016/j.scienta.2018.12.045

108	Makhlouf-Gafsi, I., Krichen, F., Mansour, R. B., Mokni, A., Sila, A., Bougatef, A., ... & Besbes, S. (2018). Ultrafiltration and thermal processing effects on Maillard reaction products and biological properties of date palm sap syrups (Phoenix dactylifera L.). Food chemistry, 256, 397-404. DOI: https://doi.org/10.1016/j.foodchem.2018.02.145
109	Maou, S., Meghezzi, A., Grohens, Y., Meftah, Y., Kervoelen, A., & Magueresse, A. (2021). Effect of various chemical modifications of date palm fibers (DPFs) on the thermo-physical properties of polyvinyl chloride (PVC)–high-density polyethylene (HDPE) composites. Industrial Crops and Products, 171, 113974. DOI: https://doi.org/10.1016/j.indcrop.2021.113974
110	Masmoudi-Allouche, F., Kriaa, W., & Drira, N. (2019). Staminodes evolution and in vitro development innovation in date palm (Phoenix dactylifera L.). Comptes rendus biologies, 342(5-6), 220-229. DOI: https://doi.org/10.1016/j.crvi.2019.06.001
111	Mesnoua, M., Roumani, M., & Salem, A. (2018). The effect of pollen storage temperatures on pollen viability, fruit set and fruit quality of six date palm cultivars. Scientia Horticulturae, 236, 279-283. DOI: https://doi.org/10.1016/j.scienta.2018.03.053
112	Mihi, A., Tarai, N., & Chenchouni, H. (2019). Can palm date plantations and oasification be used as a proxy to fight sustainably against desertification and sand encroachment in hot drylands?. Ecological Indicators, 105, 365-375. DOI: https://doi.org/10.1016/j.ecolind.2017.11.027
113	Minikaev, D., Zurgel, U., Tripler, E., & Gelfand, I. (2021). Effect of increasing nitrogen fertilization on soil nitrous oxide emissions and nitrate leaching in a young date palm (Phoenix dactylifera L., cv. Medjool) orchard. Agriculture, Ecosystems & Environment, 319, 107569. DOI: https://doi.org/10.1016/j.agee.2021.107569
114	Mirza, J. H., Kamran, M., & Alatawi, F. J. (2021). Phenology and abundance of date palm mite Oligonychus afrasiaticus (McGregor) (Acari: Tetranychidae) in Riyadh, Saudi Arabia. Saudi Journal of Biological Sciences. DOI: https://doi.org/10.1016/j.sjbs.2021.04.023
115	Mohammadi, N., Rastgoo, S., & Izadi, M. (2017). The strong effect of pollen source and pollination time on fruit set and the yield of tissue culture-derived date palm (Phoenix dactylifera L.) trees cv. Barhee. Scientia Horticulturae, 224, 343-350. DOI: https://doi.org/10.1016/j.scienta.2017.06.031
116	Mohei, E. L., Mohasseb, H. A. A., Al-Khateeb, A. A., Al-Khateeb, S. A., Chowdhury, K., El-Shemy, H. A., & Aldaej, M. I. (2019). Identification and sequencing of Date-SRY Gene: A novel tool for sex determination of date palm (Phoenix dactylifera L.). Saudi journal of biological sciences, 26(3), 514-523. DOI: https://doi.org/10.1016/j.sjbs.2017.08.002
117	Muzaifa, M., Lubis, Y. M., & Arifullah, M. (2019). Kajian Pembuatan Infused Water dari Buah Kurma (Phoenix dactylifera) dengan Penambahan Jeruk Nipis (Citrus aurantiifolia). Jurnal Teknologi dan Industri Pertanian Indonesia, 11(2), 84-89. DOI: https://doi.org/10.17969/jtipi.v11i2.14656

118	Nematallah, K. A., Ayoub, N. A., Abdelsattar, E., Meselhy, M. R., Elmazar, M. M., El-Khatib, A. H., ... & Mousa, S. A. (2018). Polyphenols LC-MS2 profile of Ajwa date fruit (Phoenix dactylifera L.) and their microemulsion: Potential impact on hepatic fibrosis. Journal of Functional Foods, 49, 401-411. DOI: https://doi.org/10.1016/j.jff.2018.08.032
119	Oluwasina, O. O., Demehin, B. F., Awolu, O. O., & Igbe, F. O. (2020). Optimization of starch-based candy supplemented with date palm (Phoenix dactylifera) and tamarind (Tamarindus indica L.). Arabian Journal of Chemistry, 13(11), 8039-8050. DOI: https://doi.org/10.1016/j.arabjc.2020.09.033
120	Ourradi, H., Ennahli, S., Martos, M. V., Hernadez, F., Dilorenzo, C., Hssaini, L., ... & Hanine, H. (2021). Proximate composition of polyphenolic, phytochemical, antioxidant activity content and lipid profiles of date palm seeds oils (Phoenix dactylifera L.). Journal of Agriculture and Food Research, 6, 100217. DOI: https://doi.org/10.1016/j.jafr.2021.100217
121	Oushabi, A., Sair, S., Hassani, F. O., Abboud, Y., Tanane, O., & El Bouari, A. (2017). The effect of alkali treatment on mechanical, morphological and thermal properties of date palm fibers (DPFs): Study of the interface of DPF–Polyurethane composite. South African Journal of Chemical Engineering, 23, 116-123. DOI: https://doi.org/10.1016/j.sajce.2017.04.005
122	Pasha, A. Z., Bukhari, S. A., El Enshasy, H. A., El Adawi, H., & Al Obaid, S. (2021). Compositional analysis and physicochemical evaluation of date palm (Phoenix dactylifera L.) mucilage for medicinal purposes. Saudi Journal of Biological Sciences. DOI: https://doi.org/10.1016/j.sjbs.2021.10.048
123	Putra, M. D., Abasaeed, A. E., & Al-Zahrani, S. M. (2020). Prospective production of fructose and single cell protein from date palm waste. Electronic Journal of Biotechnology, 48, 46-52. DOI: https://doi.org/10.1016/j.ejbt.2020.09.007
124	Qadir, A., Shakeel, F., Ali, A., & Faiyazuddin, M. (2020). Phytotherapeutic potential and pharmaceutical impact of Phoenix dactylifera (date palm): current research and future prospects. Journal of food science and technology, 57(4), 1191-1204. DOI: https://doi.org/10.1007/s13197-019-04096-8
125	Ramchoun, M., Alem, C., Ghafoor, K., Ennassir, J., & Zegzouti, Y. F. (2017). Functional composition and antioxidant activities of eight Moroccan date fruit varieties (Phoenix dactylifera L.). Journal of the Saudi Society of Agricultural Sciences, 16(3), 257-264. DOI: https://doi.org/10.1016/j.jssas.2015.08.005
126	Rezma, S., Birot, M., Hafiane, A., & Deleuze, H. (2017). Physically activated microporous carbon from a new biomass source: Date palm petioles. Comptes Rendus Chimie, 20(9-10), 881-887. DOI: https://doi.org/10.1016/j.crci.2017.05.003
127	Riahi, K., Chaabane, S., & Thayer, B. B. (2017). A kinetic modeling study of phosphate adsorption onto Phoenix dactylifera L. date palm fibers in batch mode. Journal of Saudi Chemical Society, 21, S143-S152. DOI: https://doi.org/10.1016/j.jscs.2013.11.007

128	Ridwan, M., Lestariningsih, S., & Lestari, G. I. (2018). Konsumsi Buah Kurma Meningkatkan Kadar Hemoglobin pada Remaja Putri. Jurnal Kesehatan Metro Sai Wawai, 11(2), 57-64. DOI: http://dx.doi.org/10.26630/jkm.v11i2.1772
129	Safitri, S., & Julaecha, J. (2021). Konsumsi Buah Kurma Meningkatkan Kadar Hemoglobin Pada Remaja Putri. Jurnal Endurance: Kajian Ilmiah Problema Kesehatan, 6(1), 127-134. DOI: http://doi.org/10.22216/jen.v6i1.5672
130	Sahyon, H. A., & Al-Harbi, S. A. (2020). Chemoprotective role of an extract of the heart of the Phoenix dactylifera tree on adriamycin-induced cardiotoxicity and nephrotoxicity by regulating apoptosis, oxidative stress and PD-1 suppression. Food and Chemical Toxicology, 135, 111045. DOI: https://doi.org/10.1016/j.fct.2019.111045
131	Saleh, R. H., Ronitawati, P., & Sitoayu, L. (2019). Pengaruh Subtitusi Tepung Sukun (Artocarpus Altilis) Dan Buah Kurma (Phoenix Dactlifera) Terhadap Daya Terima Pada Cookies Sebagai PMT-Balita. Retrieved from https://digilib.esaunggul.ac.id/public/UEU-Undergraduate-12712-MANUSKRIP.Image.Marked.pdf.
132	Salem, I. B., El Gamal, M., Sharma, M., Hameedi, S., & Howari, F. M. (2021). Utilization of the UAE date palm leaf biochar in carbon dioxide capture and sequestration processes. Journal of Environmental Management, 299, 113644. DOI: https://doi.org/10.1016/j.jenvman.2021.113644
133	Salomón-Torres, R., Sol-Uribe, J. A., Valdez-Salas, B., García-González, C., Krueger, R., Hernández-Balbuena, D., ... & Ortiz-Uribe, N. (2020). Effect of four pollinating sources on nutritional properties of medjool date (Phoenix dactylifera L.) seeds. Agriculture, 10(2), 45. DOI: https://doi.org/10.3390/agriculture10020045
134	Saputri, Y. (2019). Evaluasi Sensori Dan Kimia Snack Bar Berbahan Baku Tempe Dan Kurma Sebagai Makanan Pemulihan Pada Endurance Sport. FoodTech: Jurnal Teknologi Pangan, 2(1), 1-11. DOI: http://dx.doi.org/10.26418/jft.v2i1.37999
135	Sebii, H., Karra, S., Bchir, B., Ghribi, A. M., Danthine, S., Blecker, C., ... & Besbes, S. (2019). Effect of sonication pretreatment on physico-chemical, surface and thermal properties of date palm pollen protein concentrate. LWT, 106, 128-136. DOI: https://doi.org/10.1016/j.lwt.2019.02.041
136	Serret, M. D., Al-Dakheel, A. J., Yousfi, S., Fernáandez-Gallego, J. A., Elouafi, I. A., & Araus, J. L. (2020). Vegetation indices derived from digital images and stable carbon and nitrogen isotope signatures as indicators of date palm performance under salinity. Agricultural Water Management, 230, 105949. DOI: https://doi.org/10.1016/j.agwat.2019.105949
137	Shafiq, M., Alazba, A. A., & Amin, M. T. (2018). Removal of heavy metals from wastewater using date palm as a biosorbent: a comparative review. Sains Malaysiana, 47(1), 35-49. DOI: http://dx.doi.org/10.17576/jsm-2018-4701-05
138	Shahsavar, A. R., & Shahhosseini, A. (2021). Pollen grain hormones of date palm pollinator cultivars and their relationship with hormones of different stages of 'Piarom'date fruit growth. Scientia Horticulturae, 288, 110389. DOI: https://doi.org/10.1016/j.scienta.2021.110389

139	Shayeb, M. A., & Baloch, M. A. (2020). Distribution of natural radioactivity in soil and date palm-pits using high purity germanium radiation detectors and LB-alpha/beta gas-flow counter in Saudi Arabia. Nuclear Engineering and Technology, 52(6), 1282-1288. DOI: https://doi.org/10.1016/j.net.2019.12.009
140	Soomro, M. H., Mari, J. M., Nizamani, I. A., & Gilal, A. A. (2021). Performance of Ferrolure+ pheromone in the red palm weevil, Rhynchophorus ferrugineus (Coleoptera: Dryophthoridae) management in date palm growing areas of Sindh, Pakistan. Journal of the Saudi Society of Agricultural Sciences. DOI: https://doi.org/10.1016/j.jssas.2021.07.004
141	Supian, A. B. M., Jawaid, M., Rashid, B., Fouad, H., Saba, N., Dhakal, H. N., & Khiari, R. (2021). Mechanical and physical performance of date palm/bamboo fibre reinforced epoxy hybrid composites. journal of materials research and technology, 15, 1330-1341. DOI: https://doi.org/10.1016/j.jmrt.2021.08.115
142	Świąder, K., Białek, K., & Hosoglu, I. (2020). Varieties of date palm fruits (Phoenix dactylifera L.), their characteristics and cultivation®. Postępy Techniki Przetwórstwa Spożywczego. Retrieved from http://yadda.icm.edu.pl/yadda/element/bwmeta1.element.baztech-5da58b0a-6a33-4620-a9ec-7da871d086c0
143	Taban, E., Khavanin, A., Jafari, A. J., Faridan, M., & Tabrizi, A. K. (2019). Experimental and mathematical survey of sound absorption performance of date palm fibers. Heliyon, 5(6), e01977. DOI: https://doi.org/10.1016/j.heliyon.2019.e01977
144	Talukder, A. A., Adnan, N., Siddiqa, A., Miah, R., Tuli, J. F., Khan, S. T., ... & Yamada, M. (2019). Fuel ethanol production using xylose assimilating and high ethanol producing thermosensitive Saccharomyces cerevisiae isolated from date palm juice in Bangladesh. Biocatalysis and Agricultural Biotechnology, 18, 101029. DOI: https://doi.org/10.1016/j.bcab.2019.101029
145	Triastuti, U. Y. (2021). Pembuatan Susu Tempe Kurma sebagai Alternatif Minuman Kesehatan. Garina, 13(1). Retrieved from http://www.garina.org/index.php/journal/article/view/18
146	Ubah, S. A., Agbonu, O. A., Columbus, P. K., Abah, K. O., Chibuogwu, I. C., Abalaka, S. E., ... & Ajayi, I. E. (2021). Effects of date fruit (Phoenix dactylifera) on sperm cell morphology and reproductive hormonal profiles in cypermethrin-induced male infertility in Wister rats. Scientific African, 11, e00713. DOI: https://doi.org/10.1016/j.sciaf.2021.e00713
147	Wan Daud, W. N., & Abdullah, N. F. N. (2019). Tahap Pengetahuan Dan Amalan Pengambilan Buah Kurma Dalam Kalangan Pelajar Bidang Sains Kesihatan Dan Pengajian Islam [The Level of Knowledge and Practices on Dates among Students from Health Sciences and Islamic Studies Background]. Ulum Islamiyyah. DOI https://doi.org/10.33102/ulum.2019.26.08
148	Widagdo, T. J., Belyamin, B., & Kamal, D. M. (2021, August). Prototype Pengering Beku Atmosferik Untuk Menghasilkan Kurma Kering Berkualitas. In Seminar Nasional Teknik (SEMNASTEK) UISU (Vol. 4, No. 1, pp. 66-68).

	Retrieved from https://jurnal.uisu.ac.id/index.php/semnastek/article/view/4144/2976
149	Zadeh, M. V., Afrooz, K., Shamsi, M., & Rostami, M. A. (2019). Measuring the dielectric properties of date palm fruit, date palm leaflet, and Dubas bug at radio and microwave frequency using two-port coaxial transmission/reflection line technique. Biosystems Engineering, 181, 73-85. DOI: https://doi.org/10.1016/j.biosystemseng.2019.03.003
150	Zanichelli, A., Carpinteri, A., Fortese, G., Ronchei, C., Scorza, D., & Vantadori, S. (2018). Contribution of date-palm fibres reinforcement to mortar fracture toughness. Procedia Structural Integrity, 13, 542-547. DOI: https://doi.org/10.1016/j.prostr.2018.12.089
151	Zarbakhsh, S., & Rastegar, S. (2019). Influence of postharvest gamma irradiation on the antioxidant system, microbial and shelf life quality of three cultivars of date fruits (Phoenix dactylifera L.). Scientia Horticulturae, 247, 275-286. DOI: https://doi.org/10.1016/j.scienta.2018.12.035
152	Zhen, J., Lazarovitch, N., & Tripler, E. (2020). Effects of fruit load intensity and irrigation level on fruit quality, water productivity and net profits of date palms. Agricultural Water Management, 241, 106385. DOI: https://doi.org/10.1016/j.agwat.2020.106385
153	Zhen, J., Tripler, E., Pevzner, S., & Lazarovitch, N. (2019). Impact of fruiting on gas exchange, water fluxes and frond development in irrigated date palms. Scientia Horticulturae, 244, 234-241. DOI: https://doi.org/10.1016/j.scienta.2018.09.046
154	Zihad, S. N. K., Uddin, S. J., Sifat, N., Lovely, F., Rouf, R., Shilpi, J. A., ... & Göransson, U. (2021). Antioxidant properties and phenolic profiling by UPLC-QTOF-MS of Ajwah, Safawy and Sukkari cultivars of date palm. Biochemistry and biophysics reports, 25, 100909. DOI: https://doi.org/10.1016/j.bbrep.2021.100909

The Demographic Review of the Article

This objective will discuss in three categories which is language, source of information, year of publishing and subject dispersion. Each category will be explained in tables containing journal related, frequency, and percentages to make it simpler for the researcher to evaluate the relevant journal article.

Language

Table 4 below indicate the percentage of the language medium used on the date palm related publications in English and Malay. Based on the data obtained, the total number of related journal articles is 154 articles. The table shows that there are 141 (92%) journal articles written in English and 13 (8%) journal articles written in Malay. It may be assumed that the majority of dates are studied in English rather than Malay.

Table 4: Percentage and frequency of the Language Medium Used on the Date Palm Related Publications

Language (n=154)	Freq. (*f*)	Percentage (%)	Article related

English	141	92	1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 31, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 46, 47, 48, 49, 50, 51, 52, 53, 54, 55, 56, 57, 58, 59, 60, 61, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 74, 75, 77, 78, 79, 80, 81, 82, 83, 84, 86, 87, 88, 90, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 106, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 118, 119, 120, 121, 122, 123, 124, 125, 126, 127, 130, 132, 133, 135, 136, 137, 138, 139, 140, 141, 142, 143, 144, 146
Malay	13	8	44, 45, 76, 85, 89, 118, 128, 129, 131, 134, 145

Source of Information

Table 5 shows the source of information on the date palm related publications that contain two source which is Science Direct and Google Scholar. According to the table, there are 154 journal articles in total, 131 article (84%) are from Science Direct. While there are 24 article (16%) from Google Scholar. It may be argued that Science Direct is the source of most of the study on dates. This proves that Science Direct is an effective search engine for locating information sources, especially when it relates to Date Palm (Phoenix dactylifera L).

Table 5: Source of Information on the Date Palm Related Publications

Publisher (n=154)	Freq. (*f*)	Percentage (%)	Article Related
Science direct	130	84	1, 2, 3, 4, 5, 7, 8, 9, 10, 11, 12, 13, 15, 16, 17, 18, 19, 20, 21, 22, 23, 25, 26, 27, 28, 29, 30, 32, 33, 34, 35, 36, 37, 38, 39, 40, 41, 42, 43, 46, 47, 48, 49, 50, 51, 52, 53, 55, 56, 57, 58, 59, 60, 62, 63, 64, 65, 66, 67, 68, 69, 70, 71, 72, 73, 75, 77, 78, 79, 80, 81, 82, 83, 84, 86, 87, 88, 91, 92, 93, 94, 95, 96, 97, 98, 99, 100, 101, 102, 103, 104, 105, 107, 108, 109, 110, 111, 112, 113, 114, 115, 116, 117, 119, 120, 121, 122, 123, 125, 126, 127, 130, 132, 135, 136, 138, 139, 140, 141, 143, 144, 146, 149, 150, 151, 152, 153, 154
Google scholar	24	16	6, 14, 31, 44, 45, 54, 74, 76, 85, 89, 90, 106, 118, 124, 128, 129, 131, 133, 134, 137, 142, 145, 147, 148

Year of Publishing

Table 6 illustrates the year of publication for date palm-related publications throughout a five-year period, begin in 2017 and ending in 2021. In 2017, there were 16 articles (10%) on date palms. Next, there are 20 articles (13%) in 2018. Furthermore, 38 articles (25%) have been recorded in 2019 and 2021. Finally, in 2020, the higher recorded article from the related article is 42 articles (27%). In summary, in 2020 was the highest year for date palm analysis. While the year 2017 is the lowest researched of the five years analyzed, with just 16 publications were identified.

Table 6: Year of Publishing on the Date Palm Related Publications

Language (n=154)	Freq. (*f*)	Percentage (%)	Article Related
2017	16	10	1, 7, 14, 18, 22, 27, 50, 62, 66, 84, 95, 115, 121, 125, 126, 127

2018	20	13	3, 8, 9, 17, 30, 49, 65, 68, 71, 80, 82, 91, 101, 105, 108, 111, 118, 128, 137
2019	38	25	4, 10, 13, 16, 20, 21, 28, 32, 33, 34, 40, 41, 45, 52, 55, 56, 59, 61, 69, 74, 77, 79, 81, 85, 107, 110, 112, 116, 117, 131, 134, 135, 143, 144
2020	42	27	5, 6, 12, 19, 24, 26, 31, 37, 42, 43, 44, 46, 47, 48, 51, 57, 58, 64, 72, 78, 83, 86, 87, 88, 89, 92, 93, 94, 96, 97, 102, 103, 104, 119, 123, 124, 130, 133, 136, 139, 142
2021	38	25	2, 11, 15, 23, 25, 29, 35, 36, 38, 39, 53, 54, 60, 63, 67, 70, 73, 75, 76, 90, 98, 99, 100, 106, 109, 113, 114, 120, 122, 129, 132, 138, 140, 141, 145, 146

Subject Dispersion of Journal

The scatter and inter-disciplinary nature of the literature on Phoenix dactylifera L may be shown in Table 7 subject dispersion of journals. From 154 articles collected, Agriculture with 37 article (24%), Biology with 28 article (18%), Horticulture and Food science and Technology have counted the same number of articles related with 20 article (13%) have the largest number of articles. Among the three subject dispersion that had the lowest article record were Pharmacy, General and Nuclear Science which had only 1 journal article (1%). The study on Phoenix dactylifera L is primarily concerned with the scientific study of life and the cultivation of plants and livestock.

Table 7: Subject Dispersion on the Date Palm Related Publications

Subject Category (n=154)		**Freq.(*f*)**	**Percentage (%)**	**Article Related**
1.	Agriculture	37	24	5, 8, 19, 22, 26, 27, 32, 33, 34, 38, 45, 47, 48, 53, 55, 73, 81, 83, 95, 97, 98, 99, 101, 102, 106, 112, 113, 117, 120, 125, 127, 133, 136, 140, 144, 150, 152
2.	Biology	28	18	3, 4, 16, 21, 23, 29, 31, 35, 36, 39, 54, 57, 58, 62, 65, 70, 71, 77, 85, 93, 96, 103, 110, 114, 116, 122, 146, 154
3.	Food science and Technology	20	13	6, 7, 15, 17, 37, 41, 43, 44, 49, 64, 66, 80, 84, 90, 117, 124, 130, 131, 145, 148
4.	Chemistry	10	6	18, 46, 52, 61, 86, 87, 92, 94, 108, 119
5.	Botany	6	4	13, 42, 59, 67, 88, 143
6.	Science (General)	12	8	9, 14, 56, 63, 68, 74, 75, 78, 79, 100, 142, 147
7.	Horticulture	20	13	10, 11, 50, 51, 69, 72, 82, 91, 104, 107, 109, 111, 115, 118, 128, 129, 134, 138, 151, 153,
8.	Medical Sciences	2	1	12, 24
9.	Environmental Science	2	1	40, 132
10.	Engineering and Technology	5	3	1, 20, 28, 30, 141

11.	Pharmacy	1	1	2
12.	Engineering Sciences	7	5	20, 121, 123, 126, 135, 137, 149
13.	Nutrition	2	1	60, 105
14.	General	1	1	76
15.	Nuclear Science	1	1	139

CONCLUSION

Two goals guided the collection of the data, which took place over a five-year period, from 2017 to 2021. First of all, English has 141 articles (92%) more research than Malay, which has 13 articles (8%). Following that, Science Direct is a beneficial search engine for discovering sources of information, particularly regarding date palm. Then, in 2020 with 42 journal article (27%) was the most popular for date palm analysis. While in 2017 only 16 journal article (10%) discovered, the lowest investigated of the five years examined. Additionally, the research on Phoenix Dactylifera.L is primarily focused on the scientific study of life, plant, and livestock cultivation. From 154 article that was found, Agriculture with 37 article (24%), Biology with 28 article (18%), and Horticulturae with 20 article (13%) have the largest number of articles based on subject dispersion.

According to the growth of the literature analyzed in this study, research on this subject increased from 2017 to 2020, and then stabilized in 2021. The findings support the multidisciplinary nature of the date palm literature. However, most of the subject dispersion deal with Agriculture, Biology, and horticulture. The improvement of food and feed quality, management of plant diseases, and plant breeding are major areas of emphasis in this research. The animal side is given greater emphasis than the human side in the medical literature. In addition, journal articles and the English language predominate in this study. The study's findings will be highly beneficial to academics and students across a variety of fields, both in terms of generating ideas for new studies and raising awareness among concerned researchers.

ACKNOWLEDGMENTS

This finding is part of self funding research conducted in order to have better understanding on current research related to date palm. Our gratitude to Faculty of Quranic and Sunnah Studies, Universiti Sains Islam Malaysia for its support in completing this research.

CONFLICT OF INTERESTS

The authors declare no competing interests such as financial or personal relationship regarding the writing of this article.

REFERENCES

Abuelgassim, A. O., Eltayeb, M. A., & Ataya, F. S. (2020). Palm date (Phoenix dactylifera) seeds: A rich source of antioxidant and antibacterial activities. Czech Journal of Food Sciences, *38*(3), 171-178.

Al-Alawi, R. A., Al-Mashiqri, J. H., Al-Nadabi, J. S., Al-Shihi, B. I., & Baqi, Y. (2017). Date palm tree (Phoenix dactylifera L.): natural products and therapeutic options. Frontiers in plant science, 8, 845.

Annum, G. (2019). Research Instruments for Data Collection Method. *Research Methodology*, 1–6.

Asim, M., Jawaid, M., Khan, A., Asiri, A. M., & Malik, M. A. (2020). Effects of date palm fibres loading on mechanical, and thermal properties of date palm reinforced phenolic composites. Journal of Materials Research and Technology, 9(3), 3614-3621.

Bedjaoui, H., & Benbouza, H. (2020). Assessment of phenotypic diversity of local Algerian date palm (Phoenix dactylifera L.) cultivars. Journal of the Saudi Society of Agricultural Sciences, 19(1), 65-75.

Faisal, A. H. M., Mokhtar, M., Rahman, T. A. F. B. A., & Rahim, F. (2020). Bibliometric Analysis of Publications Related to Surah Al-Nahl: Towards Research in I'Jaz Studies.

Fauzi, M. N. M., Mat, A. S. A., Shuhaimi, A. I. E., Asmuzi, N.F., Abd Aziz, N.A., & Abdul Rahman, A.F. (2019). Bibliometrics Analysis of Research Publications Related to Sus scrofa domesticus.

Hachani, S., Hamia, C., Boukhalkhal, S., Silva, A. M., Djeridane, A., & Yousfi, M. (2018). Morphological, physico-chemical characteristics and effects of extraction solvents on UHPLC-DAD-ESI-MSn profiling of phenolic contents and antioxidant activities of five date cultivars (Phoenix dactylifera L.) growing in Algeria. NFS journal, 13, 10-22.

Hassan, S. N. S., & Baharuddin, F. N. (2021). Prophetic Food in Journal Articles from 2015 Until 2019: A Bibliometric Study. Journal of Islamic, 6(35), 68-84.

Hipni, H. I., A'wani Abd Aziz, N., & Rahman, T. A. F. T. A. (2020). Bibliometrics Analysis of Research Publications Related to Goat's Milk: Towards Research in Islamic Studies. Sains Insani, 5(1), 126-134.

Ikmal Hafiz Jamal, Muhammad Najib Abd Wakil, Muhammad Hasif Yahaya, Ahmad Thaqif Ismail & Mohammad Afandi Md Ismail. (2020). Statistical Analysis of the Word Zakat and Its Application in Sahih al-Bukhari Perspective. Journal of Contemporary Islamic Studies, 6(2), 93-110.

Karra, S., Sebii, H., Jardak, M., Bouaziz, M. A., Attia, H., Blecker, C., & Besbes, S. (2020). Male date palm flowers: Valuable nutritional food ingredients and alternative antioxidant source and antimicrobial agent. South African Journal of Botany, 131, 181-187.

Khan, S. A., Al Kiyumi, A. R., Al Sheidi, M. S., Al Khusaibi, T. S., Al Shehhi, N. M., & Alam, T. (2016). In vitro inhibitory effects on α-glucosidase and α-amylase level and antioxidant potential of seeds of Phoenix dactylifera L. Asian Pacific Journal of Tropical Biomedicine, 6(4), 322-329.

Khattak, M. N. K., Shanableh, A., Hussain, M. I., Khan, A. A., Abdulwahab, M., Radeef, W., & Samreen, M. H. (2020). Anticancer activities of selected Emirati Date (Phoenix dactylifera L.) varieties pits in human triple negative breast cancer MDA-MB-231 cells. Saudi journal of biological sciences, 27(12), 3390-3396.

Kulakli, A. (2021). Integration of Data Mining and Business Intelligence in Big Data Analytics: A Research Agenda on Scholarly Publications. In Integration Challenges for Analytics, Business Intelligence, and Data Mining (pp. 13-43). IGI Global.

Mia, M. A. T., Mosaib, M. G., Khalil, M. I., Islam, M. A., & Gan, S. H. (2020). Potentials and safety of date palm fruit against diabetes: A critical review. Foods, 9(11), 1557.

Mokhtar, M., Faisal, A. H. M., & Rahman, T. A. F. T. A. (2020). Bibliometric Analysis of Research Publications Related to At-Tazkir and At-Ta'Nith in Al-Qur'an..

Qadir, A., Shakeel, F., Ali, A., & Faiyazuddin, M. (2020). Phytotherapeutic potential and pharmaceutical impact of Phoenix dactylifera (date palm): current research and future prospects. Journal of food science and technology, 57(4), 1191-1204.

Rahman, T. A. F. T. A., Idris, K., A'wani Abd Aziz, N., & Shariman, N. Q. (2020). Research on Ziziphus Mauritiana: Bibliometric Studies. *Sains Insani*, *5*(1), 148-156.

Shah, N. (2004). Pharmaceutical supply chains: key issues and strategies for optimisation. Computers & chemical engineering, 28(6-7), 929-941.

Świąder, K., Białek, K., & Hosoglu, I. (2020). Varieties of date palm fruits (Phoenix dactylifera L.), their characteristics and cultivation®. Postępy Techniki Przetwórstw.