

Religion and Horticulture: A Review

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ABSTRACT

Religion is a composite of believes and practices that are directly connected with spirituality and affects people's way of life. The common religions across the globe include; Christianity, Hinduism, Islam, Judaism, Buddhism, Sikhism and African traditions among others. Horticulture encompasses the science and art of growing flowers, fruits and vegetables. The horticultural sector is highly valuable in many aspects of religion. Flowers are largely grown for their aesthetic values and are used by various religions for landscaping around places of worship, and religious rituals and ceremonies such as burials weddings and are bouquets for the altars and pulpits decorations. Some specific flowers symbolize purity, divinity and spirituality, with some regarded with reverence as source of supernatural powers, while others have been used to emit fragrances that are believed to repel demonic powers. Vegetables are grown and utilized alongside the main dishes, for their soluble mineral salts, vitamins, and other essential

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compounds that can boost immunity. Religions such as the Hindu and Budha emphasize to their congregants being vegetarians as they worship the animals and therefore, they cannot eat meat. Christians have associated different colors of various vegetables and fruits with purity, Holy Spirit, faith, trust, royalty, crucifixion and resurrection of the Lord Jesus Christ. The herbs and the spices are of equal importance in all the religions where some are used in burning incense at the altars, religious offerings, and rituals, culinary while others are used for medicinal purposes. Fruits symbolize faith, holiness, fruitfulness, significance purity, food, eternity etc. Fruits are sources of wine in most religious practices. Some religious practices either enhance or hinder the growth of the sector. Most people who practice traditional religion hardly accept new technologies and innovations, thus hinder the growth of the horticultural sector. In conclusion religion affects the type of horticultural plants, to be cultivated and consumed in each area. Religion also influences the uptake of relevant horticultural technologies and in the long run has a direct influence on the development of that area.

Keywords: *Christianity, Hinduism, Islam, Judaism, Buddhism, Sikhsim, African traditions, Horticulture.*

1.0 REVIEW OF RELIGION

1.1 Introduction

Religion includes beliefs, practices and rituals related to divinity, and this describes on how people live. Religion is always associated with spirituality which is the connection to that which is sacred and that's what people are always searching (Tan et al., 2013). Those who are spiritual are deeply religious and most religious beings have been reported to have a better health (Gillum et al., 2008). They are associated with lower mortality and better adaptation of health behaviors more life satisfaction and lower prevalence of hypertension (Hill & Pargament, 2003). Religion is an important aspect of people's daily livelihood and 51% of the people across the globe believe in God (s).143 countries from the developing world have reported religion as an important aspect of their life (Hill et al., 2006).

Religion benefits health through adoption of religious practices that are health promoting. Most religions view the body as sacred and will prohibit unhealthy behaviors. These behaviors not only harm the body but the spirit too (Koenig, 2012). The major religions across the globe include Christianity, Islamic, Hinduism, Buddhism and indigenous/traditional. Religion influences the overall growth and the economic growth of a nation through agriculture (Dimiyati, 2016).

In Africa 40% of the population are Christians, 40% Muslims and 20% the rest. Some aspects of agriculture such as land distribution agronomic practices community responsibilities are deeply rooted in religion. The more a country is diverse in religion, the greater competition and better quality of religious products, hence greater involvement in religion and increase in believers. The more people are educated and intelligent, the less they believe in religion. People who are hit harder by economic distress tend to increase their religious intensity (Chen 2005).

Replacement of traditional religion in Africa by the western and eastern religion have orchestrated changes in altitude to agriculture. Countries dominated by traditional religion have demonstrated low uptake of technology. The traditional believes have limited them from taking up new farming techniques, methods. Countries dominated by

Christians have a better take up of technology. Economic growth responds positively to the extent of religious believes (Nkamleu Guy, 2019). Cultural and religious practices greatly affect the adoption of farming technologies in sub-Saharan Africa (Tanko & Ismaila, 2021).

In some countries religion is on pedestals and techniques such as altering plant genome is regarded as ungodly and arrogant (Adekunle et al., 2016). In areas dominated by traditional religion more human effort is used rather than the technical efforts. In the event of new technologies, they seek approval from relevant gods (Tanko, 2020). They are dominated too with cultural restrictions whereby some days are set for working and others not and this reduces on the productivity. Some need elders or chiefs to approve certain technologies and they believe in what will be approved. Some need to seek ancestral approvals. The output in farm production is highly influenced by religious believes if they get a bumper harvest that show a blessing but the opposite shows Gods wrath upon them (Tanko & Ismaila, 2021).

Religion and spirituality are negatively associated with harmful behaviors such as smoking, drug abuse, alcoholism and risky sexual behaviors (Blay et al., 2008) and it is positively associated with good behaviors such as preventive health care and physical activity. Most religions have food guidelines on what to eat and not to eat. Most religions encourage vegetable and fruit consumption while prohibiting fat intake especially the Hindu and Budha encourage their congregants to be vegetarians to cultivate compassion. Seventh Day Adventist are encouraged to be vegetarians to maintain a healthy body. Non-vegetarian food is considered impure and that could hinder spiritual growth (McCaffree, 2002)

Dietary practices and guidelines are protective factors that prevent diet related ailments, and the people end up having longer lifespans and better physical health. The people in a small town in Japan Okinawa are said to have longer lifespans and their diet consist of fruits and vegetables, The people eat at least five servings of fruits and vegetables every day. At least seven types of fruits and vegetables are consumed daily. The Okinawans hardly take sugar which is said to be poisonous. If they do, it has to be cane sugar and in total, they consume a third of the world's sugar consumption (Hectar&Francesc, 2016). Religious

denominations have a significant correlation to fruit and vegetable intake. Spirituality and religion promote the development of attitudes, behaviors and habits that are important for better technical economic importance (Dimyati, 2016).

In Christianity the followers are urged to produce good fruits, and they are associated with Holy Spirit. They are compared to Christ who is said to be the vine, and the followers are equated to be the branches while God the father is the gardener. The olives, grapes, figs pomegranates are extensively mentioned in the bible.

Among Hindus some fruits are offered to the gods and have myriads of significances while in Islam the dates, figs pomegranates are treated with reverence during certain religious functions such as the holy month of Ramadhan, regarded as heavenly gifts and used as medicine. The religious use of certain horticultural products affects its production. The Indians believe that herbs and spices have medical impact in their lives, and they produce them for such purposes. With the increase in Christianity around the globe has seen the emergence of prayer retreat gardens where the individuals want to connect with God as it was in the Garden of Eden. These gardens are well manicured a mixture of fruit tree orchards and ornamental plants.

2.0 REVIEW OF HORTICULTURE

Horticulture is a branch of agriculture that involves the growing of perishable crops. They are classified into five broad groups: vegetables, fruits, flowers, environmental horticulture, and herbs and spices. Horticulture offers knowledge skills and technologies to plants for both human food and non-human food uses (Chap et al., 2024). It also includes plant propagation, cultivation, to realize plant growth, yield, nutritional value, pests and diseases resistance and biotic and abiotic stress. Horticulturists work as gardener's growers, therapist designers and technical advisors (McSweeney et al., 2014).

2.1.0 Relationship of Horticulture and Religion

2.1.1 Vegetables

Vegetables are herbaceous plants that are eaten raw or cooked as part of the main meal. The edible parts comprise of various section which can be the leaves, stem, roots, flowers fruits or seeds (Carrillo-López & Yahia, 2019). The relationship between vegetables and religion is a fascinating topic that spans cultures and traditions worldwide. Many religions have embedded dietary laws and symbolism that elevate the role of vegetables either in rituals, festivals, or daily practice (Monterrosa et al., 2020). This review explores how different religions incorporate vegetables into their spiritual practices, moral codes, and rituals, underscoring the intersection of food, faith, and community.

In Hinduism and Buddhism, vegetarianism is widely promoted, not only for health reasons but also as part of the broader principle of non-violence, or ahimsa (Tyagi & Singh, 2023). The belief in karma and reincarnation influences adherents to avoid harm to living beings, including animals. Vegetables, therefore, become central to the diet and rituals of these religions. According to the Bhagavad Gita, "Foods that increase life, purity, strength, health, joy, and cheerfulness, which are savory and oleaginous, substantial, and agreeable, are dear to the pure man" (Prabhupada & Swami, 1972). These qualities are most often associated with plant-based foods, including vegetables. Vegetables of various colors are also integral to rituals and offerings, known as prasad. These offerings are given to deities and later distributed to devotees. Each color present in the offerings has its own significance, often corresponding to qualities attributed to the deities or the desired spiritual effects. For example, green vegetables like spinach or beans symbolize life, fertility, and growth, resonating with the Earth goddess Bhumi and Lord Krishna, who is associated with nature and compassion (Hazen, 2003).

Buddhism, particularly in its Mahayana form, emphasizes compassion for all sentient beings, leading many adherents to adopt vegetarian diets. The consumption of vegetables is seen as a way to minimize harm to other beings. The monastic tradition of Buddhism,

especially in regions like China and Vietnam, involves simple meals focused on vegetables, further underscoring their importance in the daily life of the faithful. The practice of vegetarianism is closely linked with the principles of ahimsa (non-violence) and compassion for all living beings (Sheeja, 2013). Vegetables are central to the monastic diet, and the variety of colors they present in meals is seen as promoting balance and harmony in the body and mind. Each color is thought to have specific health benefits, contributing to holistic well-being, which aligns with the Buddhist principle of maintaining physical and mental equilibrium. In many Buddhist cultures, the color white is significant, symbolizing purity and detachment from materialism. White vegetables such as radishes and turnips are often consumed during periods of fasting and spiritual retreats to purify the body and mind (Marwaha, 2006).

Judaism, Christianity, and Islam also have distinct views on the role of vegetables. In Judaism, vegetables are key components of religious feasts and rituals. For example, during the Passover Seder, bitter herbs (often represented by vegetables such as horseradish or romaine lettuce) symbolize the bitterness of slavery in Egypt. Many Jewish dietary laws, known as kashrut, revolve around the separation of meat and dairy, and vegetables are often consumed as neutral (pareve) foods that do not require such separation (Brumberg-Kraus, 2024).

In Christianity, the idea of fasting and abstinence has often led to the consumption of vegetables. The Lenten season, for instance, requires abstinence from meat for many denominations, leading believers to rely on vegetables and plant-based meals. The symbolic role of vegetables is also highlighted in the Bible, where they often represent sustenance and divine provision. For example, in the Book of Daniel, Daniel and his companions reject the king's meat and wine, consuming only vegetables and water, which God blesses, making them healthier than those who consumed the royal food (Daniel 1:12-15).

In Judaism, the color of vegetables is less directly tied to symbolic meaning within rituals, but the appearance and type of vegetables are important in kosher dietary laws. Certain vegetables of specific colors are emphasized during significant festivals like Passover and Sukkot.

For example, green vegetables like parsley are dipped in saltwater during the Passover Seder to symbolize both new life and the tears of the Israelites during their slavery in Egypt. The color green here is a representation of both hope and renewal as well as a reminder of suffering (Stein & Isaacs, 2023).

Islam also places emphasis on vegetables, especially during fasting periods such as Ramadan. The Prophet Muhammad is said to have encouraged the consumption of cucumbers and dates as part of a balanced diet, and Islamic teachings emphasize moderation and the importance of health. Many Islamic scholars argue for the ethical treatment of animals, further promoting a diet rich in vegetables (Masri, 2016).

2.1.2 Spices and Herbs

Spices and herbs are from the larger group of vegetable highly valued for their aroma and other biochemical components. They are used to flavor, color, and preserve food and beverages. As well, some have medicinal and ornamental values. Various parts of the plants are utilized including roots, leaves, buds, flowers, shoots or the entire plant. Spices are used fresh and can also be dried or processed into various products including oil and powders. Some of the common herbs and species plants are rosemary, tumeric, garlic, ginger, basil, mint, chives, lemon grass, oregon, thyme, pepper, coriander, cumin, cinnamon, cardamom, chamomile among others (Emeje and Ogu, 2024).

The herbs and spices offer the body protection against chronic ailments. They contain antioxidants, anti-inflammatory, anti-tumergenic, anti-carnogetic, and other bioactive compounds. Consumption of spicy foods has been linked to reduced rates of mortality, maintainance of health, and offereing protection against non-communicable diseases (Jiang, 2019). Consumption of herbs and spices differs with religions. They have been used in sacred ways for religious rituals from Adam's error till today. Apostolics Faith Mission in Zimbabwe view that traditional herbs originate from evil spirits and discourage its congregants. Seventh Adventist are still involved in research about the consumption of the herbs so as to make informed decisions. Most independent churches use and value of herbs and harbal plants (Nath,

2010). Most faith leaders appreciate the use of herbal medicine and the herbs are utilised by prophets for healing. In a study by Harun-Or-Rashid et al., (2011) he concluded that religious leaders played a key role in perceptions and attitudes of its congregants towards use of herbs and spices as medicine (Harun-Or-Rashid et al., 2011).

In 17th Century B.C the spices were utilised in religious offerings, rituals medicine trade and seasoning. From the book of Songs of Solomon several culinary spices are mentioned that include cinnamon and saffron. In 1000BC, Queen Sheba visited King Solomon and brought him many spices (2nd chronicals 9.9). In exodus 16:31 manna that was given to the children of Israel is described as coriander seed. In the New Testament we find the religious tithing of mint dill cumin (Math 23:23). The spices were also used to anoint the body of Jesus Christ (Mark 16:1).

Egyptians enjoyed flavouring food with cardamom and cinnamon sourced from Ethiopia. Verban spice was considered to have supernatural powers due to association with divinity (Sharangi & Acharya, 2018). Religion in Babylonia involved ancient medical god of the moon who controlled the medicinal plants where potent parts of the plants were not exposed to the sun and were harvested during moonlight. In India spices were grown as early as the 8th century. Sushruta who was an ancient surgeon used various aromatic plants in bed sheets to exorcise evil spirits and oil from sesame was used to heal wounds. The Muslims made use of the Asian species such as myrrh and frankincense while in the medieval Europe bride price was paid using pepper and some landlords accepted payment of peppercone as rent (Zohar & Lev, 2013). In Christianity myrrh cinnamon and frankincense is widely used (Sharangi & Acharya, 2018).

The Hindus use the herbs for religious purposes with Tulsi which is a form of baal that is valued as a medicinal goddess and highly planted by the Hindus for that purpose (Simranjeet et al., 2020). Mistletoes was used in Europe by incorporating in rituals performed by Druidic brits as a symbol of immortality while in Celtic mythology it was used to cure barrenness in animals. Peyote which is a small spineless cactus has been used in sacramental rites in all manner of social religious ceremonies eg white sage, diviner's sage, morning glory sage.

Catholics have embraced rosemary for decoration (Dafni et al., 2020). Having religious crusades across the globe facilitate the spread of herbs and spices across continents and they became more available and cheap (REF.)

2.1.3 Fruits

Fruits are perennial, woody or herbaceous plants with fleshy edible parts, succulent and closely resembling flower development. It can also be referred to as an expanded ovary. They are usually consumed as a snack, a dessert or processed into fresh juices or into wines (Čakar et al., 2019). They are usually grown in orchards (groves- citrus, vineyard-grapes). The fruits are classified based on various terminologies; growth habit, lifecycle, origin, climatic requirements-temperate and tropical, dry fruits and fleshy fruits (Cerri & Reale, 2020). The dry fruits include the dates, raisins, figs, apricots, prunes. The Fresh fruits can also be dried to provide the necessary nutrients even during the off seasons (Chang et al., 2016).

The fleshy fruits are the common classification which includes the drupe which have a stone inside; avocado, mango, apricot, peach, plums (Čakar et al., 2019). The Berry- tomato, grapes, straw berries, blue berries, rasp berries; they lack a stone inside and are fleshy all through, with unique flavor, delicate texture and they are diverse in (Manganaris et al., 2014). The pome includes the apple, pears which have some grittiness. The hesperidium is usually covered with a leathery rind e.g. the citrus family. Additionally, the pepo are fruits belonging to Cucurbitaceae family (Chang et al., 2016). The nuts such as hazel nuts, almonds, cashew nuts, macadamia, chestnuts (Alasalvar et al., 2020). They are rich in proteins and fats (Bolling et al., 2023). The fruits are sources of fibers minerals, vitamins, contain more than 90% moisture content and antioxidant elements (Glenn et al., 2023) (Dreher, 2018).

Fruit consumption is associated with protection benefits against various chronic diseases, stimulate the functioning of organs and organ system (Pal & Molnár, 2021). Some fruits, such as tomatoes, cucumber eggplants and avocados are used as vegetables and in salads (Pal & Molnár, 2021).

In Christian religion, people are encouraged to bear fruits and those that don't bear fruits will be cut down and thrown into fire (Math 7:19). The kingdom of God is about bearing fruits and being fruitful. In the New Testament the pharisees and the teachers of law bared fruits of self-effort, busying themselves and holding unto traditions to impress others (Math 23).

In John 15:1-10 we are given the analogy of the gardener who is God and everything that the gardener does do fruit tree for it to bear many fruits. For us to bear much fruit we must remain in Christ and him in us because he is the vine, and we are the branches. The branches cannot be on their own. They must remain in the vine which is a source of its nutrients the same way the word of God is to us. We must always consult it for us to grow. And many times, when we are not bearing fruits, we are pruned and that is disciplined by God who is the gardener for us to get back on track. The fruits here are analogies one's characters that are depicted in Galatians 6:22-23. We must produce fruits that are Christ-like and that will last long (<https://www.navigators.org/blog/the-kingdom-of-god-is-about-bearing-fruit/>).

In Hinduism people offer certain fruits to their gods that have various meanings: bananas are offered to Lakshmi and Vashni goddess and lord seeking for favor. Coconuts show cleanliness and spiritual awareness. Coconuts are broken as a symbol of respect to their god and ask for good things to happen. Mango is offered to the god Gashena as a sign of affection. Apples and oranges are thought to bring good health, energy, joy and wealth. Traditional beliefs are considered while choosing fruits for offerings (Chandra, 2023).

In the Muslim religion, grapes, figs, pomegranates, bananas, dates, olive and olives are heavenly gifts. The fruits contain essential nutrients and have compounds that offer health benefits (El-Seedi et al., 2019)

2.1.4 Flowers

Flowers are produced for their great aesthetic value, oil, perfumes, beverages, and their significance in various rituals, functions and believes. The flower industry includes cut flowers, potted flowering plants, bedding plants, flowering shrubs, and trees for landscaping and gardens. Flowers and their products have a significant economic value to the producing countries both locally and internationally (Rout et al 2022). They can be classified based on life cycle: annuals (merigold), biannuals (tulips), perenials (roses, carnations lilies, chrysanthemus). They can also be classified based on uses as either indoor or outdoor, or both uses. Cut flowers are used in bouquet or decorations and can either be fresh cut or dried flowers. The most common flowers include; roses, carnations, astroemeria, orchid, lilies among many others.

Bedding plants are outdoor plants raised for growing in outdoor beds. The seeds are sown indoors during off season and later outdoors during the on season e.g petunias and snap dragon. Hanging plants are either annuals or perennials and are put in decorative baskets and hung from the ceiling eg geraniums. Dried flowers are dried after use and are dried using certain preservatives (Reema Raval et al., 2020). Landscapes plants are grown in the garden for beauty and include lawn-grass grown as carpet, ground covers that are grown for decoration in unpleasant sites, climbers which are either annuals or perennials such as money plant, English ivy. Flowers have been used from ancient rituals to modern ceremonies (Dafni, 2007). They are essential in creating sacred, joyfulland harmonious atmosphere. They are offered to deities and spiritual figures. They are brought to the temple as a way of expressing reverence and devotion (Dafni, 2007).

In Christianity, Easter lilies symbolise the resurrection of Jesus chrst and is commonly used during Easter celebrations (George & George 2020). The rose flower is associated with beauty and love and used in practices such as Sufism in rituals and ceremonies, shows the blood of Jesus Christ and symbol of rosary among the Catholics. They create serene ambiance, decorate sacred spaces and are incorporated into ceremonial wreath, garlands and bonquette. The Easter lily shows Christ's purity and divinity, miraculous conception and resurrection of

Jesus Christ. The passion flower symbolizes Christ's scourging, Crucifixion and Resurrection with each part having its own meaning (Husti Anca, 2015).

In Hindu religion, the groom and bride exchange garlands made from fresh flowers as a symbol of union and blessing. Ikabena in Japanese tea ceremonies are designed to symbolise harmony and balance (Darma et al., 2021). The flowers are used in funerals to let go and allow the soul of the departed to journey to the next realm. They show the ultimate act of selflessness and purity and are used for sanctifying the funeral spaces. Flowers such as garlands, marigolds, and jasmine are brought in during prayer rituals, weddings (P. Sindhu & V. P. Rathi, 2020). In Buddhism, the Nymphaea tetragona and lotus flowers show purity and have been commemorated and prayed for blessings and are carriers of Buddhist religion and culture (Xu et al., 2023).

In the Islamic religion, the rose flower is used for religious and medical reasons. The celebrations also include mourning where mourners pass around the roses. In a study by Shohreh Javadi, 2020, he reveals that the rose was also associated with love, beauty, divine perfection, purity and light. Flowers are believed to possess healing properties and promote the wellbeing of tranquility. In aromatherapy, essential oils are extracted from flowers to elicit a sense of calmness and balance during meditation or prayers (B. Prabawati et al., 2021). The soothing scent of lavender induces relaxation and reduces stress, making it popular in mindfulness and self-reflection (Smigielski et al., 2018).

CONCLUSION

Religion influences the types of horticultural to be grown in a given area. Diverse religions promote the use of different horticultural products, this makes them cheap and available while communities that are embedded in traditional religion there is limited appreciation of horticultural development. Religious leaders have a great influence in perception and the attitudes of communities in horticultural practices.

REFERENCES

- Adekunle, A., Osazuwa, P., & Raghavan, V. (2016). Socio-economic determinants of agricultural mechanisation in Africa: A research note based on cassava cultivation mechanisation. *Technological Forecasting and Social Change*, 112, 313–319. <https://doi.org/10.1016/J.TECHFORE.2016.09.003>
- Alasalvar, C., Salvadó, J.-S., & Ros, E. (2020). Bioactives and health benefits of nuts and dried fruits. *Food Chemistry*, 314, 126192. <https://doi.org/10.1016/j.foodchem.2020.126192>
- B. Prabawati, N. B., Oktavirina, V., Palma, M., & Setyaningsih, W. (2021). Edible Flowers: Antioxidant Compounds and Their Functional Properties. *Horticulturae*, 7(4), 66. <https://doi.org/10.3390/horticulturae7040066>
- Blay, S. L., Batista, A. D., Andreoli, S. B., & Gastal, F. L. (2008). The Relationship between Religiosity and Tobacco, Alcohol Use, and Depression in an Elderly Community Population. *The American Journal of Geriatric Psychiatry*, 16(11), 934–943. <https://doi.org/10.1097/JGP.0b013e3181871392>
- Bolling, B. W., Aune, D., Noh, H., Petersen, K. S., & Freisling, H. (2023). Dried Fruits, Nuts, and Cancer Risk and Survival: A Review of the Evidence and Future Research Directions. *Nutrients*, 15(6), 1443. <https://doi.org/10.3390/nu15061443>
- Brumberg-Kraus, J. (2024). A Jewish Theology of Food'. *St Andrews Encyclopaedia of Theology*.
- Čakar, U., Petrović, A., Pejin, B., Čakar, M., Živković, M., Vajs, V., & Đorđević, B. (2019). Fruit as a substrate for a wine: A case study of selected berry and drupe fruit wines. *Scientia Horticulturae*, 244, 42–49. <https://doi.org/10.1016/j.scienta.2018.09.020>
- Carrillo-López, A., & Yahia, E. M. (2019). Morphology and anatomy. In *Postharvest physiology and biochemistry of fruits and vegetables* (pp. 113–130). Elsevier.
- Cerri, M., & Reale, L. (2020). Anatomical traits of the principal fruits: An overview. *Scientia Horticulturae*, 270, 109390. <https://doi.org/10.1016/j.scienta.2020.109390>

Chandra, S. (2023). Documentation of the plants used in different Hindu rituals in Uttarakhand, India. *Asian Journal of Ethnobiology*, 5(2). <https://doi.org/10.13057/asianjethnobiol/y050203>

Chang, S. K., Alasalvar, C., & Shahidi, F. (2016). Review of dried fruits: Phytochemicals, antioxidant efficacies, and health benefits. *Journal of Functional Foods*, 21, 113–132. <https://doi.org/10.1016/j.jff.2015.11.034>

Chap; Singh, S. H. J. R. (2024). Scope and Importance of horticultural Crops.

Dafni, A. (2007). Rituals, ceremonies and customs related to sacred trees with a special reference to the Middle East. *Journal of Ethnobiology and Ethnomedicine*, 3(1), 28. <https://doi.org/10.1186/1746-4269-3-28>

Dafni, A., Petanidou, T., Vallianatou, I., Kozhuharova, E., Blanché, C., Pacini, E., Peyman, M., Dajić Stevanovic, Z., Franchi, G. G., & Benitez, G. (2020). Myrtle, Basil, Rosemary, and Three-Lobed Sage as Ritual Plants in the Monotheistic Religions: an Historical–Ethnobotanical Comparison. *Economic Botany*, 74(3), 330–355. <https://doi.org/10.1007/s12231-019-09477-w>

Darma, I. D. P., Sutomo, S., Hanum, S. F., Iryadi, R., & Rahayu, A. (2021). Flowers and Value of Conservation in the Culture of the Hindu Community in Bali. *Biosaintifika: Journal of Biology & Biology Education*, 13(1), 34–40. <https://doi.org/10.15294/biosaintifika.v13i1.27054>

Dimiyati, A. (2016). Integrating Spirituality into Efforts for Improving Value Chains of Farm Products. In *Islamic Perspectives on Science and Technology* (pp. 213–228). Springer Singapore. https://doi.org/10.1007/978-981-287-778-9_14

Dreher, M. L. (2018). Whole fruits and fruit fiber emerging health effects. *Nutrients*, 10(12), 1833.

El-Seedi, H. R., Khalifa, S. A. M., Yosri, N., Khatib, A., Chen, L., Saeed, A., Efferth, T., & Verpoorte, R. (2019). Plants mentioned in the Islamic Scriptures (Holy Qur’ân and Ahadith): Traditional uses and medicinal importance in contemporary times. *Journal of Ethnopharmacology*, 243, 112007. <https://doi.org/10.1016/j.jep.2019.112007>

Gillum, R. F., King, D. E., Obisesan, T. O., & Koenig, H. G. (2008). Frequency of Attendance at Religious Services and Mortality in a U.S. National Cohort. *Annals of Epidemiology*, 18(2), 124–129. <https://doi.org/10.1016/J.ANNEPIDEM.2007.10.015>

Glenn, A. J., Aune, D., Freisling, H., Mohammadifard, N., Kendall, C. W. C., Salas-Salvadó, J., Jenkins, D. J. A., Hu, F. B., & Sievenpiper, J. L. (2023). Nuts and Cardiovascular Disease Outcomes: A Review of the Evidence and Future Directions. *Nutrients*, 15(4), 911. <https://doi.org/10.3390/nu15040911>

Harun-Or-Rashid, M., Yoshida, Y., Rashid, M. A., Nahar, S., & Sakamoto, J. (2011). Perceptions of the Muslim religious leaders and their attitudes on herbal medicine in Bangladesh: a cross-sectional study. *BMC Research Notes*, 4(1), 366. <https://doi.org/10.1186/1756-0500-4-366>

Hazen, W. (2003). *Hindu Beliefs and Worship: Inside Hinduism*. Milliken Publishing Company.

Hecta, G & Francesc, M (2016). *The Japanese secret to a long and happy life (IKIGAI)*. Penguin books. An imprint of penguin random house LLC, 375 Hudson street New York, New York 10014

Hill, P. C., & Pargament, K. I. (2003). Advances in the conceptualization and measurement of religion and spirituality: Implications for physical and mental health research. *American Psychologist*, 58(1), 64–74. <https://doi.org/10.1037/0003-066X.58.1.64>

Hill, T. D., Burdette, A. M., Ellison, C. G., & Musick, M. A. (2006). Religious attendance and the health behaviors of Texas adults. *Preventive Medicine*, 42(4), 309–312. <https://doi.org/10.1016/j.ypmed.2005.12.005>

Husti Anca, M. C. (2015). Sacred Connection of Ornamental Flowers with Religious Symbols. *ProEnvironment*, 8, 73–79.

Jiang, T. A. (2019). Health Benefits of Culinary Herbs and Spices. *Journal of AOAC INTERNATIONAL*, 102(2), 395–411. <https://doi.org/10.5740/jaoacint.18-0418>

Koenig, H. G. (2012). Religion, Spirituality, and Health: The Research and Clinical Implications. *ISRN Psychiatry*, 2012, 1–33. <https://doi.org/10.5402/2012/278730>

Manganaris, G. A., Goulas, V., Vicente, A. R., & Terry, L. A. (2014). Berry antioxidants: small fruits providing large benefits. *Journal of the Science of Food and Agriculture*, 94(5), 825–833. <https://doi.org/10.1002/jsfa.6432>

Martins Emeje and Enejo Ogu. (2024). Promoting utilization of Nigeria natural resources for economic development. *African Journal of Economics and Sustainable Development*, 7(2), 236–242

Marwaha, S. B. (2006). *Colors of truth: Religion, self and emotions: perspectives of Hinduism, Buddhism, Jainism, Zoroastrianism, Islam, Sikhism and contemporary psychology*. Concept Publishing Company.

Masri, A.-H. B. A. (2016). *Animal welfare in Islam*. Kube Publishing Ltd.

McCaffree, J. (2002). Dietary Restrictions of Other Religions. *Journal of the American Dietetic Association*, 102(7), 912. [https://doi.org/10.1016/S0002-8223\(02\)90212-9](https://doi.org/10.1016/S0002-8223(02)90212-9)

McSweeney, P. F., Williams, C. C., Nettle, R. A., Rayner, J. P., & Brumfield, R. G. (2014). Extension Approaches for Horticultural Innovation. In *Horticulture: Plants for People and Places*, Volume 3 (pp. 1117–1138). Springer Netherlands. https://doi.org/10.1007/978-94-017-8560-0_7

Monterrosa, E. C., Frongillo, E. A., Drewnowski, A., de Pee, S., & Vandevijvere, S. (2020). Sociocultural influences on food choices and implications for sustainable healthy diets. *Food and Nutrition Bulletin*, 41(2_suppl), 59S–73S.

Nath, J. (2010). ‘God is a vegetarian’: The food, health and bio-spirituality of Hare Krishna, Buddhist and Seventh Day Adventist devotees. *Health Sociology Review*, 19(3), 356–368. <https://doi.org/10.5172/hesr.2010.19.3.356>

Nkamleu Guy, B. (2019). Religious faith and agricultural growth: exploring some correlations in Africa. Oxford Conference Paper. MPRA.

P. Sindhu, & V. P. Rathi. (2020). The flowers and its impact in Indian culture, history and literature. *Journal of Natural Remedies* Vol. 21, No. 3(S2) (2020), 21(3), 57–60.

Pal, M., & Molnár, J. (2021). Growing Importance of Fruits and Vegetables in Human Health. *International Journal of Food Science and Agriculture*, 5(4), 567–569. <https://doi.org/10.26855/ijfsa.2021.12.001>

Prabhupada, A. C. B. S., & Swami, B. (1972). *Bhagavad-Gita as it is*. Bhaktivedanta Book Trust Los Angeles.

Reema Raval, Swati Jayswal, S. J., & Bharat Maitrey. (2020). Drying Techniques of Selected Flowers - A Review. *International Journal for Research in Applied Science & Engineering Technology (IJRASET)* 8(6).

Sharangi, A. B., & Acharya, S. K. (2018). Spices in India and Beyond: The Origin, History, Tradition and Culture. In *Indian Spices* (pp. 1–11). Springer International Publishing. https://doi.org/10.1007/978-3-319-75016-3_1

Sheeja, O. K. (2013). The concept of non-violence in the philosophy of Sree Chattampi Swamikal: An overview. *ACADEMICIA: An International Multidisciplinary Research Journal*, 3(9), 28–33.

Shohreh Javadi, N. S. (2020). Red Flower Symbolism with Emphasize on Iranian Culture and Art. *Jaco Quarterly*, 2, 47–60.

Simranjeet Kaur, S. S. N. A. S. S. D. S. B. A. M. (2020). An overview of Tulsi (Holy basil). *European Journal of Molecular & Clinical Medicine*, 7(7), 2833–2840.

Smigielski, K., Prusinowska, R., Stobiecka, A., Kunicka-Styczyńska, A., & Gruska, R. (2018). Biological Properties and Chemical Composition of Essential Oils from Flowers and Aerial Parts of Lavender (*Lavandula angustifolia*). *Journal of Essential Oil Bearing Plants*, 21(5), 1303–1314. <https://doi.org/10.1080/0972060X.2018.1503068>

Stein, L., & Isaacs, R. H. (2023). *Let's Eat: Jewish Food and Faith*. Rowman & Littlefield.

Tan, M.-M., Chan, C. K. Y., & Reidpath, D. D. (2013). Religiosity and Spirituality and the Intake of Fruit, Vegetable, and Fat: A Systematic Review. *Evidence-Based Complementary and Alternative Medicine*, 2013, 1–18. <https://doi.org/10.1155/2013/146214>

Tanko, M. (2020). Is farming a belief in Northern Ghana? Exploring the dual-system theory for commerce, culture, religion and

technology. *Technology in Society*, 63, 101339.
<https://doi.org/10.1016/J.TECHSOC.2020.101339>

Tanko, M., & Ismaila, S. (2021). How culture and religion influence the agriculture technology gap in Northern Ghana. *World Development Perspectives*, 22, 100301.
<https://doi.org/10.1016/J.WDP.2021.100301>

Tyagi, K., & Singh, K. (2023). Jainism: A religion of compassion and non-violence. In *Religious and Spiritual Practices in India: A Positive Psychological Perspective* (pp. 197–222). Springer.

Xu, X., Yan, C., Ma, Z., Wang, Q., Zhao, J., Zhang, R., He, L., & Zheng, W. (2023). Ornamental plants associated with Buddhist figures in China. *Journal of Ethnobiology and Ethnomedicine*, 19(1), 19.
<https://doi.org/10.1186/s13002-023-00595-3>

Zohar, A., & Lev, E. (2013). Trends in the Use of Perfumes and Incense in the Near East after the Muslim Conquests. *Journal of the Royal Asiatic Society of Great Britain & Ireland*, 23(1), 11–30.
<https://doi.org/10.1017/S1356186312000673>