ACEH LOCAL WISDOM IN THE METHOD OF DETERMINING THE HIJRI CALENDAR

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Abstract

Calendars with cultural nuances are part of local wisdom that should be preserved, one of which is the formulation of Shaykh Abbas Kutakarang's calendar from Aceh. This article aims to see how Shaykh Abbas Kutakarang shaped local wisdom in the method of determining the classical Hijri calendar in Aceh. This article is qualitative in nature by using library data with content analysis method. The primary data source used is the book of *Tāj al-Mulūk* by Shaykh Abbas Kutakarang. This article finds that there are characteristics of local wisdom in determining the classical Hijri calendar in Aceh in different methods and algorithms from classical Javanese reckoning. These differences have an impact on differences in determining the beginning of the Hijri year. This method is a representation of local wisdom in the Hijri calendar in Aceh.

Keywords: local wisdom; Aceh; method; Hijri calendar

Abstrak

Kalender dengan nuansa budaya menjadi bagian dari kearifan local yang patut untuk dilestarikan, salah satunya yaitu rumusan kalender Syekh Abbas Kutakarang dari Aceh. Artikel ini bertujuan untuk melihat bagaimana Syekh Abbas Kutakarang membentuk kearifan lokal dalam metode penentuan kalender hijriah klasik di Aceh. Artikel ini bersifat kualitatif dengan menggunakan data kepustakaan dengan metode analisis isi. Sumber data primer yang digunakan yaitu kitab *Tāj al-Mulūk* karya Syekh Abbas Kutakarang. Artikel ini menemukan bahwa terdapat karakteristik kearifan lokal dalam penentuan kalender hijriah klasik di Aceh pada metode maupun algoritma yang berbeda dengan hisab klasik ala Jawa. Perbedaan tersebut berdampak pada perbedaan penentuan awal tahun hijriah. Metode inilah yang menjadi representasi dari kearifan lokal dalam penanggalan hijriah di Aceh.

Kata Kunci: *kearifan lokal; Aceh; metode; kalender hijriah*

A. Introduction

In the past, the calendar had a system based on the customs and understanding of a group of people referring to the heavenly bodies. The system is divided into three, namely: the solar system, the lunar system and the sun-moon system. All three have been found in the literature and scientific discussions and are still used today. Meanwhile, the calendar system in Indonesia, which is famous for its various ethnicities, races, and cultures, makes the calendar system diverse and influential in the lives of previous people. In addition, there is also a calendar system written in characters used in carrying out daily activities. The existence of knowledge and manuscripts is what needs to be known and preserved as relics of the ancestors.[1]

The development of Islamic Astronomy in Indonesia cannot be separated from the process of the entry of Islam into the archipelago, including the formation of a calendar, especially the Hijri calendar. The method of determining the Hijri calendar in Indonesia, of course, comes from scholars who carry out scientific research to the Middle East or from foreign Muslim scholars who are expanding Islamic territory in Indonesia. However, there is a process of acculturation of foreign cultures with local cultural customs in each method of determining the Hijri calendar in various regions in Indonesia.[2]

Aceh is a province located at the northern tip of the island of Sumatra. Its geographical position is very strategic as the western gateway to enter the archipelago. Therefore, Aceh is filled with contacts and influences from outside.[3] Islamic teachings give a new style to the beliefs and traditions of the Acehnese people. Many Acehnese traditions and customs are acculturated to Islamic teachings, making it difficult to distinguish between Islamic teachings and customs. Likewise, there are Islamic practices which later become part of the *adat* or are customized. For example in a ceremony held to commemorate Islamic holidays. In the Acehnese calendar system, the month of *Mawlīd* is made three months in a row.[4]

Acculturation of Acehnese culture and Islamic teachings occurs in almost all aspects of Acehnese life, including the Hijri calendar. We can see this from the works of Acehnese scholars in the field of astronomy which are thick with local culture, one of which is the book

[1] Hikmatul Adhiyah Syam, "The Essentialy of the Nusantara Traditional Calendar," *Al-Hilal: Journal of Islamic Astronomy* 3, no. 1 (2021): 1–28.
[2] Susiknan Azhari, *Ilmu Falak: Perjumpaan Khazanah Islam dan Sains Modern*, 2nd ed. (Yogyakarta: Suara Muhammadiyah, 2007).
[3] Taufik Abdullah, "Ensiklopedi Tematis Dunia Islam" (Jakarta: PT Ichtiar Baru Van Hoeve, 2002), 178.
[4] Abdullah, 178.

of *Tāj al-Mulūk* in which there is a copy of the work of Shaykh Abbas Kutakarang. Shaykh Abbas Kutakarang is a legendary astronomer from Aceh who lived during the reign of Sultan Alaiddin Ibrahim Mansyur Syah (1857-1870 AD). Because of his extensive knowledge, Sultan Alaiddin Ibrahim Mansyur Syah appointed Shaykh Abbas to become Qādī Mālik al 'Adil in the Kingdom of Aceh.[5]

Shaykh Abbas Kutakarang has a method of determining the beginning of the month which is stated at the beginning of the book *Tāj al-Mulūk*. The reckoning used in this book is different in concept from the *`urfī* nuanced astronomy books that have been used so far. Shaykh Abbas Kutakarang's reckoning concept is almost the same as the Aboge system's *`urfī* calculating concept. This is interesting because so far the *`urfī* calculation with the Aboge system has only been known in Java, but the fact is that the *Tāj al-Mulūk* book also uses the same *`urfī* Calculation as the Aboge system, the difference is that the *Tāj al-Mulūk* book does not recognize the public.

As the next generation, it is appropriate to recognize the historical development of the calendar system in the country, starting from the archipelagic calendar model from Hijri to Christ. The condition of the people of the Nusantara before the acculturation of culture in a broad sense caused local people to know the system and model of the Nusantara's calendar.[6] Therefore, it is necessary to analyze the Hijri calendar method in Aceh contained in the *Tāj al-Mulūk* manuscript as an effort to identify Acehnese local wisdom. Not many have studied the Hijri calendar in Aceh, but there are several articles that explain the Hijri calendar in terms of local traditions in various regions, such as Arisafitri and Izzuddin's work which looks at the ins and outs of the Nias tribal calendar system.[7] Then continued with writing about the calendar system in the era of the Samudera Pasai Kingdom,[8] this is the only writing about the calendar in Aceh. Followed by Ilham Nur Fauzi who directly discussed the method of determining the beginning of the lunar month with the Aboge system.[9] It closes with Yusri

[5] Muchsin A Misri, "Ensiklopedi Pemikiran Ulama Aceh" (Aceh: Ar-Raniry Press, 2004).

[6] Cyril Glasse, *Ensiklopedi Islam (Ringkas) Terj*, ed. Ghurfon A. Mas'adi (Jakarta: Raja Grafindo Persada, 1999).

[7] Novi Arisafitri and Ahmad Izzuddin, "Sistem Penanggalan Suku Nias Perspektif Ilmu Falak Dan Astronomi," *Al-Afaq: Jurnal Ilmu Falak Dan Astronomi* 3, no. 2 (2021): 143–70, https://doi.org/10.20414/afaq.v3i2.4770.

[8] Ismail Ismail, "Sistem Kalender pada Masa Kerajaan Samudera Pasai," *Syarah: Jurnal Hukum Islam dan Ekonomi* 7, no. 1 (2018).

[9] Ilham Nur Fauzi, "Penetapan Awal Bulan Qamariyah dengan Sistem Aboge di Godongan Kidul Purworejo Geger Madiun" (IAIN Ponorogo, 2018).

Akhimuddin's writing which specifically examines a manuscript containing the method of determining the Hijri calendar.[10]

B. Method

This research is a qualitative research on the study of the character's thinking. The study of character studies is a systematic study of the thoughts or ideas of a character, in whole or in part.[11] The approach used in this research is the historical approach. This historical approach is used to analyze the data, ideas and thoughts of Shaykh Abbas Kutakarang known as Teungku Chik Abbas Kutakarang[12] or Tengku Chik Kutakarang in determining the beginning of the Hijri month in the period entering the 19th century.

Teungku Chik Kutakarang is from Kutakarang Village, Mukim Ulee Susu, Darul Imarah District, Aceh Besar. He is known as a pious scholar, legal expert, author and warrior, Teungku Chik Kutakarang was also a famous healer in his day. The works he produced after doing scientific research to Mecca, including *Kitāb al-Raḥmah,* "Sirāj al-Ẓalām fī Ma'rifah Sa'di wa al-Nahas fī al-Shuhūr wa al-Ayyām", *Book of Astronomy and Magic*, *Maw'iẓah al-Ikhwān* and *Tadhkirah al-Rākidīn*, and *Qunū' li Man Ta'aṭṭuf*.[13] However, the primary data source in detecting local wisdom in this study is a copy of the book "Sirāj al-Ẓalām fī Ma'rifah Sa'di wa al-Nahas fī al-Shuhūr wa al-Ayyām", part of which is contained in the book *Tāj al-Mulūk*.

C. Result and Discussion

Each region must have a different culture. This cultural difference is a necessity because basically, the culture of one area is a manifestation of the taste and initiative of an individual or group of people formed by the environment in which they live.[14] Indonesia has a variety of ethnicities so that it gives birth to cultural diversity. This cultural diversity has become a local wisdom for the people who adhere to it. The form of cultural diversity is not only in the social, political and legal fields, it is also seen in the field of science. Calendar is a science but it is a form of interpretation of a culture in which there are noble values that are always

[10] Yusri Akhimuddin, "Naskah [Asal Khilaf Bilangan Taqwim]: Relasi Ulama-Umara di Minangkabau Abad Ke-17 dalam Penetapan Awal Ramadan," *Manuskripta* 2, no. 1 (2012): 79–101.

[11] Abuddin Nata, *Metodologi Studi Islam* (Jakarta: Raja Grafindo Persada, 2006), 49.

[12] Misri, "Ensiklopedi Pemikiran Ulama Aceh."

[13] Misri.

[14] Sartini Sartini, "Menggali Kearifan Lokal Nusantara: Sebuah Kajian Filsafati," *Jurnal Filsafat* 14, no. 2 (2007), https://doi.org/10.22146/jf.33910.

implemented, developed and passed on by the people. These values are known as local wisdom in an area. Local wisdom (local genius) is a term introduced.[15]

Local wisdom is a culture that belongs to a certain community in a certain place that is able to survive in the midst of the onslaught of other incoming cultures. This local wisdom is also a cultural identity because it is able to absorb and adapt foreign cultures in accordance with the local values of community members.[16]

Culture and customs in the Province of Nangroe Aceh Darussalam have diversity according to their respective sub-ethnics. This diversity shows the wealth and treasures of these sub-ethnics. The people of Aceh consider the values contained in customs and culture to be integrated with Islam. Most of the religious practices carried out are in accordance with prevailing traditions or customs.[17] Likewise in the practice of determining the Hijri calendar in Aceh. In determining the Hijri calendar, the people of Aceh always rely on what the Prophet has done, namely through *rukyah*. However, in the method of determining it still uses *ḥisāb*.[18]

There are various methods of reckoning in determining the Hijri calendar including *`urfī*, essential and contemporary methods.[19] Among these methods, the *ḥisāb `urfī* method is the most frequent and contains many elements of local wisdom. The *`urfī* reckoning method that developed in Indonesia follows the customs and culture of an area. Including the *`urfī* calculation method used in determining the Hijri calendar in Aceh.[20]

The people of Aceh are very thick with the influence of Islamic law. In the context of the Hijri calendar, the people of Aceh have their own local wisdom in determining it, both in terms of the method of determination and its use. The reckoning method in determining the Hijri calendar certainly has different algorithms, from the easiest to the most complicated, from the simple to the complex. There are concepts that only add or subtract, divide and multiply data from tables, as well as concepts that use spherical trigonometry.[21] The concept

[15] Rasid Yunus, "Nilai-Nilai Kearifan Lokal (Local Genius) sebagai Penguat Karakter Bangsa," *Deepublish Publisher*, 2011, 36.

[16] Sartini, "Menggali Kearifan Lokal Nusantara: Sebuah Kajian Filsafati."

[17] Jamhir Jamhir, "Revitalisasi Hukum Adat di Aceh," *Jurnal Justisia: Jurnal Ilmu Hukum, Perundang-Undangan dan Pranata Sosial* 1, no. 1 (2020): 68–90.

[18] Anthony Reid, *Menuju Sejarah Sumatra: Antara Indonesia dan Dunia* (Yayasan Pustaka Obor Indonesia, 2011), 120.

[19] Muh Rasywan Syarif, "Diskursus Perkembangan Formulasi Kalender Hijriah," *Elfalaky* 2, no. 1 (2018), https://doi.org/10.24252/ifk.v2i1.14158.

[20] Hasna Tuddar Putri, "Hisab Urfi Syekh Abbas Kutakarang: Kajian Etnoastronomi dalam Penentuan Awal Bulan Hijriah," *Media Syari'ah: Wahana Kajian Hukum Islam dan Pranata Sosial* 21, no. 1 (2020): 52–72.

[21] Fatikhatul Fauziah, "Analisis Metode Hisab Awal Bulan Kamariah dalam Kitab Maslak al-Qāṣid ilā Amal ar-Rashīd Karya Aḥmad Ghazālī Muḥammad Fatḥullāh," n.d., 2.

of calculating the month for the Hijri calendar is usually born from local civilizations that developed at the birth of the Hijri calendar which is still very simple.

Snouck Hurgronje[22] tells the customs of the Acehnese in his book on the calendar system. According to Shafi'i teachings, the determination of the date of celebrations related to religion should not be determined by calculation, but the beginning of each month is determined by observing new moon. For example, the month before the Ramadan, according to the calculation is 29 days, the next day cannot be considered as the start of fasting unless it is according to a predetermined law, it has been witnessed by a number of people that they have seen the new moon on the night after the 29th day. is not visible, then the month must be considered a full 30 days, regardless of astronomy.

In Aceh, people have always used calculations. The scholars were able to overcome various problems, which they managed to find in the legal books, namely: the air layer in this area is rarely clear so that the crescent moon is not always visible on the first day of its appearance. Therefore, in the decisions of the Sultan there is a regulation which states that the beginning of the fasting month every year must be determined by a council of experts, on the last Friday of the previous month. The day (date) was announced to the people by cannon fire the previous day. According to Observation method (*rukyat*), this is impossible.[23]

Shaykh Abbas as one of the Acehnese scholars who is able to master the science of astronomy explains the division of the number of months in a Hijri year in this book, which consists of 12 months starting with the month of Muharram which amounts to 30 days. In determining the number of days for the year and month as in the Hijri year in general. In a lunar year, there are 354 days for a common year and 355 days for a leap year. As for the age of the Moon, there are 29 days or 30 days, with the determination that the Moon's age in odd order is 30 days and the month in even order is 29 days. For the 12th month the number of days depending on the year is a leap year or common. In a leap year, the number of days in the 12th month is 30 days, while for a common year it is 29 days. The name of the day and month according to Shaykh Abbas Kutakarang:[24]

[22] Snouck Hurgronje, *Aceh di Mata Kolonialis* (Jakarta: Yayasan Soko Guru, 1985).
[23] Snouck Hurgronje.
[24] Ismā`īl ibn `Abd al-Muṭallib al-Ashī, *Tāj al-Mulūk* (Jeddah: Ḥaramayn, n.d.), 6.

Table 1. Month and It's Number of Days

نام بولن	محرم	صفر	ربيع الاول	ربيع الاخر	جمادي الاول ١٨٧١	جمادي الثاني	رجب	شعبان	رمضان	شوال	ذو القعدة	ذو الحجة
عدد	٣٠	٢٩	٣٠	٢٩	٣٠	٢٩	٣٠	٢٩	٣٠	٢٩	٣٠	٢٩
	كنف	كاسل	كنف	كاسل	كنف	كاسل	كنف	كاسل	كنف	كاسل	كنف	**كاسل**

Shaykh Abbas also explained the existence of leap years and common because the Hijri month was reckoned from one *ijtima'* to the next *ijtima'*. *Ijtima'* occurs sometimes when it is 29 days and sometimes it is 30 days. In addition, there is also an explanation about determining the month of *Qibty*, but it is not comprehensive, only as an introduction because Shaykh Abbas only focuses on the Hijri calendar.

The following is a method for determining the Hijri calendar of Shaykh Abbas Kutakarang which is divided into the following sub-chapters:

C.1 Determination of Leap and Common Years

To determine the Hijri year including leap year or common year, the method used is the same as other *`urfī* calculation, one cycle or full cycle totaling 30 years. In every 30 years the cycle consists of 11 leap years. Leap years occur every 2nd, 5th, 7th, 10th, 13th, 15th, 18th, 21st, 24th, 26th and 29th year. Some books are currently developing, the 15th leap year is changed to 16th. This of course has an effect if the desired year is a leap year, because by using 16th then the 15th year is not a leap year, and vice versa. Here's how to calculate leap and common year:[25]

a. The year sought or the *nāqiṣah* year is divided by 30. If it is divisible by no remainder, then the year is a common year.
b. If there is an excess of numbers, then the excess is sorted into the year data which is included in a leap year, which is eleven. If the excess amount is the same as the data for a leap year, it means that the year is a leap year. And if the data is not the same as the data in a leap year, then that year is a common year.

Shaykh Abbas Kukarang also explained a table containing the years which included leap and common years as well as the names of the letters of the year:

[25] Al-Ashī, *Tāj Al-Mulūk*.

Table 2. Leap and Common Year

يغ باقي	بيلاعن	نام حروف	يغ باقي	بيلاعن	نام بولن
كمدين دبواغ	هجرة	تاهن	كمدين دبواغ	هجرة	تاهن
٥	١٣٢٥	ك ج	٢	١٣٠٦	ب د
٦	١٣٢٦	ب ر	٣	١٣٠٧	ب ا
٧	١٣٢٧	ب د	٤	١٣٠٨	كه
٨	١٣٢٨	ك ب	٥	١٣٠٩	ب ج
١	١٣٢٩	ب و	٧	١٣١١	ك د
٢	١٣٣٠	ك د	٨	١٣١٢	ب ب
٣	١٣٣١	ب ا	١	١٣١٣	ب و
٤	١٣٣٢	ب ه	٢	١٣١٤	ك د
٥	١٣٣٣	ك ج	٣	١٣١٥	ب ا
٦	١٣٣٤	ب ر	٤	١٣١٦	كه
٧	١٣٣٥	ب د	٥	١٣١٧	ب ج
٨	١٣٣٦	ك ب	٦	١٣١٨	ب ز
١	١٣٣٧	ب و	٧	١٣١٩	ك د
٢	١٣٣٨	ك د	٨	١٣٢٠	ب ب
٣	١٣٣٩	ب ا	١	١٣٢١	ب و
٤	١٣٤٠	ب ه	٢	١٣٢٢	ك د
٥	١٣٤١	ك ج	٣	١٣٢٣	ب ا
٦	١٣٤٢	ب ز	٤	١٣٢٤	كه

The determination of leap and common years described by Shaykh Abbas is no different from leap years and common for other Hijri years. Until now, *`urfī* calculation systems such as Shaykh Abbas are still used by other astronomers and are widely included in several classical astronomy books. This happens because the intellectual network in Malay-Nusantara is mostly from the Middle East, in fact most of the works in Malay-Nusantara are adaptations from outside,[26] so it is possible for

[26] Mugiyono, "Integrasi Pemikiran Islam dan Peradapan Melayu," *Jurnal Ilmu Agama: Mengkaji Doktrin, Pemikiran, dan Fenomena Agama* 17, no. 1 (2016): 23–45, http://jurnal.radenfatah.ac.id/index.php/JIA/article/view/634.

calculating between one character to be the same, even though different ethnic groups, can be a place for calculation. learn the same so you get the same method.[27]

C.2 *Tiga Puluh Tahun* Cycle Method

In determining the beginning of the Hijri Month, Shaykh Abbas divided the *`urfī* calculation method into two types, namely *delapan* cycle and *tiga puluh* cycle. Shaykh Abbas also distinguishes between calculation at the beginning of the Hijri year, namely the beginning of Muharram and the calculation at the beginning of the Hijri month, namely the month of Safar and so on. The initial calculation of the Hijri month for the month of Safar and so on is determined using the *Hawwāz* alphabet for either an *tiga puluh* cycle or a *delapan* cycle.[28]

A number or numbering system that uses the 28 Arabic alphabets to represent numeric values. This system has been used by Arabs in the world since the 8th century before the use of Arabic numerals. In today's Arabic, the word alphabet has the general meaning of the alphabet or the arrangement of letters. The name of the alphabet is taken from the first 4 letters in alphabetical order, namely *alif* = 1, *ba* = 2, *jim* = 3, *dal* = 4, *ha* = 5, *waw* = 6, *zay* = 7. This alphabet represents numeric values and is used in all mathematical calculations.[29]

The number system expressed by letters is called the *Hawwāz* alphabet. This combined system is termed the *al-Jumal* calculation system. It is a method of recording the calendar through a chronogram. It consists of grouping together, in a word (significant and precise) or in a short sentence, a group of letters with numerical equivalents, added together, giving the date of a past or future event. This chronogram is known as *ramz* in the Turkish calendar[30] and Babilonia.[31] On Muhyidin Khazin[32] stated that what is meant by *Jumali* numbers are number notations symbolized by Arabic letters.

Shaykh Abbas Kutakarang explained that the letters of the Arabic month are calculated with the *kabīr* sum calculation system. What is meant by *jumal kabīr* are the

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[27] Jayusman, "Sejarah Perkembangan Ilmu Falak Sebuah Ilustrasi Paradoks Perkembangan Sains dalam Islam," *Al-Marshad: Jurnal Astronomi Islam dan Ilmu-Ilmu Berkaitan* 1, no. 1 (2017): 44–67, https://doi.org/10.30596%2Fjam.v1i1.738.

[28] Al-Ashī, *Tāj Al-Mulūk*.

[29] E.J. van Donzel et al., *The Encyclopaedia of Islam* (Leiden: E. J. Brill, 2000).

[30] Donzel et al.

[31] Mat Rofa Ismail and Ahmad Tarmizi Rohani, *Ilmu Hikmah dalam Kajian Etnosains dan Etnomatematik Alam Melayu* (Selangor: Universiti Putra Malaysia, 2012).

[32] Muhyiddin Khazin, *Ilmu Falak dalam Teori dan Praktik* (Yogyakarta: Buana Pustaka, 2004).

letters that do not come out of *makhraj safrah*. An example is the letter *dal*. If calculated with the sum of *kabīr*, dal shows the number 4, and if calculated with the sum of *ṣaghīr*, *dal* shows the number 35. According to Shaykh Abbas, this is due to *dal* (د) if interpreted with the sum of *ṣaghīr* becomes *dāl* (دال). In the *hawwaz* alphabet, *dal* (د) is four, *alif* (ا) is one, and *lam* (ل) is thirty, so the total is 35. The algorithm for determining the beginning of the thirty cycle Hijri year is as follows: [33]

a. Determine the year to be calculated
b. The year tam (year already passed) or the previous year is reduced by 900.
c. The result of the subtraction is divided by 30.
d. The result of the division is multiplied by 5 then stored.
e. The remainder of the division is separated between leap and common year. The number for leap years is multiplied by 5 and for common years is multiplied by 4.
f. The result of the multiplication is added then saved.
g. The result of point (d) plus the result of point (f).
h. Sum of points (g) plus 1 then divide by 7.
i. The remainder of the division is the day that indicates the beginning of Muharram. The start of the day is counted from Monday.

When compared with the *`urfī* calculation algorithm in other classical astronomy books, there is a slight difference that lies in the point (b) algorithm. *`urfī* calculation's Shaykh Abbas Kutakarang first subtracts the tam Hijri year by 900, while the other books do not follow this algorithm, the *tam* Hijri year is directly divided by 30, like the algorithm in the books of *Sham al-Hilāl* and *Badī'ah al-Mithāl*.

To determine the beginning of the thirty cycle Hijri month apart from the month of Muḥarram, namely Safar to Dhulhijjah, we also use calculation with the *hawwaz* alphabet or Arabic alphabetic numbers. Here are the Arabic letters used for the 12 Hijri months:[34]

[33] Al-Ashī, *Tāj Al-Mulūk*.
[34] Al-Ashī.

Table 3. Moon Alphabets

ذو الحجة	ذو القعدة	شوال	رمضان	شعبان	رجب	جمادي الثاني	جمادي الاولى	ربيع الآخر	ربيع الاول	صفر	محرم	تشرين
ه	ق	ا	ى	ه	ح	ق	ن	ى	ه	ح	ا	ت

To make it easy to remember, Shaykh Abbas collected the letters above in one stanza, each word at the beginning of the word indicates the letter of the month in question, as below:[35]

ان جاد دهري وجاءت زينب برضى * جلت همومي وقد أحيت به دنفا

The activities of reciting letters in a poem or in other forms have been carried out by many previous scholars when transferring knowledge to their students. So that students are easy to memorize. This thirty calculation method is called the *`urfī* method whose calculation activities are based on traditional rules.[36] The basic formula for this method is used by scholars who determine the Hijri calendar with the *`urfī* method.

C.3 *Delapan Tahun*'s Cycle Method

In addition to determining the beginning of the *tiga puluh tahun* Hijri cycle month, Shaykh Abbas Kutakarang also simplified the determination of the beginning of the Hijri month into an eight-year cycle. The determination of the beginning of the Hijri month of this eight-year cycle is entirely using the Arabic alphabet. The Arabic letters of the Hijri year in a cycle of eight years are arranged like the *Aboge* system with the difference that lies in the eighth year like this اهجزدبود .[37]

[35] Al-Ashī.

[36] Badan Hisab dan Rukyat Departemen Agama, "Almanak Hisab Rukyat," *Jakarta: Proyek Pembinaan Badan Peradilan Agama Islam*, 1981.

[37] Al-Ashī, *Tāj Al-Mulūk*.

Table 4. Name Letters For The Beginning Of The Hijri Year

No	*Ḥisāb* Syekh Abbas		
	Remain	**Alphabet**	**Days**
1	3	ا	Wednesday
2	4	ه	Sunday
3	5	ج	Friday
4	6	ز	Tuesday
5	7	د	Saturday
6	8	ب	Thursday
7	1	و	Monday
8	2	د	Saturday

The beginning of the day for this system starts from Friday or the letter (و), because according to Shaykh Abbas the Prophet Muhammad died in the year *waw* (و). So according to this reckoning system the beginning of 1266 H is the year of the end, because the remainder of the division is two and is calculated starting from the year *waw* (و). In this system, Shaykh Abbas begins the year with the year *waw* (و), then the year *dāl* (د), but the sequence of letters used still starts with the year *alif*, while the count of the beginning of the year starts from the year *waw* (و).

For the next month, namely Safar to Dhulhijjah, it also has Arabic letters for each Hijri month. The name of the letter of the month is زبجه وابده زاج:[38]

[38] Al-Ashī.

Table 5. Letter Names for the Beginning of the Eighth Cycle Month

ابجد	هوز		حطي	كلمن		سعفض	قرشت		ثبخد	ضظغ
	بكر	جلش	دمت	هنت		وسخ	زغد		حفض	طصظ
عدد	نام بولن حرف تعلن		ا ١	ه ٥	ج ٣	ز ٧	د ٤	ب ٢	و ٦	د ٤
٣٠	محرم	ز ٧	اربعاء خميس	احد إثنين	جمعة سبت	ثلثاء اربعاء	سبت احد	خميس جمعة	إثنين ثلثاء	**سبت** **احد**
٢٩	صفر	ب ٢	جمعة سبت	ثلثاء اربعاء	احد إثنين	خميس جمعة	إثنين ثلثاء	سبت احد	اربعاء خميس	**إثنين** **ثلثاء**
٣٠	ربيع اول	ج ٣	سبت احد	اربعاء خميس	إثنين ثلثاء	جمعة سبت	ثلثاء اربعاء	احد إثنين	خميس جمعة	**ثلثاء** **اربعاء**
٢٩	ربيع اخر	ه ٥	إثنين ثلثاء	جمعة سبت	اربعاء خميس	احد إثنين	خميس جمعة	ثلثاء اربعاء	سبت احد	**خميس** **جمعة**
٣٠	جمادا اول	و ٦	ثلثاء اربعاء	سبت احد	خميس جمعة	إثنين ثلثاء	جمعة سبت	اربعاء خميس	احد إثنين	**جمعة** **سبت**
٢٩	جمادا اخر	ا ١	خميس جمعة	إثنين ثلثاء	سبت احد	اربعاء خميس	احد إثنين	جمعة سبت	ثلثاء اربعاء	**احد** **إثنين**
٣٠	رجب	ب ٢	جمعة سبت	ثلثاء اربعاء	احد إثنين	خميس جمعة	إثنين ثلثاء	سبت احد	اربعاء خميس	**إثنين** **ثلثاء**
٢٩	شعبان	د ٤	احد إثنين	خميس جمعة	ثلثاء اربعاء	سبت احد	اربعاء خميس	إثنين ثلثاء	جمعة سبت	**اربعاء** **خميس**
٣٠	رمضان	ه ٥	إثنين ثلثاء	جمعة سبت	اربعاء خميس	احد إثنين	خميس جمعة	ثلثاء اربعاء	سبت احد	**خميس** **جمعة**
٢٩	شوال	ز ٧	اربعاء خميس	احد إثنين	جمعة سبت	ثلثاء اربعاء	سبت احد	خميس جمعة	إثنين ثلثاء	**سبت** **احد**
٣٠	ذوالقع	ا ١	خميس جمعة	إثنين ثلثاء	سبت احد	اربعاء خميس	احد إثنين	جمعة سبت	ثلثاء اربعاء	**احد** **إثنين**
٢٩	ذوالحج	ح ٣	سبت احد	اربعاء خميس	إثنين ثلثاء	جمعة سبت	ثلثاء اربعاء	احد إثنين	خميس جمعة	**ثلثاء** **اربعاء**

In addition to using the reckoning system above, it is also possible to determine the beginning of the Hijri month by utilizing table 5. (Letter Names for the Beginning of the Eighth Cycle Month). The table above is arranged based on the rules in the book *'umdah al-ṭullāb* regarding the Arabic calendar both at the beginning of the month starting from Wednesday and Thursday. How to use table 5. that is, by bringing together

the name of the month and the letter of the month, the meeting of the two is the first day of the month which is determined using either Wednesday or Thursday calculation.

In this calculation system, the year is still divided into 8 groups, and every 8 years it has its own Arabic letter (*harah ṭan*); the value of these letters becomes the number of years. The order of 8 years does not change, therefore you only need to know the letters of the previous year to know the current year. Without this knowledge, one can know the letters of the Hijra year. Each month has a letter and the value in the number of that letter is the number for the year.

In determining the Hijri calendar in Aceh, there are more Arabic elements, because Aceh is called the first gateway to the entry of Islam from Arab traders. Therefore, the reckoning method in determining the Hijri calendar in Aceh cannot be separated from eastern influences which are then assimilated into Acehnese culture. The reckoning product using the Shaykh Abbas Kutakarang method is a local wisdom that deserves further study.

D. Conclusion

The method in determining the Hijri calendar varies from one region to another. However, they are still related to each other on the basis of the formula used. The method of determining the Hijri calendar in Aceh tends to adopt a formula from Arabic that is adapted to local wisdom in Aceh. There are three methods in determining the Hijri calendar in Aceh, namely first, the method of determining leap and common years using a simple algorithm. Secondly, the thirty-year cycle method whose basic formula is simple arithmetic, namely multiplication, addition and subtraction. Third, the eight-year cycle which is a simplification of the thirty-year cycle described in Arabic letters, namely ابجزدبود. This cycle is a manifestation of an Acehnese local wisdom.

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