

Calendar Conundrums

by

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Yahwist congregations strive to be spiritual Israelites, persevering obediently in the scriptures to the end of their life, or the age. Accordingly, they want to know when the scriptural year begins in order to observe the set-apart days in Leviticus 23 at the correct time.

The scriptures do not provide the rationale for determining 1 Nisan. Various criteria for doing so have resulted in calendar conundrums instead of the rationale used by the High Priests.

That rationale can be discerned if one prays, “seeks and reproves all things,” and supplements scripture study with external sources. To be confident of the rationale determined, we must know what we believe, and why. We must act upon what we know, irrespective of what others may do.

Consider the scriptural calendar for 2007 as an example. According to the United States Naval Observatory, Astronomical Applications Dept.’s website, the instant of the Spring Equinox occurred on March 21, at 00 hours and 07 minutes, 2007 Universal Time (UT), Greenwich, England, usual midnight-to-midnight reckoning.

Jerusalem, at longitude: E35.1 and latitude: N31.5, is two time zones east of Greenwich, England. Therefore, the instant of the Spring Equinox occurred there earlier (UT +2 hours) on March 21, at 02:07 Local Time (LT) Jerusalem.

Using scriptural sunset-to-sunset reckoning, the 24 hour solar day of March 21, began at the sunset of March 20, at 18:51 hours LT. This close juxtaposition of times was considered a ‘close-call’ in 2007 by those who *thought* the 24 hour Day of the Spring Equinox was the first day of spring. It is *not*, as will be explained. Further, a new moon crescent was visible at Jerusalem several hours *before* the instant of that Spring Equinox.

The leader of a congregation decides when to start the scriptural year and whether or not to intercalate Adar II, a second 12th month of 29 days. Not all congregations adhere to the same criteria so there is no common rationale for determining the first day of a scriptural calendar like the High Priest did. The criteria for same will be examined herein. First, a review of some scripture.

We know from the book of Genesis 1:14 - 16 that Yahweh let “...*luminaries be in the expanse of the heavens to divide the day and the night... for signs and for seasons, for days and years...*” “...*the greater luminary [the sun] to rule the day, and the small luminary [the moon] to rule the night to give light upon the earth and to divide between the light and the darkness...*” “...*and the stars (constellations, planets, meteors, comets, etc., which can be seen).*”

According to Genesis the universe began in *darkness*. Because darkness preceded light, the Israelites reckoned a day from sunset-to-sunset. Other nations, even those on other continents, did likewise.

The book of Exodus tells us the season in which Yahweh told Moshe that the scriptural year was to begin

Exodus 9:31, describes the Plague of Hail the Almighty Yahweh brought upon all Egypt to destroy their barley and flax crop which then was immature. The time of the year for that stage of growth is what would today be called 'late winter.' Even today Egypt has hail in the winter, but there is no record of hail ever having been as severe as described in Exodus.

Barley is the fastest growing of cereal grains (Wheat, Spelt, etc.). Even now barley is planted in Israel in the late autumn. The barley germinates in the cold wet ground during winter. As the ground warms and the 'latter rain' falls, the barley grows. It approaches maturity in eighty-nine days in what would be called 'late winter through early spring.'

The head of ancient barley had two-rows of kernels. Barley was hand-harvested with a sickle when the kernels were pasty-firm and partially green, which is when the attachment of the kernels to the head are flexible. Optimum timing of the harvest minimized kernel loss from the impact of the sickle against the stalks.

The cut stalks of barley were bound into a sheaf, left in the field to dry further, then hauled to a threshing floor. The threshing floor was usually a smooth rock outcrop where wind blew gently. The heads were then flailed and the kernels and chaff winnowed by tossing them into the wind with a wide shallow basket or with a pitch fork. The heavier grains fell back down while the lighter chaff was blown away.

A further clue as to the season when the scriptural new year began in Egypt is in Exodus 10:5 wherein is a description of the Plague of Locust. The Egyptians were warned before the plague that "...*the locust will eat every tree that sprouts to you in the field...*" As the ground temperature increases in that area, an early ripening variety of fig tree, which could have survived the plague of hail, sprouts. Also, almond trees that survived would have started to blossom.

After the plague of locust, came the Plague of Darkness. For *three days and nights* it was so dark the Egyptians did not leave their houses. Divine intervention likely caused dust to be blown into the sky, dark clouds formed, etc., which would have prevented the light from the sun, moon, and stars from reaching Egypt, except in the land of Goshen where the Israelites lived.

The plague of darkness on Egypt may have coincided with the approximate three days in a month when the moon is not visible from the earth because of the glare of the sun. Those who advocate the Conjunction Theory for determining their scriptural year call this period 'the dark of the moon.'

The conjunction of the moon occurs when the center of the moon in its orbit comes into instantaneous alignment with the center of the earth in its orbit, and the sun. Modern astronomers now call this alignment a 'New Moon.' This is *not* the visible new-moon crescent mentioned in the bible which occurs one to two nights afterward .

The word 'month(s)' seen in most bibles comes from Latin, not Hebrew. The word should have been translated 'moon' in the scriptures. Technically it should be: 'new-moon crescent.'

In Exodus 12:1 Yahweh told Moses: "*This new-moon shall be the chief of new-moons for you. It shall be the first of the new-moons of the year for you...*" The word 'new-moon,' mistranslated as 'month,' is the Hebrew word 'chodesh.' It is defined in *James Strong's Exhaustive Concordance Hebrew Dictionary*, number 2318 to 2320 as: *new (or rebuilding) moon.*

Obviously, this refers to the *visible* new-moon crescent. It gave off light which the Israelites *could see* and thereby reckon the interval of its next appearance.

One of the definitions of 'chodesh' in *The Theological Word Book of the Old Testament* is a "... *polished sword...*" (scimitar shaped new-moon crescent).

The name of the *first* Israelite new-moon describes a stage of growth of vegetation. The name is given in Exodus 13:4 as 'abib.' It is Strong's 24, defined as: *tender, green, young ears of grain.* This could only be referring to the barley crop which matures before wheat planted at the same time. We know from the book of Exodus that first new-moon crescent visible in Goshen was the delimiter for beginning the first day of the *first new-moon* named Abib.

On the 10th day of that *first* new-moon, Moshe told each Israelite head-of-household to select a yearling male lamb without blemish, from the flock. The lamb was to be set apart from the flock *until* the sunset which began the 14th, then killed. The blood was collected to mark the door posts and lintel of Israelite houses. By the 14th, the new-moon crescent would have grown to near fullness and would have provided illumination for these events and for the Exodus which began after sunset, on 15 Nisan, during the night.

The lamb was roasted and eaten by the Israelites in their houses in *trepidation*. This accurate word translation is found in the Schocken Bible - *the Five Books of Moses*, by Everett Fox. In Exodus 11:4 the Almighty Yahweh said He, not a 'Death Angel' as is commonly mis-translated, would pass over the houses of the Israelites and kill all first-born Egyptian males, man and beast. The trepidation would come from fear of retribution because of the dead Egyptians. This, even though the Israelites had been spared the ten plagues on Egypt, and had been promised deliverance by Yahweh.

The Israelites were in no 'haste,' as is commonly read, because the scriptures tell us they were forbidden by Moshe to go out of their house before morning. That included Aaron, Moshe's elder brother and Moshe himself to whom Pharaoh's decree to depart Egypt was given. The Israelite partakers of that Passover meal were also told to burn any leftovers *before* daybreak. Taken together, the words in the book of Exodus indicate that the new-moon crescent, which began that first month, occurred in the season that we today call Spring.

Spring begins *after* the 'day' of the Spring Equinox *ends*, however reckoned. Ancient Babylonian clay tablets written in cuneiform have been translated and show that the beginning of their first month, 1 Nisanu, from *BCE 500 to 68 CE*, began *after* the Spring Equinox ended. When the Israelites were released after seventy years captivity by the Babylonians, Ezra adapted the familiar name of Babylonian months (Nisanu = Nisan, etc.). They are seen on Jewish calendars today.

Scripture mentions only two seasons (Strong's Concordance 4150 'mowadahs,' defined as a fixed time or season) in Israel. There was 'plowing/planting' which took place in what is now called the autumn and winter when the weather was rainy and cold, and 'harvesting/gathering' which took place in what is now called the spring and summer - when the weather grew warm, then hot.

The seasons were delimited by what is today called the Spring and Autumnal Equinox.' This is when the earth's equator crosses the Plane of the Ecliptic in which the planets of this solar system orbit. The ancients knew that on the day of an equinox the Sun's *apparent* path cast a shadow in a straight line due east and west over a vertical object like a gnome or sundial.

There is no Hebrew word for equinox. Equinox is generally interpreted as being Strong's 8622 'tequwphah,' defined as: a revolution, a circuit, a course (as of the sun), and an end (of a season).

One can construct a visual aid to show the elliptical orbit of the earth around the sun - the sun being one of two foci. The four Israelite new-moons (lunar months) named *before* the Babylonian Captivity can be superimposed over the name of the same Babylonian months adapted by Ezra after the captivity. The sun governs plowing/planting and harvest/gathering times between the equinoxes and about the solstices.

The difference in the number of days between equinoxes and solstices, star constellations including the first point of Aries, fixed Gregorian calendar months, etc., can be also be shown on the visual aid. One can also list thereon the sequence of intercalary years in the 19 year Metonic cycle before CE 250, and afterward. And, a circular appendage can be made to show the effect of intercalating Adar II. Intercalation keeps the date of the spring equinox from advancing into the winter due to the lunar year being about 10.89 days shorter than the solar year.

At the time of the Tabernacle, determining scriptural calendar correctly was a life or death matter to Aaron when he was designated the first High Priest. It was the same for his male prodigy who were of Sadducees sect during the Temple eras. The High Priests determined the scriptural calendar visually to about the destruction of the Temple in CE 69-70. Of particular interest to Yahwists is the rationale used by the High Priest during the Second Temple era because it spanned the life of our Savior, Yeshua the Anointed.

We can make a reasonable supposition about the accuracy of methods used by the ancient High Priests to determine the equinoxes. As mentioned, the priests could have watched the sun's straight line shadow over a gnome at noon to know if the Spring Equinox nearly occurred on the previous day, and was likely to occur on the current day. They could see the new-moon crescent, and also could see the first point of Aries, in the star constellation then called Tleh in Hebrew.

The High Priest *officially* ‘declared’ the beginning of the scriptural year, also the time of set-apart days, the intercalation of a month, etc. He would have used the book of Leviticus for dates of the observances. Before the destruction of the Second Temple, history informs us there were differences of opinion regarding calendar rationales amongst the sect of the Sadducees, Pharisees, Kariates, Essens, etc. The priesthood was essentially destroyed with the destruction of the Second Temple. The Pharisee leaders became the Rabbis of today. Their manmade *opinions* are found in various Rabbinic writings. The other sects have essentially died out.

So, it should be no surprise there are some differences amongst the leaders of Yahwist congregations about criteria that should be in a common rationale for determining 1 Nisan, the beginning of the scriptural New Year, the Gregorian date of observances, intercalation of a second 12th month, etc. To have a common rationale requires the criteria of existing rationales be validated against scripture and external sources. If a criteria cannot be validated, it must be discarded. The following example is why.

Several years ago the leadership responsible for determining the start of the scriptural year for their congregations published a calendar with date for 1 Nisan shown, then abruptly changed it. They advanced 1 Nisan backward to the last new-moon crescent in *Winter*, in the month of *Adar*, solely because of a report of early maturing *wild, not cultivated*, barley in Israel.

This was done even though scripture *does not* mention wild or cultivated barley as a *criteria* for determining 1 Nisan. Barley is important for the Wave Sheaf Offering. Not widely known is the fact that varieties of cultivated barley in Israel today are different from ancient barley. Selective breeding has resulted in four and more rows of kernels in the head. Genetically modified barley can have maturity times *different* from ancient barley. Same is widely imported in Israel now.

Advocates of barley as a calendar determinate never mentioned the date *when* barley was *planted* in Israel in ancient times, or *why*. Yet same can be gleaned from ancient Rabbinic writings which will be discussed herein.

The following comments summarize known criteria differences in rationales for determining the scriptural calendar. Only one criteria in each is valid. The conclusions of the reader will identify the rationale the High Priest used for the determination of the scriptural calendar:

1. Reckon the beginning of the scriptural year 1 Nisan, to: (a) the instantaneous astronomical conjunction of the *invisible* moon, or (b), to the first *visible* new-moon crescent, with unaided eyes.

This criteria difference is pivotal. Those who advocate the Conjunction Theory will start the beginning of a scriptural year *one to three* days *before* the earliest visible new-moon crescent sought by the High Priest. Because the conjunction occurred *before* the day of the Spring Equinox in 2007, a second 12th month, Adar II, was intercalated in the scriptural year *ending* to ensure 1 Nisan began *after* the spring equinox. This is necessary about every three years in the 19 year Metonic cycle of lunar years. It is was done by the Israelites, the Babylonians, and other ancient nations.

Before about BCE 330 the *interval* of the conjunction of the moon was unknown. It became known to a few Athenian and Babylonian astronomers who could determine the interval with reasonable accuracy. It was not until modern times that the *instant* of the conjunction could be determined. The average person today cannot determine the instant of the conjunction unaided.

Reckoning 1 Nisan to the instantaneous conjunction of the *invisible* moon for determining the scriptural calendar is a relatively modern *theory*. It is *not* mentioned in ancient literature written *before* the destruction of the Temple in CE 69-70 so could not have been used by High Priests up to that time. There is *no mention* of reckoning to a conjunction of the moon in Rabbinic writings.

A quote from Herb Solinski is enlightening: "The Rabbinic writings (primarily the Mishnah c.200, Tosdffa c.300, Jerusalem Talmud c.400, Babylonian Talmud c.600) do not refer to the conjunction at all. They refer to the new moon (CHODESH)..." "...They do not admit that a calculated calendar was in use during the days of the writing of these documents."

So, for these reasons alone, and there are *many more*, the conjunction theory was clearly *not* used during the Temple eras by the High Priest for determining the scriptural calendar.

The appeal of the conjunction theory is its *assumed* accuracy because the *theoretical* lunation is shown to nine decimal places. But that number is a *mathematical average* over many centuries. It is *not* an actual lunation interval which in the short term can vary from 12 to 14 hours. The time varies because of the mass attraction of near and distant celestial objects cause changes in velocity of the moon in its comparatively eccentric orbit about the earth. The velocity changes depending if the moon is between the earth and sun, or opposite the earth and sun. The variation in time is a natural occurrence which affects the determination of 1 Nisan.

Conversely, the first new-moon crescent of the 'small luminary' of Genesis delimits the beginning and ending of new-moons and years by its brief appearance. Any Shepard boy could relate to the new-moon crescent because he could *see* it. Plain common sense says that neither David, or anyone, could have reckoned to the conjunction of an invisible moon which they could *not* see.

The visible new moon crescent was one of the 'signs' given to the Israelites for the purpose of reckoning the new year, new-moons, and set-apart (Holy) days.

A calculated calendar based upon the conjunction of the moon surely became known to the High Priest during the Babylonian Captivity, but there is *no* evidence of its use. The methodology for a calculated calendar could have been a contingency plan later under the increasing harshness of the Roman occupation. It was likely considered after the destruction of the Second Temple in 69-70 CE and surely revisited after the Maccabean uprising in 134 CE. After then the High Priest could not enter Jerusalem so could not declare the beginning of the scriptural year there.

The early rabbis closely guarded the methodology for a calculated calendar. The methodology was not published until about CE 300 - 400 by Hillel. However, the method contained an error, which was corrected by his son, Hillel II. The calculated calendar was useful for the Israelites living in the Diaspora.

Non-scriptural observances such Purim, Hanukkah, the four postponements of Yahweh's set-apart days for the convenience of the Rabbis, etc., were added to, and resulted in, what is now called the Jewish Calendar.

2. - Reckon to a calendar wherein the first day of the new year, 1 Nisan, may fall (a) ON or PRECEDING the Spring Equinox, or (b), only AFTER the Spring Equinox.

The Aaron the first High Priest obtained his calendar guidance from the book of Genesis, Exodus, Leviticus, and Deuteronomy penned by his brother Moses. As mentioned, Aaron began the first month of the scriptural year *only after* the day of the Spring Equinox reckoned sunset-to-sunset.

Before or during the Babylonian Captivity, the High Priest became aware that the Babylonians reckoned their new year *essentially the same way as he had been doing for Israel*. Babylonian new-moon records made have been translated into English in the book *Babylonian Chronology 626 BC to AD 75*, by Parker and Dubberstein. It shows an *unbroken* record of almost 8600 sightings of the *new moon crescent* seen in *Babylon*, written in cuneiform on clay tablets. As mentioned, from BCE 500 to 68 CE the Babylonian records show the Babylonian New Year began *only after* the Day of the Spring Equinox.

The tablets contained the name of the king reigning at the time, some of whom are recognizable from the scriptures.

The tablets are 'hard' evidence the Babylonians utilized the sighting of the new-moon crescent to determine the first day of their lunar months and new year. They started their calendar *wholly* in the spring, and intercalated months. This fact is very significant because although the Babylonians possessed the knowledge to have a calculated calendar, *they relied upon visual sightings* and recorded them.

There is *no* evidence that during the 70 year Babylonian Captivity the Israelites did not also use the Babylonian calendar which included the name of Babylonian months. After the captivity, Ezra adapted those familiar names (Nisanu became Nisan, etc.) as can be seen in Chapter III, page 26., of Parker and Dubberstein's book. Those adapted names are seen on a Jewish Calendar today.

Again, there is *no* evidence a calculated calendar, or one based upon the instantaneous conjunction of the invisible moon, was in use in Israel *before* CE 69-70.

The 'day' of an Equinox or a Solstice begin in the season *ending*. It is the last day of that season however it is reckoned (sunset-to-sunset or midnight-to-midnight). The day after is the first day wholly within the next season. Since the 'Day of the Spring Equinox' begins in *Winter*, in the 12th moon *Adar*, it is a day of *Winter* until it ends. The actual 'First day of Spring' begins at the sunset of the Spring Equinox reckoned sunset-to-sunset.

The logic for when to know 1 Nisan is in the correct season is obvious when looking at the U.S. Naval Observatory's internet home page www.usno.navy.mil. On the left side of the web page under Departments, click on: *Astro Applications, Data Services, Dates, and Earth's Seasons, Equinoxes, Solstices, Perihelion, and Aphelion 1992-2020*. Notice in the heading there are *only two* categories: 'ON or PRECEDING and AFTER' an equinox. There *cannot* be another category for of the reasons previously explained.

3. - Reckon the beginning of the day as: (a) sunrise-to-sunrise, (b), midnight-to-midnight, or (c), sunset-to-sunset.

The book of Genesis tells us that the universe began in darkness, then there was light. The light came directly from the sun and indirectly from sunlight being reflected off the moon.

The Egyptians worshiped the sun god Ra and reckoned their days from sunrise-to-sunrise. This fact must be kept in mind when reading the translated writings of authors who lived in Alexandria, Egypt, such as Philo Juda.

We know that what we call a 'day' refers to the 24 hour solar period which is essentially one rotation of the Earth measured against a bright star, and, that the word 'day' is used to refer to the illuminated portion of the 24 hour solar day measured at the equator.

4. - Reckon the new-moon crescent to: (a) Local Time anywhere, or (b), Local Time in Jerusalem, Israel, time zone (UT+2).

It seems condescending to Almighty Yahweh's word to use time locally to reckon 1 Nisan and the dates of set-apart days, because it overlooks significant facts. Jerusalem is the city spoken about in the scriptures many times as the place with special significance. The Almighty Yahweh choose to have his presence on Mount Zion within the Holy of Holies of the Tabernacle and Temples there. Our Savior died in Jerusalem, and it is where the High Priest determined and *declared* the Scriptural Calendar for Israel.

Congregations reckoning events to Jerusalem avoid the confusion of using local time in a country like the USA which has several time zones. Congregations on the east coast may not see a new-moon crescent whereas it may be seen later by those on the West Coast. Muslims had the same problem until they decided to reference their calendar to Medina, a location in the approximate center of their adherents.

Jerusalem as the single reference point is similar in some respects to Greenwich, England. By international agreement, Greenwich is the location of zero longitude and zero Universal Time (UT) reference. It is the only longitude from which all time zones are referenced. This is done by *adding* hours for time zones to the east, or *subtracting* hours if to the west. Scripturally, it is logical that Jerusalem be used as the criteria from which new-moon sightings, 1 Nisan, and set-apart days, are determined.

Even without using today's instant communications and precise astronomical information, anyone observing a new-moon crescent at a given location can predict its probable occurrence in Jerusalem. This is done by aligning the bottom of one's out-stretched thumb with the horizon. If a new moon crescent can be seen above the top of one's thumb, that new moon crescent is at a high enough altitude to be visible in Jerusalem, local atmospheric conditions permitting.

5. - Do: (a) not intercalate a second 12th month, Adar II at the scriptural year ending to ensure 1 Nisan starts *after* the spring Equinox, or (b), intercalate Adar II.

Whether or not to intercalate Adar II, a second 12th month of 29 days (not a thirteenth month) to the scriptural year ending, is the responsibility of a congregation's leader. Again, some may think it is a 'close-call' when 1 Nisan falls *on* the day of the Spring Equinox, but it is because they incorrectly *assume* that day is the first day of spring. It is not. As explained, it is instead the *last day of Winter* and the moon of *Adar*. The scriptural year can *only* begin *wholly* in the *spring*.

So, 1 Nisan 2007 was not a 'close-call' when one reckons a day from sunset-to-sunset, a lunar month by the new-moon crescent observed *in Jerusalem*, recognizing that the preponderance of ancient evidence shows the scriptural new year always began *after* the Day of the Spring Equinox, and intercalates Adar II when the scriptural year ends in the Winter.

6. - Assume: (a) cultivated barley in Israel is the same variety as in ancient times therefore is a criteria for beginning the scriptural year, or (b), do not assume barley is, or ever was, such a criteria.

Starting in the book of Exodus, barley is *not* mentioned as a criteria when Yahweh told Moshe in Egypt that the first day of the moon and the new year was to begin. Of course, barley is not mentioned as a criteria Aaron was to include in determining the Scriptural Calendar during the forty years the Israelites traveled in the wilderness. Neither was it so after the Israelites crossed the Jordan River into the Promised Land. It is *not* mentioned as a criteria for determining the Scriptural Calendar during the Temple eras when the Israelites did cultivate barley.

Leviticus 23:10 required that *when* the Israelites entered the promised land, they were to bring the first-fruit of the grain crop (barley planted by non-Israelites) to the priests for an Elevated and a Burnt Offering. Barley could *not* be a determinate for 1 Abib because it had passed about two weeks earlier.

The first-fruit barley for the offerings were *cut and brought* to the priests at the *beginning* of the *first day* after the *weekly Sabbath following* Passover after sunset, even if dark. That first day always falls within the Days of Unleavened Bread. The *count* to the Feast of Weeks must start on that first day of the week (now called Sunday).

The *season* in which the Israelites entered the Promised Land is known from Joshua 3:15 "... now the Jordan overflows all its banks during the time of the [barley] *harvest*," and from Joshua 4:19 "And the people came up from the Jordan River on the *tenth* day of the *first* month, and they camped in Gilgal." The verses point to events in the first moon of the scriptural year.

Barley matures earliest of the cereal grains (spelt, wheat, etc.). Egypt being further south than Israel, would have had barley reach the 'abib' (pasty-firm to dry kernels) state earlier than Israel.

Regardless of these facts, in past years some congregations which had published and distributed a scriptural calendar, backed the start of their scriptural year one lunar month. This caused 1 Nisan fall *before* the Spring Equinox, thus into the *Winter* and the month of *Adar*. The apparent reason for doing so was a report of finding *wild* (not cultivated) barley in Israel in the abib state.

The leaders cited no scriptural support for making the change. No outside proof was offered to show even one time *during the Temple eras* the scriptural year had ever been declared *before* the sunset of the day of the Spring Equinox. All things being equal, increased global warming, etc., could cause grain crops in Israel, and elsewhere, to tend to mature earlier in the coming years.

How did the ancient Israelites: (a) ensure there would likely be barley in the 'abib' state at Passover so (b), the first-fruit of the barley harvest could be cut and prepared for the Day of the Elevated Offering, and (c), the cutting would also be in accordance with Deuteronomy 16:9 for counting to the Feast of Weeks?

One could assume the optimum time farmers planted their barley was handed down from father-to-son over centuries. However, Rabbinic writings tend to show that during the Temple eras the time to plant may have been linked to the *date* of Passover in the *forthcoming* year.

Alfred Edersheim's book *The Temple its Ministry and Services*, Chapter XIII The Days of Unleavened Bread and the Feast of Weeks, describes a special temple delegation sent to harvest the first-fruit of the cultivated barley crop for the Elevated Offering and Burnt Offering. It was to come from an ordinary field in the Kidron Valley. The footnote on page 258 of The Wave-sheaf paragraph, reads:

¹ *Mishnah*, Menach. viii. 1, 2. The field was to be ploughed in the autumn, and sowed seventy days before the Passover.

The abbreviation stands for: Menachoth, Chapter 8., paragraphs 1., and 2., which is about food.

Theoretically, planting barley *seventy days* before Passover would cause it to be nineteen days from maturity. The link of the planting time to Passover provided a time margin to maturity to accommodate for differences in growing conditions, etc.

Assuming the footnote in Edersheim's book described the general practice of barley farmers:

(a) The planting time link to Passover would tend to ensure the barley crop would have kernels which would be pasty-firm to dry, as Passover approached. Same would also occur in years when Adar II was intercalated because the whole scriptural calendar shifted one lunar month.

(b) It would enable the first-fruit of the barley crop to be cut on the first day *after* the weekly Sabbath following Passover, *regardless* which date it fell upon within the seven Days of Unleavened Bread. The barley would tend to get drier toward the end of the feast.

(c) It ensured the beginning of the count to the Feast of Weeks would occur as in Deuteronomy 16:9 "... begin to count seven weeks from the time when you put the *sickle to the grain.*"

However, for barley farmers to be able to count seventy days to the *next* Passover, they first had to know when the *next scriptural new year would begin*. Until the destruction of the Second Temple in CE 70, it seems likely farmers sighted new-moon crescents, counted to the crescent first after the day of the Spring Equinox, and added the fourteen days to Passover. They would have then counted backwards seventy days for the date to plant the barley. Genesis 1:14-16 was common knowledge.

While Rabbinic writings are never as reliable as Scripture, the above footnote further shows that barley was *not* a determinate for beginning the Scriptural year. Instead, it infers that Passover on 14 Nisan, in the *next* year, determined the date for planting barley in the autumn of the current year. That variable planting date would have occurred around the Hebrew month named Shebat, i.e., after plowing and when there was 'rain on high, when it was cold, and when there was snow accumulating on mountain tops, etc.

Further, there is also *no evidence* during the Temple eras that barley farmers used a calculated calendar based on an invisible astronomical conjunction of a moon which they could *not* see.

If the first-fruit of the barley crop was not mature by 14 Nisan, the start of the new year would be postponed one lunar month. No record has surfaced that this ever happened.

Non-scriptural year determination issues -

7. - Advocating that the Passover lamb was killed: (a) during the afternoon of 14 Nisan and eaten at the beginning of 15 Nisan, or (b), immediately after the sunset which began 14 Nisan, roasted, and eaten in houses thereafter during the night.

The connotation of the Hebrew word translated 'evening,' is the period of diminishing light after sunset until night. "Night," as a Rabbi is to have said: "is when you can see three stars." In the spring there are about 1-1/2 hours of visibility for a head-of-household to have killed a yearling lamb, roast it, and it be eaten in his house during that first night of the pass-over.

To draw the nation of Israel together, king Josiah (BCE 637-607) encouraged a *change* from the *domestic* Passover event of killing a male lamb by a head-of-household at home, to instead be done by a Levite priest in a *national* event at the Temple in Jerusalem. Josiah did this to draw the nation together, which it did.

More changes occurred. The killing of the lambs nationally at the Temple instead of domestically became common. There seems to have been insufficient time to kill the increasing number of lambs needed as the population grew. The killing of the lambs was moved from dusk at the *beginning* of 14 Nisan, to *mid-afternoon*. This was likely justified because the killing still occurred within the same commanded day.

There were also changes in the way Yahweh's set-apart days were kept. The Jews held a feast after the sunset of day of Passover instead a Last Supper on Passover. Also, non-scriptural observances: Purim, Hanukkah, and postponements for when Yahweh's set-apart days were commanded to be observed, were inserted into the scriptural calendar.

Passover, originally a *memorial* of the *deliverance* of Israel from slavery because of their sins, instead became merged into a *celebration* of Israel's *exodus* out of Egypt. The national slaughter of Passover lambs on 14 Nisan was the norm by New Testament times. The Gospels record Passover being referred to as the 'preparation' day for the first day of the Feast of Unleavened Bread at the beginning of 15 Nisan, the first set-apart day of the seven day Feast of Unleavened Bread. That day is called 'an High day' in John 19:31. It is an annual Sabbath which may also fall on a weekly Sabbath.

The Gospels record that the Jewish religious leaders who accused Yeshua would not enter the Roman Judgement Hall on 14 Nisan because they considered doing so would defiled them from attending the feast commencing *after* the sunset of Passover day, which also began 15 Nisan.

A close reading of the Gospels, reveals Yeshua and his Apostles observed a domestic Passover about the same time it had been first observed in Exodus by Moshe. The scriptures infer that the lamb Yeshua and his Apostles ate was slaughtered after the sunset of 13 Nisan, which began 14 Nisan.

But the killing of the innocent male lambs nationally at the Temple on the afternoon of 14th Nisan seems to have had divine approbation to be synonymous with our innocent Savior being killed on that same day.

There is no scriptural requirement that a scriptural calendar determination must ensure the set-apart days in the 7th new-moon named Tishri, always occur *after* the Autumnal Equinox. The false supposition is that the gathering of dates, summer figs, etc., had to be completed before then to provide the tithe all Israelite males were to contribute on the first day of the Feast of Tabernacles. For information purposes, all set-apart days in Tishri will automatically fall *after* the Autumnal Equinox when 1 Nisan occurs eight or more days *after* the Spring Equinox, which is most of the time.