

Understanding The Hebrew Calendar

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Every calendar in the history of man has attempted to measure time by either the solar or the lunar cycle. The calendar we use today is a solar calendar. Because it is a solar calendar, its months are synchronized with the equinoxes and solstices of the solar year.

The 365 days in the solar year are divided into four months with 30 days ($30 \times 4 = 120$), seven months with 31 days ($31 \times 7 = 217$), and one month with 28 days ($120 + 217 + 28 = 365$ days). Although the calendar year is 365 days, the actual solar year is 365.2425 days. The fraction of a day (approximately $\frac{1}{4}$ day) is made up by adding one day to February every 4 years.

Because we live in a culture that uses this calendar, it governs our days and months of worship. It governs our work schedules, vacations, graduations, weddings and funerals. It governs our financial system. All businesses, large and small, depend on the calendar to set dates of contracts, interest schedules, tax schedules and billing periods.

The Hebrew Calendar served the same purposes for banking and commerce in ancient times. However, its most important function was, and still is, to set the dates of the annual holy days that God established at the creation of the world.

Genesis 1:14 tells us that God arranged the sun, moon and stars in the heavens “for signs, and for seasons, and for days and years.” The word “seasons” is translated from the Hebrew *moed*, which means “appointed times.” Observing God’s appointed times helps us to understand His plan of salvation for mankind.

These appointed times are listed in Leviticus 23, where the Hebrew *moed* is translated “feasts.” The first feast, or appointed time, is the weekly Sabbath (v. 3). The annual feasts, which take place during the three harvest seasons in the year, are listed next.

The Passover, the first of the annual feasts of God, is observed at the beginning of the 14th day of the first month (v. 5). The 14th day itself is not a Sabbath but a day of preparation for the Feast of Unleavened Bread, which begins on the following day, the 15th, and lasts for seven days (v. 6). The first day and the seventh day are Sabbaths of rest (vs. 7-8).

The next verses describe the wave sheaf offering, which takes place during the Feast of Unleavened Bread on “the morrow after the Sabbath” (Sunday). From this Sunday seven complete weeks are counted (v. 15) and the following Sunday (the 50th day) is the Feast of Firstfruits, (vs. 16, 21). This feast is referred to in the New Testament as Pentecost, which means “fiftieth (Acts 2:1).

The following verses in Leviticus 23 describe the fall festival season, which is composed of four separate feasts that all take place in the seventh month of the year. The Feast of Trumpets is the first day of the seventh month and is a Sabbath of rest (v. 24). The tenth day is the Day of Atonement, also a Sabbath (vs. 22-28). The Feast of Tabernacles begins on the 15th day and lasts for seven days (v. 34). The first day is a Sabbath of rest (v. 35). Immediately following the Feast of Tabernacles is the last feast of the year, which is also a Sabbath of rest (v. 36). This feast day is called the “Last Great Day” in the New Testament (John 7:37).

All these feasts, or “appointed times,” were observed by the servants of God in the Old Testament down to the time of Abraham, Isaac and Jacob. Before Jacob’s death, he and his eleven sons went down to Egypt, where his son Joseph had risen to rulership. After several generations of living among Egyptian sun worshippers who observed pagan festivals, the descendants of Jacob lost all knowledge of God’s feast days.

When God sent Moses to lead His people out of Egypt, He began to restore the knowledge of His appointed times. Exodus 12 records His instructions for the feasts of the first month:

And the LORD spoke unto Moses and Aaron in the land of Egypt, saying, “This month shall be unto you the beginning of months: it shall be the first month of the year to you” (vs. 1-2).

The following verses in Exodus 12 give instructions for the feasts of the first month—the Passover on the 14th day and the Feast of Unleavened Bread on the 15th through the 21st day. These are the only feasts that are recorded in Exodus 12. Although the other feast days are not listed in Exodus 12, God gave Moses instructions for them also. Psalm 81 testifies that God delivered instructions for all His appointed times when He brought Israel out of Egypt:

Blow up the trumpet in the **new moon**, in **the time appointed**, on our solemn feast day. For this was a statute for Israel, and a law of the God of Jacob. **This He ordained in Joseph for a testimony**... (vs. 3-5).

Verse 3 is referring to the new moon of the seventh month. This is the only new moon of the year that God appointed as a feast day. The New King James Version of Psalm 81:3 gives the complete meaning of the Hebrew text, confirming that this verse is speaking of the seventh month:

Blow the trumpet at the time of the New Moon, at the full moon, on our solemn feast day. For this *is* a statute for Israel, A law of the God of Jacob. This He established in Joseph *as* a testimony...

There is no question that Psalm 81 is referring to the seventh month. No other month of the year has a commanded feast on both the new moon and the full moon. The seventh month is the last month of the annual holy day season. Thus Psalm 81:3 confirms that God delivered a complete calendar for observing His appointed times when the Exodus took place.

The Hebrew word that is translated “New Moon” in Psalm 81:3 is *chodesh*. This same Hebrew word is translated “month” in Exodus 12. *Chodesh* is used numerous times in the Old Testament and may be translated either “month” or “moon” depending on the context in which it is used. Its literal meaning is “new moon,” which is the first day of each month in the Hebrew Calendar.

The fact that the Hebrew text uses the same words for “new moon” and “month” gives us insight into the calendar that God delivered to His people. The months of this calendar are set by the lunar cycle—not by the equinoxes and solstices of the solar cycle.

Because the lunar cycle varies from month to month due to irregularities in the moon’s orbit, the Hebrew Calendar uses the *average* length of the lunar cycle to calculate the months. The average lunar cycle is 29.53 days (rounded off to the nearest one hundredth). Since months cannot consist of half days, the months of the Hebrew Calendar are alternately assigned 29 and 30 days. This sequence of 29 and 30 days works very well to keep the months aligned with the new moons.

Based on the average lunar cycle of 29.53 days, a 12-month year will have 354.36 days (12×29.53). As the monthly average of 29.53 days is attained by a combination of 29 and 30-day months, so the yearly average of 354.36 days is attained by a combination of 353, 354 and 355-day years.

These three year lengths keep the calendar aligned with the movement of the moon, but they can not keep the calendar aligned with the seasons of the solar cycle. Lunar years that are 353 to 355 days in length are 10 to 12 days shorter than solar years.

If the Hebrew Calendar consisted only of 12-month years, all the annual feasts of God would drift farther and farther from their correct seasons. To prevent this from happening, the calendar uses intercalation. Intercalation is the process of adding a 13th month every 2 or 3 years. The result is a combination of 12-month “common” years with 353 to 355 days and 13-month “leap” years with 383 to 385 days. There is a fixed cycle of 12 common years and 7 intercalary years in each period of 19 years, producing an average of 365 days per year.

Adding a 13th month to the end of a year does not change the length of the holy day season, which begins in the first month of the following year. In every year, there are 177 days from the new moon of the first month to the new moon of the seventh month. The new moon of the seventh month is the pivotal point for calculating the holy days for the year. The Hebrew Calendar calculates this moon first, and then counts back to the new moon of the first month.

This procedure is supported by the decree of God in Psalm 81 concerning the new moon of the seventh month. The word “testimony” in Verse 5 is translated from the

Hebrew *aydooeth* and is elsewhere used of the Ten Commandments, which were inscribed in tables of stone by the hand of God. In like manner, the calendar that God delivered to Moses was a written decree for calculating His appointed times. In ancient Israel, the blowing of the trumpet on the first day of the seventh month was a proclamation of the “New Moon of the Year”—so named because it determines the beginning of all the months of the year.

Since the first day of each month is a new moon, the fifteenth day of each month is a full moon. This is the time that God appointed to begin the Feast of Unleavened Bread in the first month and the Feast of Tabernacles in the seventh month. The timing of these feasts is the primary focus of the calculations of the Hebrew Calendar. The calculations aim for the best illumination of the moon for the arrival of these two major feasts of the year.

It is not possible to achieve 100% illumination in every year due to variations in the lunar cycle. Despite these variations, the calendar has maintained an average of more than 99% illumination for thousands of years. No lunar calendar designed by man has ever survived the test of time.

The Hebrew Calendar requires many more calculations than our modern solar calendar. Due to the many variables in the lunar cycle, it is necessary to use complex mathematical averages to calculate the months and years. Because the lunar year is shorter than the solar year, 13-month years are needed to keep the holy days in their appointed seasons. While these calculations provide accurate dating in most years, there are years when the variables in the lunar cycle require additional adjustments to the calendar.

In such years, the calculated dates are corrected by mathematical formulas that keep the calendar precisely on target for observing the holy days. These mathematical formulas are expressed in simple terms as the Rules of Postponement. These four rules are applied when the calculations that are based on averages place the new moon of the seventh month too early, which would cause the holy days to be observed before their appointed times.

God in His wisdom set the sun and moon in their positions expressly for the purpose of establishing His appointed times. Foreseeing every circumstance that would arise with the passing of time, He made provision for all irregularities to be corrected when He gave instructions to Moses for calculating His feast days. This revelation was committed to His people for all time.

Regardless of their unfaithfulness, God has preserved the Hebrew Calendar through them. Although they have changed their observance of the Passover and the Feast of Pentecost, they have retained all the calculations of the Hebrew Calendar. Paul's letter to the Romans confirms this truth:

What advantage then hath the Jew? ... Much every way, chiefly, because that unto them were committed the oracles of God. For what if some did not believe? Shall their unbelief make the faith [faithfulness] of God without effect? (Rom. 3:1-3.)

The Hebrew Calendar is the same today as it was in the days of Noah, Abraham, Moses and all the prophets of the Old Testament. It is the calendar that Jesus and His apostles followed. It stands as a testimony to the faithfulness of God in our time, and it will remain in effect during the coming reign of Christ (Isa. 66:23, Zech. 14:6).