

Everyday Life in Bible Times
Chapter 2 – Agriculture

Lesson 2.01
Introduction

In Chapter 1 we learned about outdoor work during Bible times.
Hunting for wild animals for food.
Catching fish.
Caring for sheep.

God planned that His people would not continually wander.
He planned for Israel to settle and live in their own land and stay there.
He wanted them to have farms and grow food.

But sometimes they had problems.
Shepherds that traveled with their sheep wanted land to stay open.
They didn't like farm fences that blocked their sheep.
So the Shepherds and farmers had conflicts.

God established laws for people to keep their land in their families, passing the property down to each generation.

STUDY QUESTIONS

Look in your Bible and see if it has maps in the back. Find the map of Israel.

- Measure how large Israel is.
- From north to south, how many miles or km.
- From east to west, how many miles. or km.

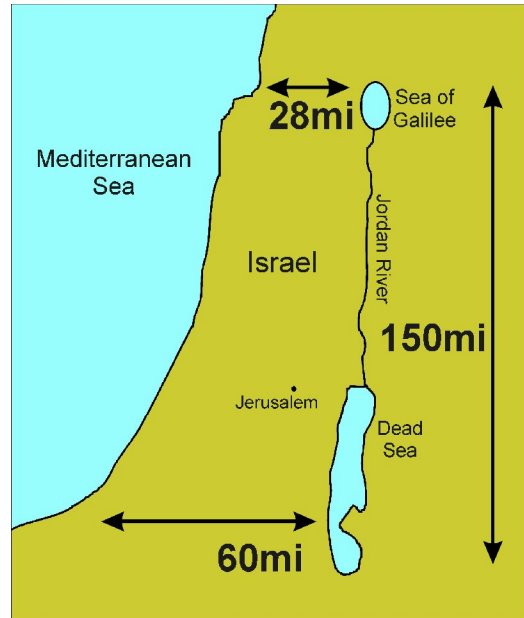


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Lesson 2.02
The Land

In Old Testament times, the land of Israel was called **Canaan**. Today we call that land **Palestine**.

Israel was not a large country.
From north to south, it was about 150 miles (240 km).
From east to west:
at the north end,
Israel was about 28 miles (45 km) wide;
at the south end,
Israel was about 60 miles (97 km) wide.



In the west, near the ocean, the land was flat.
Then in the middle the mountains went up to 3000 feet.
Then the side east slopes down steeply to the Jordan river.

The Sea of Galilee is about **700 feet below sea level**.
Then the Jordan river flows downhill to the Dead Sea, about **1,300 feet below sea level**.

Food grew best in the west, near the Mediterranean Sea and north in Galilee.

Israel had many hills and valleys.
The valleys had good farms.
On the terraced hillsides they grew grapes and other fruit.

STUDY QUESTION

Look at your Bible map. Find the highest place and the lowest place in Israel.

Lesson 2.03
Weather

The land of Israel has two seasons.
1. The cool rainy season
2. The hot dry season (summer)

During the cool months in the fall, the first light rain begins in the first two weeks of October.
That rain makes the soil soft for plowing and planting.

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Then rain increases during December. to February or March.

Often the Bible talks about “the last rains” in April.

Farmers depend on rain coming at right time, the right way, and in the right amount.

During the summer dry months, the land receives moisture, how?

The ocean wind, blowing east, carries moisture that touches the land with morning dew

If the wind blows from east or from the south, those winds are dry.

Sometimes hot dry winds, called SIROCCO, kill plants. That is very dangerous.

Sometimes those dry winds blow sand. A dust storm is terrible.

STUDY QUESTION

Read Isaiah 55:10-11

God compares rain to what? Why?

Lesson 2.04

Conditions at the Time of Joshua

Jewish people lived as slaves in Egypt for 400 years.

After they escaped, they travelled for 40 years, and then finally they arrived in that land that God promised to give them.

When they saw the land, it was awesome.

Nice farms.

Lots of fruit trees.

Huge bunches of grapes.

How did the land grow so much fruit?

The people who previously lived in that land had already established farms.

They plowed, planted, and irrigated the land.

The Israelites arrived and took over those farms.

God called it, “A land flowing with milk and honey.”

Israel conquered the land little by little.

One family had one plot (piece of land).

Another family had another plot.

Another family had another plot.

etc.

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The family land had boundaries.
They kept the land in their family, passing it to each generation.
They marked the boundaries with used natural things like
 a river,
 a line to a cave, or
 a line to a stone.
They were not allowed to change the boundaries.

STUDY QUESTION

Read 1 Kings 21:1-3

The king saw some land that he wanted. But he couldn't buy it. Why?

Lesson 2.05

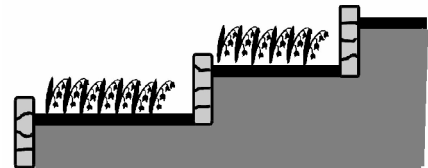
Kinds of Land

The best farm land in Israel was near the ocean – the Mediterranean Sea.
They also had good farms on the plains and in the valleys.

Crops did not grow as well on dry hillsides.
Sheep grazed (ate grass) on the hills.
But they did have some farms on hills. How?

They cut away stones, put them in a line, and built a wall.

They dug into the side of the hill, and used that soil to fill in
behind the wall, making a level field.



Then further up, again, they cut away more stones, built another wall, dug soil from the hill and made another level field..

Then further up the hill they did the same thing again and again. .
That is called a **terrace**.

Farmers planted their crops on those level sections of land on the hillside.

They grew
 Wheat.
 Barley.
 Beans.
 Lentils.
 Vegetables.

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Most people ate wheat. Poor people and animals ate barley.

Farmers did not add fertilizer. They just used natural animal droppings.
Also, any plants that were left in the field after last year's harvest decayed and fed the soil.

Through a lot of hard work, the dry land changed into fruitful farms.
That hard work also made people strong and healthy.
And that hard work taught them patience and trust.
When they harvested, they thanked God.

They loved their land.

STUDY QUESTION

Read Isaiah 51:3

God promised to make the land of Israel like what?

Lesson 2.06

Irrigation

In the fall, farms grew plenty because they had enough rain.
But during the summer it was dry. They did not have enough rain.

Farmers needed to bring water to their farms.

How?

Some places they had a stream or river nearby.

They cut a channel for water to flow from the river to the farm.

If the stream was low and the farm land was high what did they do?

They carried the water up to the land.

If they had a well.

They lifted water out for the farm. How?

One way, they had a large tube. One end was in the water.

The other end up on the land.

Inside that tube had a large screw.

The tube had tabs for stepping on.

People held on to overhead supports and stepped on tabs, turning the screw.

Water flowed up and out onto the land and watered the farm.

You can see a picture of this irrigation tube on the internet. Search Archimedes' screw."

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Lesson 2.07
An Irrigation Machine

Another kind irrigation machine was a large wooden wheel that had jars or large cups tied to it. The bottom of the wheel was in water – a river or spring.

While the wheel turned, cups went down into the water and up again, filled with water. When the cups reached the top of the wheel, they tipped over, pouring water into a trough. Then the water flowed into a pool, vat, or out to the farm field.

How did the wheel turn?

Some wheels had a crank that people turned – hard work!

Other wheels meshed with a gear and a long pole tied to an animal – ox or donkey. The animal walked in circles, turning the wheel.

If the wheel is in a river, the power of flowing water in the river can make the wheel turn.

See lesson 2.07 video to see an example of this kind of water wheel.

STUDY QUESTION

Read Ecclesiastes 12:6-7

A water wheel is compared to what?

Lesson 2.08

Yokes

Long ago Jewish farmers did not have machines to do their work. No tractors. But they did have animals help to their farm work

A cow.

A donkey.

Two oxen (cows) yoked together.

Oxen pulled farm equipment.

Donkeys and camels carried loads.

When two animals worked together, that thing on their necks is called a **yoke**. That is how two animals shared their work equally.

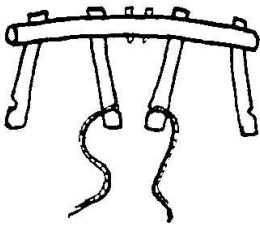
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1. Horn yoke

This is a simple yoke.

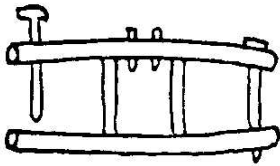
It is a wood pole on the heads of both animals,
and tied to their horns.



2. Syrian yoke

This is a large straight piece of wood on the necks of both animals.
Short poles extend through the wood down on both sides of the
animal's neck.

Under the neck, the poles are tied together by a short rope.

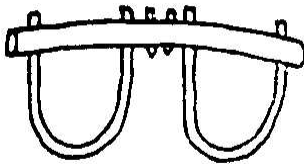


3. Square yoke

This is like the Syrian yoke. A large straight piece of wood is on the
necks of both animals.

Short poles extend through the wood down on both sides of the
animal's neck.

Then the poles extend through another large piece of wood under
their necks of the animals.



4. Round yoke

A large straight piece of wood is on the necks of both animals.

Extending through that piece of wood is a long thin pole, curved
under the animals' necks.

That pole under the neck was hard and could hurt.

So farmers added soft padding to it.

The center of the yoke connected to a plow, or a wagon.

If a farmer had two animals working together with a yoke, those two animals must be the same
kind and size of animals -- two oxen or two donkeys.

If the two animals are different, that is a problem, like a cow with a donkey.

They cannot pull equally.

STUDY QUESTION

Read Matthew 11:28-30

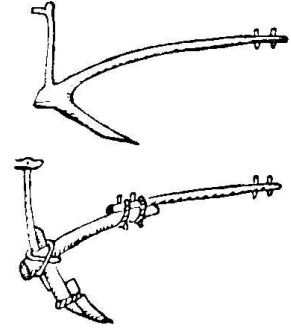
Jesus invites us to do what?

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Lesson 2.09
Plows and Goads

Farm work requires plowing.

One simple plow was from a tree with two branches.
Cut the tree just below the branches.
The long center pole is tied to the donkey.
The farmer holds one branch.
The other branch goes into the ground and cuts the furrow.



Farmers today use a plow like that, which they make with wood and add a metal tip.

The farmer held the plow with his left hand and in his right hand he held a long stick called a **goad**.

The farmer used the goad for guiding his animal that pulled the plow.

The farmer tapped the animal on each side, to make it go straight or to turn.
If the animals are oxen, sometimes farmers put a metal nose on the end of the stick for poking the oxen.

And that metal tip is a good tool for other things.
When mud sticks to the plow, the farmer used the goad to scrape the mud off and clean it.

Jesus used the plow and the goad as pictures for His teaching.

Remember the apostle Paul.
You know that before Paul became a Christian, he hated Christ. He persecuted Christians.
When Jesus appeared to him in a vision, Jesus said,

“You are kicking against my goad. That’s hard for you. Right?”

STUDY QUESTION

Read Luke 9:62

Jesus compares plowing to what?

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Lesson 2.10

Preparing the land for sowing

The farmer's plow loosens the hard soil.
But the soil still has large chunks.
The farmer cannot plant seed in that.
Those large chunks must be broken up into fine dirt.

The farmer does that, how?
The farmer uses a **hoe** -- a long stick with a small blade at the end.

Another tool that the farmer uses is called a **mattock**.
That has a long handle and a long curved blade at the end, like a hoe, but longer,
for digging into the soil and breaking apart large clumps of dirt.

Next the farmer uses a **harrow**.
That is a wide wood board that had metal spikes poking down.
The animal pulls the harrow, making the soil surface smooth.
The harrow is like a big rake.
Children stood on the harrow, adding their weight.

Farmers began working on the soil in the fall, around October. When they had their first rain and the soil became soft, farmers began their work making the soil ready for planting.

Sowing Seed

When the soil was ready, farmers planted the seed.

They held a basket in one arm.
They threw the seed out with the other hand.

When they sowed the seed, the seed lay on top of the soil.
The seed must become covered with soil. How?
They pulled a harrow, stirring up the soil and covering the seed.
Or they turned sheep or goats loose into the field.
When the sheep walked, they pushed seed down into the soil.

When the planting was done, the cool rain fed the soil and the seed began growing.
Then, when the weather became warm, the plants sprang up.

STUDY QUESTION

Read Matthew 13:3-8, 18-23

Jesus compared sowing seed to what?

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Lesson 2.11
Harvesting Grain

The farmer plowed, hoed, harrowed, and planted.
Then he waited for the rain, and the seed grew.
Then came time for the harvest.

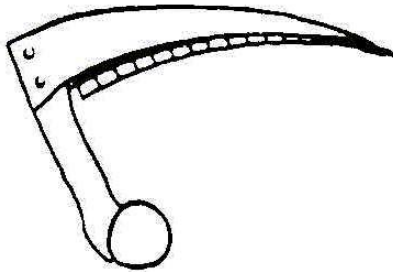
Barley was ready for harvest in late April and early May.
The wheat harvest was in May and June.

How did farmers harvest the grain?
They used a **sickle**.

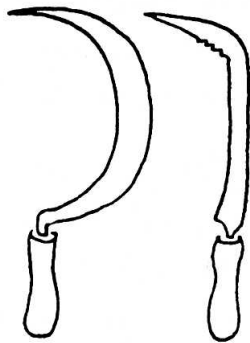


They had various kinds of sickles.

A simple one was an animal jawbone, from a cow or a donkey.



They also made sickles copied from the jawbone that they made those with clay pottery and sharp stones.



Also, they had a small curved metal blade with a small wood handle.

The metal they used was iron or bronze.

Have you seen a large scythe, that had a double handle?
That was invented many years later in Europe and America.
Long ago farmers did not have that.

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When they cut the grain, it fell and lay on the ground.
Behind them, people had rakes.
They raked the grain into bundles.
They tied the bundles with its own straw.

If they notice any grain that they missed., they couldn't pick it up. God forbid that.
They must leave it. Later poor people will come and pick it up for their food.

Workers picked up the bundles and piled them on wagons.
Animals pull the wagons to the area called **the threshing floor**.
They lay the bundles out to dry.

When the day was done, did they just leave the grain and went home?
No. Someone stayed and slept overnight there to protect their grain.

STUDY QUESTION

Read Matthew 9:37-38

Jesus compares harvesting to what?

Lesson 2.12

Gleaners

God established a law:
When the farmer cuts the grain, he cannot cut it all.
Near the boundary lines, he must leave that standing.
Also, in the corners, he cut around it and left that standing.

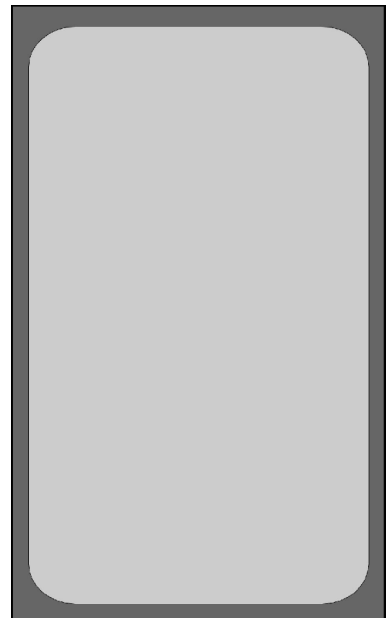
Why? So foreigners, traveler, and poor people can have food.

Remember when the farmer harvests and any grain drops, he must leave it to let poor people following behind and pick it up.

That picking up is called **gleaning**.

If the farmer had a big heart, he gave those poor people some food and water while they work all day under the hot sun, trying to get a little food for their family.

The Bible has a famous story about one poor woman that did that gleaning on a farm that belonged to a rich man. The woman's name was Ruth. And that rich man married her. Neat!



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God permitted that if a traveler was walking along and he became hungry, he could pick grain from farmers' fields near the road. But he could not use a sickle. He could only pick with his hands.

A traveler could also pick fruit from a farmer's tree or grapevines. But he could only pick it and eat it. He must not put any in a basket.

The Bible has a story about Jesus and His 12 Disciples walking along a road. They became hungry. So what did they do? They went over to a farmer's field and picked grain and ate it.

Sometimes fake wheat called **tares** grew up with the real wheat. That's a weed that looks like wheat.

Normally when weeds grow, we want to pull them up quickly, so they don't bother the good plants. But tares looks just like real wheat. If you try to pull up those weeds, you might pull up the real wheat by mistake. So farmers must let them grow together.

The real wheat grows tall and good.
The fake wheat, is short and seeds are no good.
That is when it is easy to notice they are different.
So the farmer cuts them both together. and then separates them.
He saves the good wheat. and throws out the fake.

Farmers work hard in their fields, hoping they will have a good crop. But sometime something hits that destroys everything, like grasshoppers and other insects that eat all the green plants.

During war, an invading army maybe will steal a farmer's food, or they will set his field on fire and destroy everything.

That's a terrible frustration.

STUDY QUESTION

Read Matthew 13:24-30, 36-43

Jesus compares wheat and weeds (tares) to what?

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Lesson 2.13

Threshing

When wheat is fully grown, it is a stalk of straw with seed on the end.
And each seed is covered with a rough shell that protects it.

How did farmers remove the seeds from the straw stem?
And how did they remove the covering shells?

The process is call **threshing**.

The farmer has a special place for that work., called the **threshing floor**.
That area was bare and smooth rock or hard dirt, about 30 feet wide or larger.
Sometimes they had a low wall around it.

In the spring months, farmers made the threshing floor flat.
If an area was rough or high, they used a harrow and a roller.
If an area was low, they added clay.

Some villages had one large field that had several threshing floors for the various farms.

Now, how were the seeds removed?
They stacked grain bundles on the threshing floor about one foot high.
Then cows or donkeys walked on it. That pressure broke the seeds loose.
If the cow ate that grain, that was okay.
Jewish law did not allow farmers putting a muzzle on the cow to protect the grain.
God said, “Do not muzzle the ox while that animal threshes the grain.” (Deuteronomy 25:4)

STUDY QUESTION

Read 1 Corinthians 9:9, 14

Paul says that animals eating the grain it threshes is the same as what?

Lesson 2.14

Threshing Machines

Farmers had various ways for removing seed from the stalk.
Animals stomped on the grain..
Farmers also did hand work.
They had a flat wood paddle and they beat the grain.
That was hard work.

Also, they used a large wood sled, 3 or 4 feet wide and 6 to 7 feet long.

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The underside of the threshing sled had stones that were embedded in the wood.
Oxen pulled the sled while a man rode on the sled.
The stones on the underside. knocked the seeds loose.

Fancy threshing sleds had several wheel disks that were iron that threshed the grain as the oxen pulled the sled.

Egyptians had an interesting thing they used for threshing.
It was a board, with metal spikes like a comb.
The sheaves were combed through the spikes; the seeds fell off.

Lesson 2.15
Winnowing

When threshing was finished the seeds, the straw (**chaff**) were all mixed together.
How did the farmer separate them?

Farmers used shovels to scoop up the grain and throw it into the air
The seeds were heavy, so they fell straight back to the ground.
But the straw and chaff were light, so the wind blew them to the side.

They did that many times.

When they were finished, the seed was piled on the floor and the straw was scattered to the side.

They raked up the straw and saved that for the animals.
The chaff was worthless, so they burned it.

Then they had a **sieve** –
a large bowl made of copper that had small holes,
or a box that had a mesh bottom.

They poured in the seeds.
The seeds fell through, and any dirt or stones were left in the bowl or box.

STUDY QUESTION

Read Psalm 1:4

Chaff is compared to what?

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Lesson 2.16
Measuring and Storing Grain

Next the farmers measured the grain seeds.

Their measuring containers were various kinds.

- Clay pottery.
- Wood box.
- Copper bowl.

What were their sizes?

We will learn about that in chapter 7.

They did their measuring slowly and carefully, not in a hurry.

They filled the container.

Then they shook it a little, and the seeds settled so they could pour in a little more.

Then they poured the grain into large baskets or bags, that they tied shut.

Then they loaded those on donkeys, that carried them home.

Then they lightly washed the grain.

They put it outside on the roof to let it dry in the sun.

Then they pour the grain through the sieve again.

They stored the grain in large wood boxes or clay jars until they needed it for cooking.

Read chapter 3 in *Everyday Life in Bible Times*.