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The Vedic Period

There are four Vedas, viz., **Rig, Sama, Yajur,** and **Atharva** Vedas .

Each Veda is further divided into four parts: Brahmanas, Samhitas, Aranyakas and Upanishadas.

In Rigveda period, the farmers occupied more number in the society, they used to cultivate the land and produce agricultural products under the land lord.

The farmers' status was more in Atharva Vedic period. They cultivated the crops based on the advice of the saints.



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Land type

Rigveda : two types

fertile (*apnaswati*) and barren (*artana*)

Later Vedic literature: two types

alkaline (*Ushara*) and non-alkaline
(*anushara*)



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Soil Conservation

- The *Rigveda* laid down two processes:
(A) Arable land lying fallow (*khila*) by turn and letting it as pasture ground and;
(B) Practice of two-field and three-field systems.

The *Rigveda* referred to burning and cutting of forest land, a method followed also in the subsequent periods.



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Village settlement

Vedic Chalcolithic Period provided evidence of village settlement (*Rigveda*, c. 1500 B.C.).

The village represented in this period appeared to be a tribal agrarian centre inhabited by a few families by kinsmanship.

The inhabitants were mostly pastoral people and the tillers of the soil.



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Village settlement... (2)

The village was protected by hedges to avoid attack of the enemy and wild beasts.

The land within the boundaries of village had three parts: **the homestead land, the arable land and grass land for pasture.**

The villages were also provided with adjoining forest lands.

Source: Rigveda



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Village settlement... (3)

In the later Vedic period, that is in the Iron Age, village settlement was **not only confined to river beds but scattered in river tracts** getting the facilities of cultivable land from the clearance of jungle by sharp iron cutting tools.

The **economic basis** of these settlements became **agriculture and animal husbandry**.



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Village settlement... (4)

- The ***Satapatha*** and ***Aitereya*** ***Brahmans*** described there were two types of villages,
 - (i) scattered and (ii) closed together.
- The **common property** of the villages was
 - (i) grass-land for pasture and (ii) granary.



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Land ownership and tenure

- Ownership was with **tribal chief or tribe as a whole**, and **individual or family** in the unstable land economy.
- Individual tenures associated with land under private ownership and given generally to single cultivator came into existence.



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Manuring

- Manures of **animal and vegetable origins** for the fertilization of soil.
- Use of *Animal manures* as **blood of cow** and **cow-dung**.
- Green manuring.
- Seeds treatment with **clarified butter and honey**.



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Crop cultivation

Rigveda (c.1500 B.C.)

(i) *Cereal*: Yava (which stands for grains in general or wild variety of cereals); Yavasa (probably ancestor of barley); Tokman (a variety of barley); and Pakadurva (edible millet).

(ii) *Fruit crops*: Cucumber (*Urvaruka*.
Cucumis sativus)

(iii) *Intoxicating drug crops* : (a) Soma and
Bhanga (*Cannabis sativus*)



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Crop cultivation... (2)

- Yajurveda (c. 1200 B.C.) **added**
- (a) Rice (*Vrihi*) : Four cultivated varieties. viz. black. white. quick-grown (*asu*) and *manavrihi* (large grained).
- (b) Wheat (*godhuma*).
- (c) Barley (*yava*). and a species of it named *upavaka* (a species of *yava*).
- (d) Millet (panic seeds **anu**, *Panicum millicium*; **priyahgu**, *Panicum italicum* and **syamaka**, *Panicum frumenataceum*).
- (e) Legumes: **masa** (*Phaseolus mungo*); **mudga** (*Vigna radiata*); **khalva** (*Lathyrus sativus*) and **masura** (*Lens esculantus*). Reference to wild bean (*garmut*) showed nativity of beans in India.



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Crop cultivation... (3)

(f) Oilseeds: Sesame (*tila*, *Sesamum indicum*).

(g) Fibrous plant: Cotton (*kapasa*, *Gossypium herbarium*).

(h) Sugar crop: Sugarcane (*ikshu*, *Saccharum officinarum*)

(i) Vegetables: Cucumber (*Urvaruka*, *Cucumis sativus*), bottle-gourd (*alabu*, *Lagenaria siseraria*).

Classified medicinal herbaceous plants (*oshadhi*) into flowering and non-flowering and fruit-bearing and fruitless.



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Crop cultivation... (4)

The *Atharvaveda* (c. 1000 B.C.) **added**

- *Millet*: A named Sandadurva, ie, millet having egg shaped roots.
- *Oilseeds*: Two varieties of mustard, namely, *pinga* (White) and *baja* (brown).
- *Intoxicating Drug Crop*, *Bhahga* (the flower of *Cannabis sativa*) became a cultivated crop. *Fibrous crop*: Hemp (*Sano, Crolataria juncea*).



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Crop cultivation... (5)

**Brahmanas and others (c. 1000 B.C.-600 B.C.)
added**

- (i) *Cereal*: Red paddy (*hayana*).
- (ii) *Legumes*: Beans (*kulattha*, scientific name: *Dolichos biflorus*).
- (iii) *Oilseeds*: Mustard (*sarsapa*) and castor (*eranda*, scientific name: *Ricinus communis*).
- (iv) *Fruit crops*: **Myrobalan** (*amalaki/ amla*, scientific name: *Emblica officinalis*); **bilwa** (*Aegle marmelos*), and three varieties of **jujube** ; **sephaka** (paniphal, *Trapa bispinosa*).



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Tillage

- **Tillage or ploughing:** with the help of oxen in teams of six, eight or eleven.
- For small field in mountainous region, it was done with the help of one sheep.
- Furrow-marks were made in grid pattern.



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Farm Implements

Rigveda

- **mower** for grass-cutting
- **corn-cutting tools** three types:
datra (a sort of sickle, shape of crooked knife), *srini* (sickle) and *jeta* (reaping hook).
- **sieve and winnowing fan.**
- **carriers**, viz. *anasa* (carts) and *sakata* (wagon).



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Farm Implements

Later Vedic literature

- **grass-cutting knife (*lavana*):** (i) small, (ii) short and thick, (iii) and with well-made eye.
- **harvesting tools** included iron sickle of five types : (a) sickle with curved blade (Nagda), (b) sickle-knife with hole in handle (cairns of Nilgiri Hills), (c) very small but long tanged, (d) very thick and tang wanting, and (e) thin, slightly bent.



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Farm Implements

- Corn dehusking implements including **quartz-made corn-crusher** and **iron mortar and pestle** were also noted.
- Tillage & sowing implement: (a) bill-hook, attached to plough for clearing the roots from the ploughed fields, and (b) seed box.



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Cropping Operations

- **Sowing of seeds** of different kinds was done in grid-patterned furrows.
- **Rotation of crops** was followed.
- **Harvesting and post-harvest technologies** including **reaping, threshing, winnowing and storing** found mentioned in the different texts of the Vedic literature.



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Rivers and water resources

- ***Saraswati*** the non-perennial rain-fed river was observed as an important river.
- Important rivers **Ganga, Yamuna, Godavari, Narmada, Sindhu and Kaveri.**
- Other rivers **Sindhu, Suvastu (Swat), Varnu, Dishadwati, Sarayu, Vipasah, Chandrabhaga Devika.**



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Irrigation

- **Rigveda** (c.1500 B.C.), two types of irrigation:
 - **(i) Natural irrigation** by river water distributed over arable field by means of channels.
 - **(ii) Artificial irrigation** by wells when the water was lifted by means of **stone-wheel, ghati-chakra or ghati-yantra.**



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Irrigation... (2)

- ***Yajurveda* (1200 B.C.-1000 B.C.)** referred irrigation by dam or reservoir and by canal.
- ***Atharvaveda* (c. 1000 B.C.)** narrated about canal irrigation.
- The **other texts of the Vedic literature** referred to large-scale use of irrigation by well and reservoir dam.



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Plant protection

• **The Vedic Literature: Birds** (damage the grains) and the practice of **control** was **driving away the pest-bird by din and noise.**

- ***Yajurveda*** : insect-pest
- ***Atharvaveda***: (a) **Borer** (it may indicate either insect or bird), **hooked-insect and locust**; (b) **rodents and rats**; (c) **reptiles**; and (d) natural phenomenon like **lightning and sun.**



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Livestock rearing

- ***Rigveda*** gave importance to cattle, horse, sheep, goat and dog.
- Cattle breed: two wild species of cattle, namely, ***Gaura*** and ***Gayal*** .
- Milch cow: ***Dhenu***
- Sheep breed: ***Gandhara*** (High wool producing capacity).



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Livestock rearing... (2)

- **Green grasses and water** were considered most nourishing food for cattle. **Barley** was the other food for cattle.
- **Penning** was another important function of rearing.
- Two types of abode for cattle, **open pasturage (gostha)** and **cow-stall (gosala)**.



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Livestock rearing... (3)

- **Castration** of sheep and stallion occurred in the period of *Rigveda*, that of cattle was found in the *Yajurveda*.
- During the period of *Atharvaveda* animal breeding was more advanced.
- Branding by copper knife and breeding ceremony (**Vrishotsarga**) are the two noticeable events.



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Livestock rearing... (4)

- Animal powers during Vedic age were required for:
 - (i) Ploughing by ox and sheep;
 - (ii) Transporting food or agricultural produce by carts drawn by ox, stallion, ram and dog;
 - (iii) Carrying of water possibly to arable land.



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Fishery

- Use of fish & some other aquatic species, particularly mollusk, snails, turtle, etc. for human consumption was evident from the prehistoric period.
- No direct evidences of fish-eating or fishing were available in Vedic Literatures, though reference to fisherman was found to occur in *Yajurveda*.



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Honey bee

- Rigveda: evidence of apiculture.
- The seven types of honey as enumerated in the ***Susruta Samhita*** and later medical texts and lexicography were: *Pauttika*, *Bhramara*, *Kshaudra*, *Makshika*, *Chatra*, *Arghya*, *Auddalaka*.



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Agriculture and meteorology

- The Rigvedic Period is distinguished by profound knowledge about the heavenly bodies and their impact upon weather, vegetation and livestock.
- The importance of some astral influences during ploughing was found.



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Farm labourers

- In Vedic Chalcolithic period, information on labourers was very precise.
- Some occupations were found like **ploughman, sower of grain, husk-remover *and* com-grinder** were noted as labourer.
- The labourers involved in animal farming were known as **herdsmen, cattle breeders.**
- ***Slave-labour*** in the work of husking in the *Atharvaveda*.



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Farm tax

- The *Rigveda* referred to a kind of tribute (***bali***) paid to the king. This tribute is taken as 'agricultural tax' .
- The *Yajurveda* mentions, ***samahartra*** and ***bhagadugha*** in the sense of collector of king's customary share in agricultural produce.
- *Atharvaveda*. share of produce was $1/16^{\text{th}}$ of agricultural yield, instead of $1/6^{\text{th}}$ of the later period.



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Farm Credit System

- The *Atharvaveda* for the first time mentions the system of loan in grains (*apamityaka*) and its return as repayment of debt.



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Trade

- The *Rigveda* has several references to sea voyages. But no direct evidence of the commodities was mentioned.
- A Chinese legend, however, throws light on India's trade with China during 12th century B.C. (**Import of sugar and silk and export of pepper along with other commodities**).