

Lecture 22

Islamic influences on Western Agriculture

The rise of Islam from the 7th to the 12th centuries is an extraordinary event in the history of the world. A small, tribes of desert warriors conquered and converted a large portion of the Roman empire in a few hundred years. It is still difficult to explain how this came about. Part of it was fortuitous. They arose when the Roman world was in decline and they were able to sweep from Arabia to conquer the Byzantine world and more. They marched east to India and made inroads into China, eastward to Indonesia, and West to absorbing all of North Africa, penetrating deep in the continent, plus strong incursions into Europe conquering, Sicily, Iberia, and reaching southern France. They reached their apogee in 1200 and then their decline started. They were expelled from Spain in 1492, their empire broke up into feuding kingdoms. Calamity came with the rise of the Ottoman Turks, who while converting to Islam, eventually conquered the Arab world and controlled it from 1500 to 1918, when having chosen the wrong side in World War I, they lost it all. The Arab world was extremely backward and poor until the discovery of oil in the early part of the 20th century changed the fortunes of the oil rich countries.

Agriculture and Horticulture

The Arabs were a key influence in the exchange of crops between East and West. From India they brought sugarcane, rice, spinach, artichokes, eggplants, orange, lemon, coconut, and banana, and old world cotton; from Africa they introduced the watermelon and sorghum, and from the Middle East the durum (hard) wheat and artichokes. The flour of hard wheat is known as semolina from the Arab "*semoules*." Having less gluten it is not good for bread, but can be used for a number of processed products including couscous, and various pastas such as spaghetti and ravioli that we now associated with Italian cuisine.

The land of the Arab countries were dry. Thus the great contribution of Arab agriculture was the introduction of summer irrigation which greatly intensified cultivation. The traditional Mediterranean agriculture was based on winter or spring production. This explains the incentive of Rome to conquer territory to import foodstuffs. The Romans managed the shortage of water by fallow, in which some land was not farmed to conserve moisture. The Arabs, originally a desert people could only farm with irrigation. When they moved into Europe (they entered Spain in 800 and move as far north as southern France), they carried their irrigation technology with them allowing cultivation in the dry summers. The remains of the irrigation technology can be seen today in Southern Portugal in the Algarve where wells dot the countryside and primitive water lifting devices, chain of pots, have only recently been electrified. The water storage reservoirs and channels to divert water are the heritage of the Arab agriculture. They introduced the Indian and African summer crops and employed fertilization including manure as well as ground bones, crop residues, ashes and limestone. They also introduced new technologies. The introduced sugarcane, introduced the beginnings of intensive production exploiting slaves associated with the plantation system, and refined techniques for sugar manufacture.

Early Islam was scientific and tolerant of other cultures. Thus, the advancing armies of Islam were the inheritors of all the knowledge of the Ancient world. In the early period, Jewish scholars who were proficient in Greek, Hebrew, and Arabic served as translators and the knowledge of the ancient world was preserved. Works in mathematics, medicine, agriculture, astronomy were preserved and advanced. For example, the Arabs developed distillation.

Gardens of the Islamic World

Gardens were always important in the Mideast. In Babylon, the hanging gardens were one of the seven ancient wonders of the ancient world. This was based on ziggurats, temple towers constructed as an artificially stylized hill. The tower of Babel was created in a flat land by people who yearned for heights and longed for water. These early influences inspired the gardens in the Islamic World, which occupied an important place in their culture. The Koran is full of allusion to gardens, and Paradise (which means garden in Persian) is a celestial gardens. The Koran promises the faithful the blessings of eternal gardens replete with water and fountains, lush with greenery, and containing delicious food and sensuous beauty.

*Surely the pious shall drink of a cup, whose mixture is camphor
A fountain where at drink the servants of God,
making it to gush forth plenteously...
...and recompensed them for the patience
with a garden, and silk;
Therein they shall recline upon couches
Therein they shall see neither sun or bitter cold,*

*Near them shall be its shades, and its cluster hang meekly down
And there shall be passed around them vessels
Of silver, and goblets of crystal,
Crystal of silver that they have measured very exactly.*

*And therein they shall be give to drink a cup whole
Mixture is ginger;
Therein a fountain whose name is Salsabil.
Sura 76 (Verses 5–6)12–22, Arberry's translation):*

Running water and fountains become an integral part of gardens especially important to those associated with arid landscapes. The phrase “gardens underneath which rivers flow” is one of the most frequently used expressions for the bliss the faithful have to expect.

*This is the similitude of Paradise
Which the godfearing have been promised:
Therein are rives of water unstalling,
Rivers of milk unchanging in flavour, and rivers of wine—a delight to the drinkers,
rivers, too, of honey purified,
And therein for them is every fruit
And forgiveness from their Lord.
Sura 47/16*

The images multiply:

*And besides there shall be two gardens,
Green green pastures,
Therein two fountains of gushing water
Therein fruits, and palm-trees, and pomegranates
therein maidens good and comely ...
houris, [nymphs] cloistered in cool pavilions.*

In the Islamic Persia, garden images are present in the earliest surviving poetry.

*...I saw, then, in a dream a tree of incomparable
verdant freshness, beauty and magnitude;
on this tree three kinds of fruit were growing
that bore no resemblance to the fruits of this world
and were plump like a virgin's breast:
a white fruit, a red fruit and a yellow fruit, shining like
stars on the green base of the tree...*
Rabia Al Adawiya (c. 714–801 CE)

The Persian garden is a place where flowers and birds abound, where color, fragrances, and sounds intoxicate the senses, where the shade of enormous trees provides refuge from the blazing sun. Enclosed, walled gardens predominate. Wells are dug and there are complicated apparatus for watering and fountains. Gardens tend to be rectangular and formal and become synonymous with relaxation and pleasure.

In 917, two ambassadors are sent by the Byzantine Emperor Constantine Porphyrogenitus to visit the Caliph as-Muqtadir in the palace compound of Baghdad and write this fulsome description of the palace grounds:

...the New Kiosk is a palace in the midst of two gardens. In the center was an artificial pond of tine [or lead], round which flows a stream in a conduit, also of tin, that is more lustrous than polished silver. This pond was thirty cubits in length by twenty across, and round it were set four magnificent pavilions with gilt seats adorned with embroidery of Dabil, and the pavilions were covered over the gold work of Dabik. All round this tank extended a garden with lawns with palm-tree, and it is said that their number was four hundred, and the height of each was five cubits. Now the entire height of these trees, from top to bottom was enclosed in carved teak-wood, encircled with gilt copper rings. And all these palms bore full-grown dates, which in almost all seasons were ever ripe, and did not decay. Round the sides of the garden also were melons of the sort called Dastabuya and also other kinds of fruits.

This reports demonstrated a highly sophisticated state of landscape architecture which combines intricate layouts with startlingly contrived features that intended to impress.

The most famous of the magnificent gardens of Islam are now world-class tourist Mecca's. These include the reconstructed gardens of the Generalife, Grenada and the courtyard of the Taj Mahal in Accra, India.

References

- The Islamic Garden. 1976. Dumbarton Oaks, Washington, DC.
Solbrig, O.T. and D.J. Solbrig. 1994. So Shall You Reap: Farming and Crops in Human Affairs. Island Press, Washington DC.