

‘THE BEAUTIFUL WORLD GERMINATES...’: CORN – HISTORY... AND STORIES

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Abstract

To Europe, the concept of the New World corresponded to the human need to escape from the common, every-day habitat to a blessed realm, a land of affluence and eternal bliss. The inhabitants of the Old World were charmed by the wonders of the Americas even since the first encounter, and one of the most active and effective ways of contact and communication was food. American cuisine was an illustrative instance of commonality since turkey, duck and rabbit, corn, sunflower and beans, peppers, potatoes and tomatoes, squash, pumpkin and wild ginger, cranberries, blueberries and raspberries, all were soon adopted and adapted to suit the taste buds of the Old World. Corn, in particular, was an extremely important staple food grown not only for its nutritive value but also for its high adaptability to a variety of soils and weather conditions. However, its importance extended far beyond its immediate benefit for the original corn growers developed an entire philosophy of life centred around the plant belonging to the Poaceae family. For the original American tribes, corn was a god: it was either Father Corn or Mother Corn, and had to be paid every form of respect in order to assure the necessary food supply. Feasts and festivals, chants and songs, dances and prayers, stories and games were dedicated to every stage of the agricultural process (from sowing to harvesting), in an attempt to determine and direct reality. This paper aims to briefly introduce some of the corn-related Amerindian customs, rituals and traditions believed to help the individual experience identity with the original forces of the earth in the eternal rhythm of life.

Key words: corn, maize, Native Americans, staple food, *Zea mays* L.

INTRODUCTION

Maize (*Zea mays* subsp. *mays*), also known as corn, has ancient roots in its area of origin, the Americas, where archeological discoveries indicate that care given to agriculture was paramount.

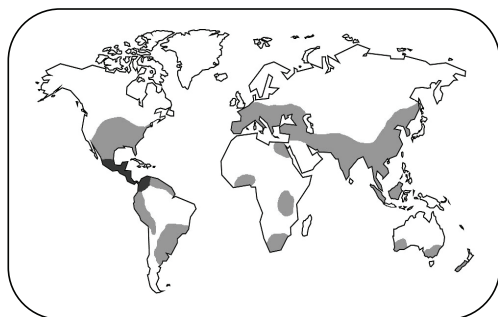


Figure1. ■ Region of origin ■ Region of cultivation
(Source:<http://www2.mpizkoeln.mpg.de/pr/garten/schau/ZeamaysL./Maize.html>)

The Olmec and Mayans cultivated it in numerous varieties throughout Mesoamerica,

cooked, ground or processed. Beginning about 2500 BC, the crop spread through much of the Americas: Central America, Peru, Mexico and Guatemala, as well as the upper Amazon basin, are considered the original regions that developed a trade network based on surplus and varieties of maize crops. After the European contact with the Americas was established in the late 15th and early 16th centuries, explorers and traders carried corn back to Europe and introduced it to other countries. Owing to its ability to grow in diverse climates, the plant subsequently spread to the rest of the world. Sugar-rich varieties called sweet corn are usually grown for human consumption, while field corn varieties are used for animal feed and as chemical feedstock.

If corn had been the basic food before the European colonization, it did not lose its importance after the conquest of the Americas. It surpassed the other plants by far, as it was able to adapt to a wide variety of soils and climatic conditions. Its great plasticity resulted in numerous varieties suitable for various

purposes. Furthermore, its high productivity was undeniable. All these essential qualities converged into worldwide appreciation for ‘the greatest blessing of the country’, ‘the greatest blessing God ever gave to man’, as the renowned American farmer and agricultural scientist William Corbett called the cereal plant (quoted by Hardeman 2).

MATERIALS AND METHODS

Our paper is primarily based on data collected from scientific literature, basically the 1957 monographic study dedicated to *Zea mays* by the Romanian Academy under the co-ordination of Prof. Traian Săvulescu and the 1977 book written by Mihai Cristea, PhD, *Rasele de porumb din România (Races of Maize in Romania)*. They are completed with the excellent study of the American historian Nicholas Perkins Hardeman, *Shucks, Shocks, and Hominy Blocks: Corn As a Way of Life in Pioneer America* (1981). The scientific facts and data from specialist literature are supplemented with an exegetical approach to several representative extracts from American Indian literature, aiming to illustrate the cultural dimension of corn crop in its original area of evolution.

RESULTS AND DISCUSSIONS

History

The English dictionary records two words for the domesticated cereal plant, which can be confusing to a non-native speaker of English:

- ‘maize’ originates from the Spanish *maiz*, a word coined after the Taino *mahiz* – an extinct Native American language spoken in the Caribbean region at the time of the Spanish Conques. The term is formally preferred in science, and particularly in agriculture, as it specifically refers to the large grain plant belonging to the Panicoideae subfamily.

- ‘corn’ derives from the Old English word *corn* referring to a grain still containing the seed inside rather than the particular plant, and is related to ‘kernel’, ‘pomegranate’ and ‘granule’, among others. In the United States, Canada, Australia and New Zealand, the term basically refers to *Zea mays*, as an abbreviated form of ‘Indian corn’.

This paper will make deliberate use of the latter term, given the cultural approach to Native American songs and rituals.

In a similar manner, the origin of the plant has been long disputed and debated: which came first, teosinte (*Zea* spp.) or maize (*Zea mays*)? Concerning its systematics, the Genus *Zea*, Subtribe *Tripsacinae*, Tribe *Andropogoneae*, Subfamily *Pooideae*, Family *Poaceae*, Order *Poales*, includes one single species, i.e. *Zea mays* L. (maize or corn), first grown in Mexico 5,200-3,400 years BC (McNeish, quoted by Cristea M., 1977).

Nevertheless, its wild form is unknown, which results in a large number of hypotheses concerning the provenience of the species and its original centres. It is possible that corn descended from the tall grass native originating from southern Mexico and Central America or from some other wild relative. Most researchers defend the American origin of corn; there are, however, different opinions regarding its exact location (Table 1).

Table 1. Possible areas of origin for corn (Cristea M., 1977, quoted by Roman Gh. V., 2011)

No.	Year	Researcher	Possible area of origin
1.	1829	Saint-Hilaire	Lowlands of Paraguay
2.	1836	Bonafous	Asia, North Africa
3.	1883	Darwin	Peru
4.	1885	De Candolle	Columbia
5.	1885	Kornicke	Lowlands of Paraguay
6.	1893	Harschberger	Mexico or Central America
7.	1931	Vavilov	Mexico or Central America
8.	1936	Weatherwax	Mexico or Central America
9.	1937	Kompton	Mexico or Central America
10.	1939	Mangelsdorf, Reeves	Lowlands of Paraguay
11.	1945	Anderson	Asia, North Africa
12.	1959	Randolph	Mexico or Central America
13.	1967	Brandolini	Polycentric origin: Zone I, primary centre in Mexico and Guatemala Zone II, primary centre in Peru-Bolivia

As concerns the provenience of the current form of corn, several hypotheses have been formulated, as summed up in Table 2.

Table 2. Possible hypotheses regarding corn provenience (Cristea M., 1977)

No.	Year	Researcher	Hypothesis
1.	1829	Saint-Hilaire	Derived from pod corn (tunicate maize) (<i>Zea mays</i> var. <i>tunicata</i>)
	1935	Vavilov	
2.	1880	Ascherson	Derived from teosinte by mutations
	1940	Langham	
	1941	Longley	
3.	1972	De Wett and Harlan	Derived from teosinte
4.	1901	Harchberger	Derived from teosinte by hybridation
	1919	Collins	
	1922	Penzig	
5.	1910	Goebel	Derived from <i>Tripsacum</i> by hybridation
6.	1931, 1945	Mangelsdorf and Reeves	Derived from tunicate maize or from teosinte by crossing tunicate maize with <i>Tripsacum dactyloides</i>
7.	1949	Mangelsdorf and Smith	
8.	1936, 1957	Weatherwax, quoted by Săvulescu	Derived from a common ancestor of <i>Zea</i> , <i>Tripsacum</i> , <i>Euchlena</i>
9.	1959	Mangelsdorf and Reeves	Tripartite hypothesis
10.	2004	Eubanks	Cross between teosinte and gamagrass (<i>Tripsacum</i>)

The interest in unveiling the mystery related to the origin of this crop plant proves its scientific, agricultural importance. Corn is quite vigorous, compared with other annual herbaceous species. Its root system is adventitious and its root type is fasciculated. The first 2-5 lower knots rising above ground form adventitious roots that have mainly two roles, i.e. to anchor the plant in the soil and to produce food for the plant. Corn has no taproot but its roots can penetrate deeply into the soil, sometimes reaching 2 m.

From the morphological viewpoint, although corn exhibits a wide range of quantitative variations compared with the other grain crops, it has several general characteristics.

Thus, stalk height can vary from 1.5 to 3.0 m, displaying 7 to 15, rarely 21, internodes filled with marrow. Alternate leaves composed of sheath and limb are attached at a node. The length of the linear-lanceolate limbs varies between 50 and 80 cm, while width varies between 4 and 12 cm. The top side of the limb

is rough-pubescent while the bottom side is hairless, shiny, with a highly prominent midrib. The ligule is emarginated, ciliated and pubescent. Total leaf number depends on the vegetation period, and temperature plays a significant role in leaf emergence and development; however, leaf number on the main stalk generally varies from 8 to 48. Leaf length extends from 30 to 150 cm and width from 4 to 15 cm.

Corn is a plant producing monoecious flowers, i.e. having the male and female reproductive organs in separate flowers on the same plant.

The male inflorescence, or tassel, is the pollen-producing organ. It is located at the top of the plant and consists of a central spike and about 10-40 spikelet-bearing branches; the number and position of branches, as well as the size of the tassel, varies with each hybrid. Each spikelet contains two florets, the upper and lower floret, and is protected by a pair of hairy leaflike glumes; within the glumes, the florets have three stamens and are further protected by a pair of thin scales called lemma and palea.

The female inflorescence, or ear, arises between the leaf sheath and the stalk at an internode, 50 cm to 1 m below the tassel or about midway on the stalk. The ear branch, or shank, consists of nodes and short internodes, and is completely covered by several layers of leaves called husks. The thick axis of the ear, the cob, produces numerous pairs of spikelets, like its male counterpart, the tassel. Each spikelet is enclosed by a pair of glumes and contains two florets, of which only the upper one is fertile, producing an ovary with an elongated style (silk) covered with hairs (trichomes).

Pollination of corn is allogamous and anemophilous, i.e. pollen is carried by the wind from the male to the female flower on the same plant. When the tassel reaches maturity, the anthers of the stamens release pollen which is dispersed by the wind, sometimes falling a few metres far from the tassel.

The corn fruit is a kernel (caryopsis) of variable forms and sizes, depending on the variety. The embryo is about 10-15% of the kernel volume, the endosperm about 80-85% and the pericarp 5-6%.

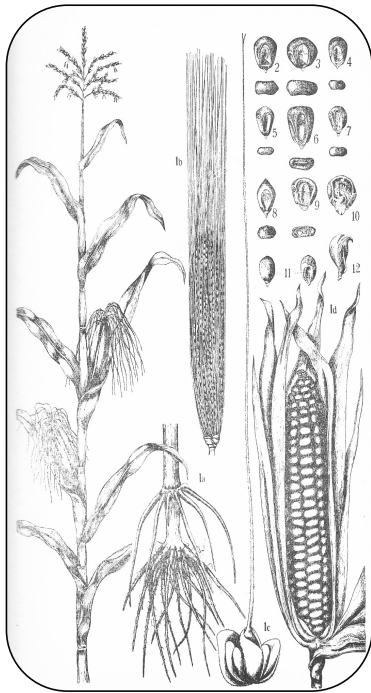


Figure 2. *Zea mays* L. (1a-root system, 1b-female inflorescence during flowering after leaf removal bracts, 1c-female flower, 1d-matur cob released from husks, 2-12-caryopses of different convariety viewed from the front side) (Source: Săvulescu T. et al., 1972)

As seen from the above, corn crop has some very specific features that recommend corn as the ‘quiet monarch that has reigned supreme in America for thousands of years.’ (Hardeman 2) The crop is widely adaptive, from Africa to Europe and Asia; it can grow in temperate as well as semi-arid areas, at elevations ranging from sea level to almost 4,000 metres in the Andes Mountains. The diverse morphology of the plant makes it conspicuous among all the crop plants: height variation between 60 and 700 cm; leaf number on the main stalk between 8 and 48; leaf length from 30 to 152 cm; leaf width from 4 to 15 cm; number of stalks per plant between 1 and 12. These various characteristics provide numerous opportunities for phenotype combination and selection.

Among other qualities there is the high multiplication ratio of corn, as one seed can produce a plant bearing between 400 and 1,000 subsequent seeds, which makes it highly productive. It is also undemanding of soil preparation, conservation tillage and

mechanisation level, and extremely resistant: it can remain in the field if weather conditions prevent harvesting operations.

... and stories

Among their numerous rituals, the original Americans carried out agricultural rites, since nature consisted of plant life, as well as bird and animal life. Like human beings, the world itself was born, bloomed, withered and died – phases marked by seasonal feasts and dances. There were ceremonies to take place at every stage of the agricultural process: when the seed was set in the ground, when the crops were growing, when the harvest was reaped. There were ceremonies to bring rain, to cast off drought, to ensure fertility, to minimize crop damage. By performing the suitable ritual, the food supply could be assured. Every crop had its own festival: the Squash Festival, the Bean Festival, the Acorn Festival, the Wheat Festival, the Corn Festival.

As the main staple food, corn was essential in the daily life of the native tribes; consequently, corn could not be exempted from their spiritual manifestations. Food was an element of cohesion and solidarity, reinforcing interactions at both physical and metaphysical level. Food sharing was part of the human capacity to interact with others: it gave the participants a sense of belonging, as aliments were considered a contributing factor to the development of self-identification. For the original American, to partake in a meal was to become a member of a ceremony which dissolved distinctions and limitations – and to share the same spirit: the spirit of Mother Corn, the First Woman, the Unknown Woman, Atna of the Arikara tribe, Selu of the Cherokee, Chicha of South America, or even the male god of corn Mandaamin of the Ojibwe.

By far the most important agricultural ceremony was the Corn Dance. There were festivals for the Fresh Corn, the Green Corn, the Young Corn, the Mature Corn. However, the form of the ceremony followed the same general pattern: the first day featured introductory speeches, thanksgiving addresses, the smoking of tobacco, and religious prayer; the second day displayed a great dance; the third day was spent singing both individual and collective ceremonial songs, in a concert of

solos and choruses; and the fourth day was devoted to playing of games.

Every evening, thanks and praises were raised to the Great Spirit, Lord of the Corn and of all living things. This annual feast took place and still takes place in the villages of the Rio Grande; it had been described at length in such books as Hartley Burr Alexander's *The World's Rim* and D.H. Lawrence's *Mornings in Mexico*. In their practically-oriented religions, Native Americans attempt to secure divine intervention for a specific purpose, a concrete achievement, a tangible thing. The rituals are seldom used for mere entertainment or for exclusively individual purposes; the word, song and dance are summoned to exert a strong influence and bring about a certain change – in this case, the very word brings the plant to life and gives it strength to produce roots, stem, leaves, for the word is the powerful agency that brings about everything the individual desires most: fertility, germination, growth. The word carries the message of spiritual regeneration, restoring the power of a simple and disciplined life.

In Native American culture, word and thought are believed to determine and to direct reality: only by concentrating his thoughts on the corn plants, the native feels that he can influence its growth and maturation. After having planted the corn seeds, the Southeastern tribes try to tame the earth with their drums throbbing in the rhythm of blood and growth, and with their voices united in a soft chant:

*"Blue evening falls,
Blue evening falls,
Near by, in every direction,
It sets the corn tassels trembling"* (Astrov 32)

Thus, they become part of the creative divinity that lives everywhere, experiencing identity with the original forces of the earth in the eternal rhythm of life. Joining the supernatural powers, man himself will be recreated and renewed. The words that are believed to promote fertility fructify not only the soil that has received the corn seed but also the soil of the human soul.

Even events and phenomena of the objective world are described in terms of germinating processes, of growth, unfolding or vanishing, or as mere outlines, as fleeting colours, or as hardly perceptible movements:

*"The beautiful world germinates.
The sun, the yellow dawn germinate.'
Thus the corn plants say to one another.
They are covered with dew.*

*'The beautiful world germinates.
The sun, the yellow dawn germinate.'
Thus the corn plants say to one another.
They bring forth their young"* (Astrov 11)

Figurative language of a metaphorical or allusive type abounds in American indigenous prayers: the sun 'comes out standing to his sacred place', the corn plants 'stretch out their hands to all directions calling for rain'.

Rain is one of the most revered presences of nature in the life of the aboriginal Americans. With this song, the Pima tribe is supposed to summon rain:

*"Hi-iyá naiho-o! The earth is rumbling
From the beating of our basket drums.
The earth is rumbling from the beating
Of our basket drums, everywhere humming.
Earth is rumbling, everywhere raining"*
(Russell 332)

The sound of the basket drum urges the gathering of the clouds, symbolized by the feathers of the eagle:

*"Hi-ihíya naiho-o! Pluck out the feathers
From the wing of the Eagle and turn them
Toward the east where lie the large clouds.
Hi-ihíya naiho-o! Pluck out the soft down
From the breast of the Eagle and turn it
Toward the west where sail the small clouds.
Hi-ihíya naiho-o! Beneath the abode
Of the rain gods it is thundering;
Large corn is there. Hi-ihíya naiho-o!
Beneath the abode of the rain gods
It is raining; small corn is there"* (Russell 332)

The Papago, a tribe from southern Arizona and northern Mexico, display the same specific practical aims in their rain song destined to secure rain and good crops. The repetitive structures elevate ordinary communication to high conceptual levels since, for the Amerindians, the word is the bearer of never-ending existence:

*"A cloud on top of Evergreen Mountain is singing,
A cloud on top of Evergreen Mountain is standing still,
It is raining and thundering up there,
It is raining there,*

Under the mountain the corn tassels are shaking,

Under the mountain the horns of the child corn are glistening” (Densmore 141)

The highly metaphoric character of Native American poetry is at work here as the delicate metaphor in the last line reveals the complex nature of the entire web of relationships and connections between the human and the vegetal realms. There is an unparalleled image of infinite tenderness: the human being acts like the guardian spirit of the corn in its process of maturation, under the sparkling light reflected in rain or dew drops.

Slow rhythms and spontaneity are tightly linked to the necessity of securing food but simplicity is only apparent; the ancient values are pervasive, as a sign of self-expression and cosmic integration, more evident in the corn-grinding ritual chant of the Laguna, a tribe from New Mexico:

“I-o-ho, wonder-water,

I-o-ho, wonder-water,

Life anew to him who drinks!

Look where southwest clouds are bringing rain;

Look where southeast clouds are bringing rain!

Life anew to him who drinks!

I-o-ho, wonder-water,

I-o-ho, wonder-water,

Life anew to him who drinks!” (Grove-Day 84)

Despite the repetitive patterns exposed in song and dance, the native nations possess an extremely rich imagination and an overwhelming inward intensity. Word, step and gesture are carefully planned to convey the inner spiritual strength to the outside powers which live under the skies and inside the earth.

‘Corn Song’ is one of the forty songs of the House God which are performed as part of the Night-Chant ceremony, a major Navajo ritual that lasts for many days:

“The corn grows up.

The waters of the dark clouds drop, drop.

The rain descends.

The waters from the corn leaves drop, drop.

The rain descends.

The waters from the plants drop, drop.

The corn grows up.

The waters of the dark mists drop, drop”

(Yeadon 18)

Addressed to another ‘nature person’ indispensable for life on earth – the Sun, the one who is able to witness everything from above. Its spirit is highly revered in prayers and the Havasupai of the Grand Canyon are no exception:

“Sun, my relative

Be good coming out

Do something good for us.

Make me work,

So I can do anything in the garden

I hoe, I plant corn, I irrigate...” (Spier 286)

It is obvious that there is a two-fold function of the ritual: in performance, the individual gains power for himself first, then he enhances the power of the phenomenon in the outside world; thus, the creative potency of the act induces germination and hastens growth:

“While I sleep you come up.

Go on your course many times.

Make good things for us, men.

Make me always the same as I am now” (Spier 286)

The particular architecture of corn often stands as a symbol of maturity, strength and potency. There are numerous songs and rituals about leaving the age of innocence and incompleteness, striving to self-improvement and, ultimately, perfection. This Apache ceremonial song of the sacred corn conjures physical and mental stamina and robustness by appealing to the image of the leafy cereal plant:

“At the east where the black water lies stands the large corn, with staying roots, its large stalk, its red silk, its long leaves, its tassel dark and spreading, on which there is the dew”.

(Grove Day 82)

They are simple but powerful songs telling of the creative union with nature, universe and divinity, which involves an acute sentiment of the self and also a comprehensive worldview, realizing that the individual and the plant are wholly reciprocal:

“At the west, the red corn,

See me!

I come forth and grow tall...

At the east, the white corn,

See me!

I come forth and grow tall” (Underhill 250)

By joining the supernatural forces in the recurrent process of creation, the individual hopes to be recreated from the depths of the

being. The words that are believed to enhance fertility will fructify the soil that has received the corn seed and the soil of the human soul, at once.

The Native American believed in the power of the word. The spoken word was the bearer of eternal life, the reality above all tangible realities, empowering the mortal with the feeling of greatness, space and freedom. A word possessed holiness and permanence – as the contemporary Native American writer N. Scott Momaday said,

“A word has power in and of itself. It comes from nothing into sound and meaning; it gives origin to all things. By means of words can a man deal with the world on equal terms. And the word is sacred.” (Momaday 33)

The word is life, substance, reality; it is thought to precede the Creator: in the beginning was the thought, the dream, the word. They encapsulate the creative union of the human with the earth, the universe and the divinity, in simultaneous simplicity and complexity.

CONCLUSIONS

The variety and excellence of Native American agricultural-related rituals and poems could remind the world the ancient values and annul the modern oppositions, for they live in a world where human being and the world are the same, wisdom requires fantasy and fantasy requires wisdom.

Although not immediately comprehensible nowadays, it is nevertheless worth remembering that their rich metaphors and allusive language sprang from basic human needs and emotions. They still preserve the substance of the ancient life force: deeply spiritual nations, Native Americans endow everything with divine essence, going beyond all ages and reaching the age of wonder where

all the oppositions are annulled and perfect harmony reigns forever.

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