

In It's Milk Stage

According to The Nation of Islam

The Honorable Elijah Muhammad advised us against eating cornmeal, and that if we wanted corn, we should eat corn in its milk stage. ~What is this milk stage?

This is perhaps among the most frequently asked questions. In *How To Eat To Live, Book 1*, the Honorable Elijah Muhammad writes: (1)

"Give the corn bread back to the horses and the mules – that is their food. Do not eat grits or coarsely chopped corn. The corn is fit for you only in its milk stage."

Many of us want to know if the corn we get at the produce section in the supermarket or the farmers' market is corn in its milk stage. This is a good question. Equally as important is why the Honorable Elijah Muhammad advised us to only eat corn when in its milk or milky stage.

As with many of his dietary mandates, this one is also rendered to thwart our devouring the deadly slave entree, which features pork and cornmeal. Historically, these two so-called foods represented the core of the slave's diet. This subject is covered in greater detail in the book, *The Slave Diet, Disease & Reparations* by this author.

According to the Honorable Elijah Muhammad, cornmeal and cornbread grinds away the delicate tissue of the stomach, just as sand paper grinds away wood. The negative health affect of cornmeal has long been supported by medical research, but where on this earth do you find someone informing the people about this except the Honorable Elijah Muhammad?

Obviously, eating something that grinds away the stomach can cause an assortment of digestive problems, such as ulcers. Black people continue to suffer digestive ailments because of our persistence in eating the very same foods that disabled our foreparents when they were on the plantation during the era of chattel slavery. Hopefully, one day we will act as though we are free and forsake the "slave" way of life.

In the context of this mandate, we are instructed that corn should be eaten only while in its milk stage.

What is this stage?

This milk stage is among several stages within the corn plant's reproductive phase. This phase starts when the corn seeds begin to germinate and extend to the physical maturity of the kernel. The matured state occurs when the kernel's moisture content is approximately 30 percent, making it hard and starch-filled.

According to some agricultural institutions, corn plant development occurs in two phases - vegetative and reproductive, Both phases are divided into stages, which is, basically, for the purpose of identifying the morphological or physical development of the plant. (2) The vegetative phase pertains to the emergence of the seed from its casing, and through the soil. The reproductive phase tracks the growth of the plant in its production of corn seeds or kernels, Again, the milk stage is in this phase.

Corn plants generally follow the same pattern of development, but the specific time interval between stages may vary depending on the type of hybrid, planting season and dates, and locations.

Most agriculturists agree that there are six stages in the reproductive phase. These are the **silking, blistering, milk, dough, dent,** and **maturity** stages.

The first stage, **silking**, begins when silks become visible outside the corn husks, This marks pollination. The falling pollen grains are caught by these silks. A captured pollen grain takes about 24 hours to grow down the silk to the ovule, where fertilization occurs. A fertilized ovule eventually becomes a kernel. Approximately 2 to 3 days are required for all silks on a single ear to pollinate. It is during this stage that the number of ovules or kernels are determined.

The **blistering** stage occurs 10 to 14 days after **silking**. At this stage, the kernels are white on the outside and resemble a blister in shape, hence the term blistering, The endosperm and its inner fluid are clear in color and the tiny embryo is now seen. The embryo is a miniature corn plant. Also, starch has begun to accumulate in the watery endosperm. This stage also marks the beginning of a period of rapid development, which is measured by the accumulation of dry matter. The kernel is going from a majority liquid state to a majority dry state. At this stage, the kernels are about 85 percent moisture.

The milk stage, the third stage, usually occurs 18 to 22 days after silking. At this stage, the kernel is yellowish and the inner fluid is now milky white, The kernels are well into their rapid rate of dry matter accumulation, and are about 80 percent moisture.

We must note that at this stage, cell division within the endosperms is essentially complete, so growth is mostly due to cell expansion and the filling of the cells with starch.

Again, this is the stage in which the Honorable Elijah Muhammad has recommended that corn be eaten. Later we will discuss why this is so.

The **dough** stage usually occurs 24 to 28 days after **silking**, and is marked by the continued accumulation of starch in the endosperm. The milky inner fluid begins to thicken resembling a paste - hence the term dough. The kernels are about 70 percent moisture, and have accumulated close to half of their mature dry weight.

The **dent** stage occurs 35 to 42 days after **silking**. At this stage, all or nearly all kernels are dented. This stage is marked by the drying down of kernels, beginning at the top where small hard white layers of starch are forming. Kernels are about 55 percent moisture content.

The final stage is the **maturity** stage. This stage usually occurs 55-65 days after silking. At this stage, all kernels on the ear have attained their maximum dry weight. The hard starch layer has advanced completely to the cob. The average kernel moisture content is 30-35 percent. After maturity is reached, the corn loses about one-half to 1 percent moisture per day while in the field. Corn produced for cattle (silage) is usually harvested after the maturity stage, when the moisture content is 22 to 28 percent. The corn is usually not suitable to store until it reaches the 13 to 15 percent moisture content.

This corn is also made into grits and cornmeal, and in this form, it enters the human food chain. This is the type of corn that we are advised not to eat.

Sweet corn is usually harvested at the milk stage - 18 days after silking. This type of corn is eaten as whole kernels, either on the cob or canned, and is marketed fresh, frozen or canned. Nearly all canned corn sold on the market is sweet corn.

Sweet corn remains in the milk stage for a short time, which depending on the weather (85 degrees and above), could be as little as one or two days.

When canned, most varieties retain satisfactory quality for 6 to 8 days. Sweet corn can also be refrigerated for 4 to 8 days, which is recommended because standard sweet corn varieties can lose 50% of their sugar within 12 hours of harvest, if not refrigerated. The person purchasing the corn must investigate the quality of the corn to determine whether it is in its milk stage or maturity stage. Fresh sweet corn sold at the farmer's market is the best bet. In some cases, corn sold in grocery store chains can also meet the milky stage criteria. The Honorable Elijah Muhammad has advised that we not eat canned foods, especially when fresh foods are available.

Sometimes people opt to eat canned corn when fresh corn is not in season, but corn is not that important to the human diet for anyone to resort to eating it from cans. This, of course, is not necessarily true if corn is the only food that we have available to eat. Obviously, circumstances can also determine the foods that are important to the human diet.

Table 1 tells the story of why corn is best when consumed in its milk stage. As noted, immature corn is higher in protein than mature corn. The great levels of protein and fiber are seen when the corn is in the milk stage.

This makes milk-stage corn a more balanced food than maturity stage corn. When eaten in the mature stage, corn is a very starchy food. And, it is harsh on the digestive tract. This was pointed out at the outset.

Therefore, eating corn in its milk stage reduces risks of damage to the digestive organs, while providing the body with proper nutrients. Overall, it is safer to eat corn in this stage.

Table 1: Dry matter composition of corn at different stages of maturity (Minnesota)

Nutrient	Early Milk	Early Dough	Mid- Dent	Maturity
Crude Protein (%)	16.6	12.5	10.7	10.9
Crude Fiber (%)	5.4	3.3	2.5	2.1
Starch (%)	47.4	55.0	58.7	63.7
Gross Energy (Keal/lb.)	2073	2064	2086	2081
Test Weight (lbs/bu)	35	47	55	58

