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The Importance of Corn in Medical Developments

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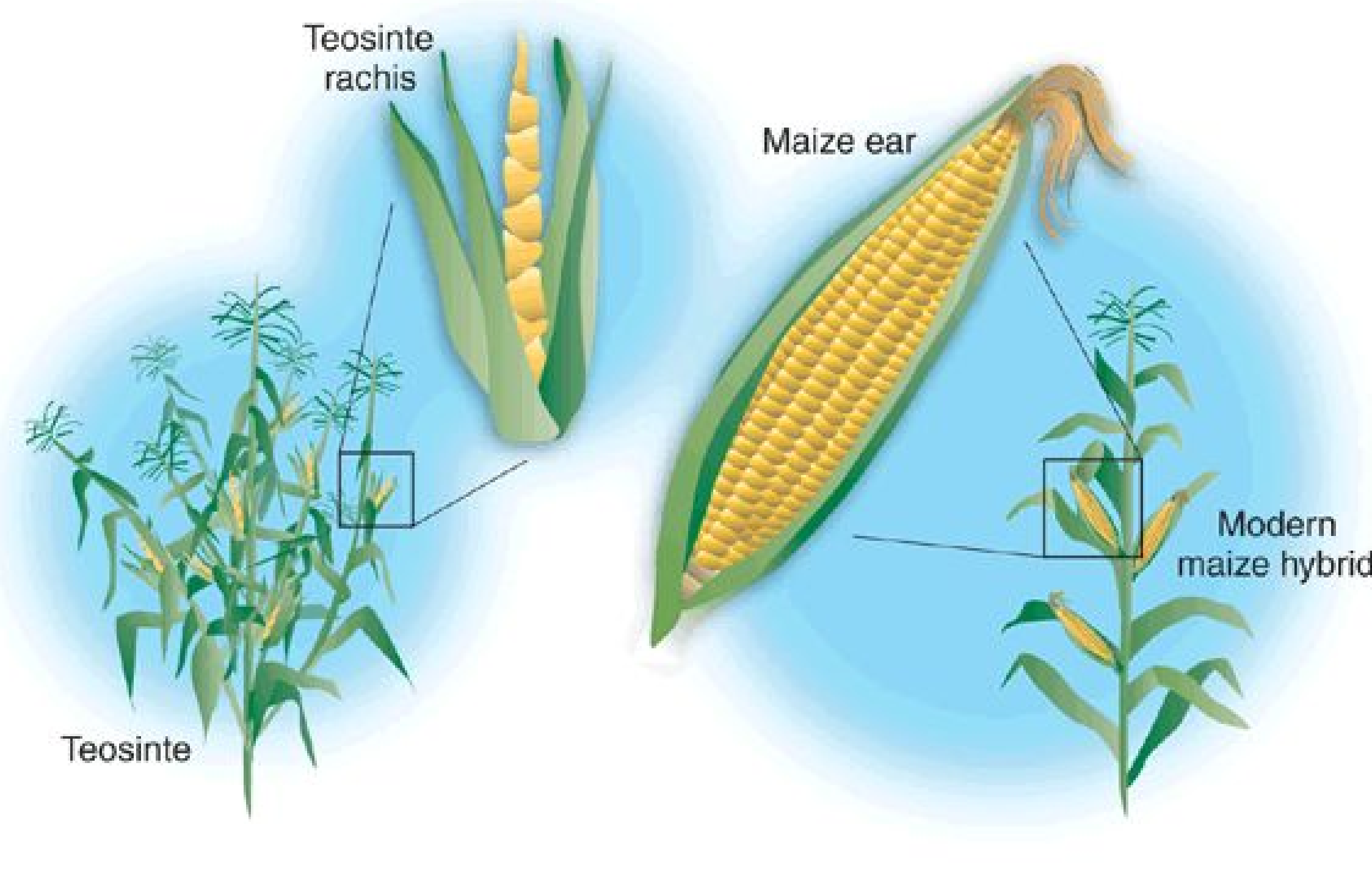
Important Evolutionary Changes in Corn, Importance of Corn in Medical Advancements, and Genetically Modified Sweet Corn

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Our Focus

Evolutionary and Nutritional Changes:



Medical Uses of Corn Through History

GENERAL FLOWSHEET

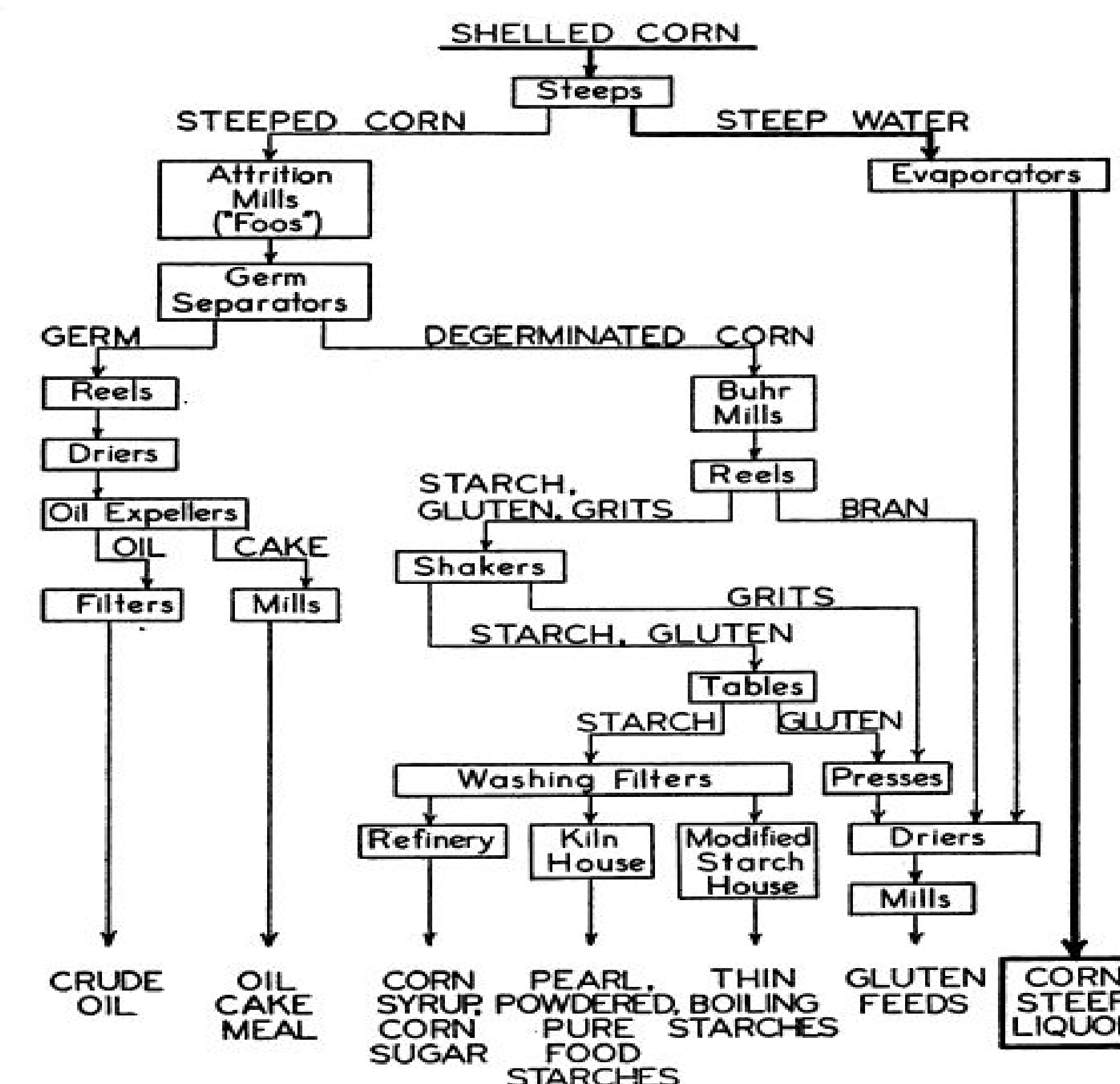
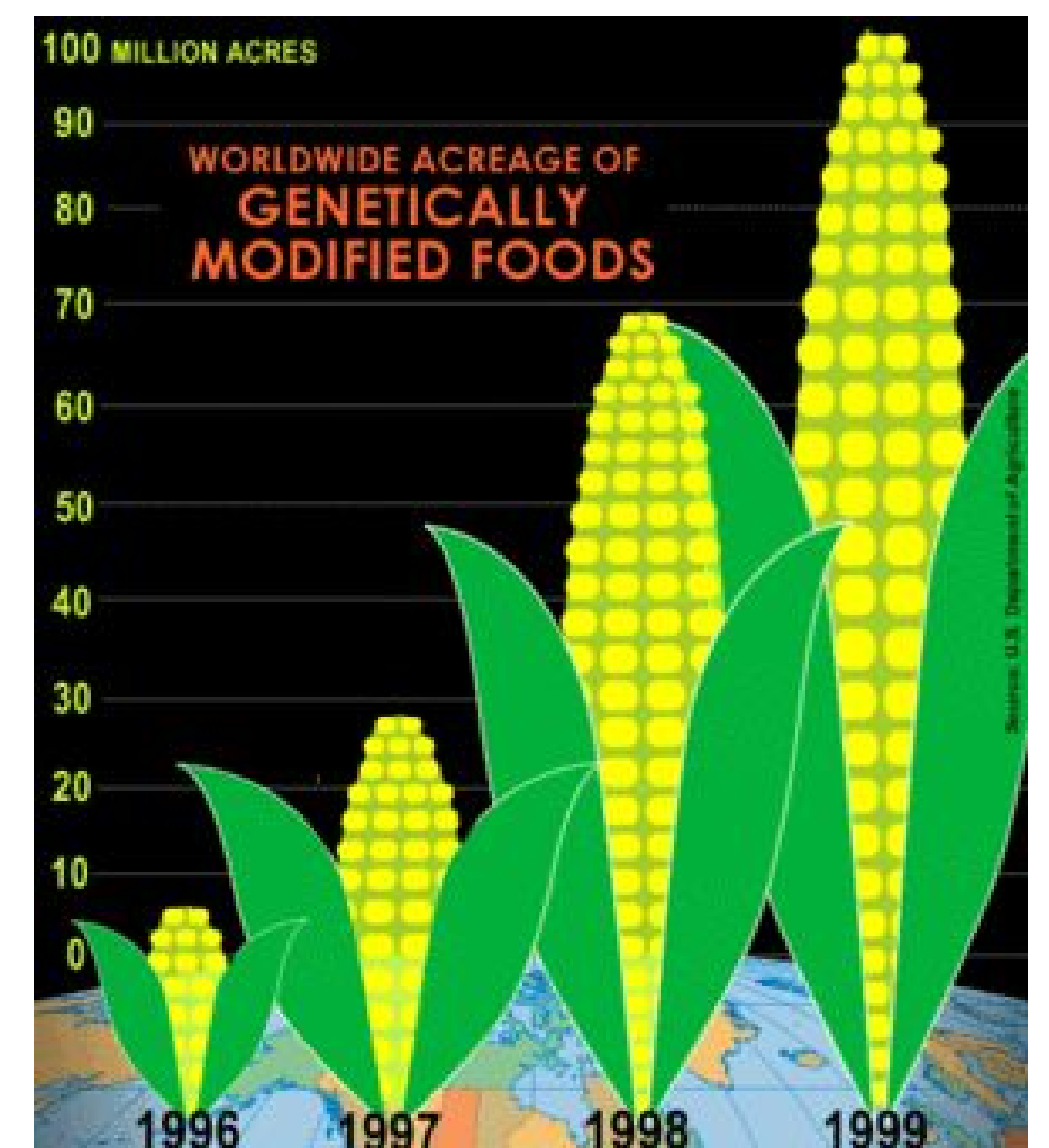


FIG. 1. GENERAL FLOWSHEET OF THE CORN WET-MILLING PROCESS. The flow of water is counter-current to the flow of materials as shown in the diagram. To maintain the water balance in the plant, water may be in process and storage for as long as two weeks. The water in the evaporator may come from any stage of the process.

Genetically Modified Sweet Corn:



Ancient Ancestor

- Teosinte to Modern Corn
 - *Zea mays ssp. Parvigumis*
 - Teosinte Glume Architecture I (*tg1*) and Teosinte Branched I (*tbl*)
 - Structural changes

Nutritional Changes

- Teosinte
 - Insoluble fiber
 - Lower caloric value
- Corn
 - Amino Acids – Lysine and tryptophan
 - Vitamin B

Ancient Uses:

- Headaches
 - Diuretic
 - Paste for bruises
- 1900s:
- Corn Steep Liquor
 - Arno Behr
 - Penicillin Production

2000s

- Corn Silk
 - Diuretic
 - Antioxidant
 - Antiproliferative
 - Many more still under research

History:

- 1972-1973: GMO's created
- 1988: First GM food
- Present: Almost 50% of sweet corn is GM

Current Genetic Modifications:

- herbicide resistant
- produce own insecticide
- high quality product

Future GM's:

- Nutrition
 - Vitamins and minerals
 - Protein
 - Fat and carbohydrates