

PEMMICAN—

Energy bar of the Plains

By Gene Gade

Archaeology indicates that moderately successful hunts at the Vore Buffalo Jump often killed more than 100 buffalo. That number of animals would yield more than 20 tons of useable meat and another four to five tons of hide and other products. More successful hunts could produce twice that amount or more!

The massive amount of meat was a great blessing to people facing a nasty Northern Plains winter, but it also presented a huge problem. How do you keep all of that meat from spoiling without technologies such as refrigeration, pressure canning and chemical preservatives that we now use to keep food safe for consumption?

Step One — Drying

The main food preservation answer for American Indians (and many other cultures around the world) was dehydration to form a jerky-like product. As soon as possible after the hunt, buffalo meat was cut into thin strips and sun dried on wooden racks in processing camps. Growth of bacteria, molds, yeasts and other microorganisms that cause spoilage



are greatly retarded when the meat's water content is 10% or less. Drying also forms a glaze on the meat surface. Ultraviolet rays in sunlight also kill some microorganisms. Sometimes small fires were used to speed the drying process and coat the meat with smoke residues that also inhibit bacterial growth and enhance flavor. Rack drying also kept meat away from camp dogs. About five pounds of fresh meat are required to produce one pound of jerky. If

under dry conditions, jerky will keep for long periods without spoilage.

Step Two — Add Fat and Berries

Once dried, some of the bison meat was pounded with stones until it had an almost powdery texture and mixed in about a 1:1 ratio

with fat that was rendered from bone marrow and around the internal organs of the buffalo. Most of the marrow bones at the Vore site have been broken to remove the fat. Fat provides almost two and a



Woman processing jerky for pemmican

half times as many calories per gram as either protein or carbohydrate and it reduces some digestive and kidney problems that can result from a high protein diet. Sometimes dried fruits such as chokecherries or service berries were added to the meat and fat mixture for taste, texture, vitamins and a few sugars. Berries also contain organic acids that may slow spoilage.

The final product, most commonly called pemmican, is essentially a sausage. Sometimes it was simply formed into balls or patties, but often the small intestines of bison were cleaned out and used as a casing. In any case, pemmican was a highly nutritious food that did not spoil quickly and that was light weight, portable and full of energy. Jerky and pemmican were the primary meat products derived from hunts at the Vore site. All of the Plains tribes produced some variant of pemmican, which can also be made from moose, deer, elk, caribou, etc. Later, pemmican became a highly valued commodity that the bison-hunting tribes traded to the European fur companies where it became the primary food of the "voyagers" who transported furs and trade goods in canoes west of the Great Lakes.