



## HISTORICAL LOOK AT RATIONS | DoD CFD

Today's rations are truly a coming together of Warfighters' recommendations, Military requirements, and leading edge food science and packaging technologies. A real appreciation of the high quality of today's combat rations can certainly be gained by taking a look at the transition of ration development from the early "meat and potato" subsistence of the Civil War through World Wars I and II to the technologically advanced, state-of-the-art advanced ration and packaging systems in the hands of Warfighters today. The initial packaged ration concepts of the 1950s have led to the current cornerstone operational rations, such as the Meal-Ready-To-Eat™ (MRE™), Unitized Group Ration™ (UGR™), First Strike Ration® (FSR®) and UGR-Express™ (UGR-E™). The evolution of rations has been possible because of the tremendous work performed by the early ration pioneer researchers that laid the groundwork for today's cutting edge technology performed by the Combat Feeding Directorate. This evolutionary work has been performed at various locations, beginning with the Quartermaster Subsistence School in the 1920s to the Chicago Quartermaster Depot in the 1930s and culminating with the revolutionary work at the state-of-the-art Natick Soldier Research Development and Engineering Center (NSRDEC) located in Natick, Massachusetts.



### A look at Military rations through the years...

#### American Revolution

The first individual ration consisted of:

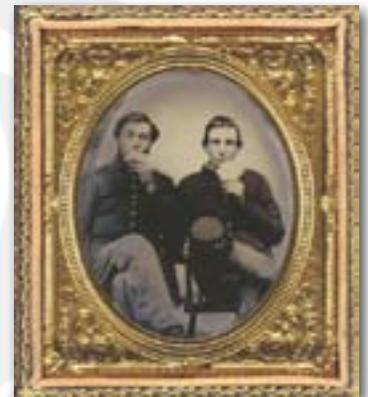
- 1-lb (.5 kg) of beef, ¾-lb (.34 kg) of pork, or 1-lb of salted fish per week
- 3-pts (1.4 l) of peas or beans per week
- ½-pt (.24 l) of rice or 1-pt (.47 l) or Indian meal per week
- 1-pt of milk per day
- 1-lb of flour per day or hard bread, once a week
- 1-qt (.95 l) of spruce beer or cider per day



#### Civil War

An attempt was made at providing fresher meat and more vegetables to Soldiers. "Beef on the Hoof" was available from live cattle that were driven along with Soldiers and slaughtered as needed.

"Desiccated vegetables" were cleaned, shredded, mixed, dried and pressed into hard clumps, but they were often referred to as "desecrated vegetables." Said one soldier: "We have boiled, baked, fried, stewed, pickled, sweetened, salted it; tried it in puddings cakes and pies; but it sets all modes of cooking in defiance, so the boys break it up and smoke it in their pipes!" (3rd Iowa Cavalry Reg)



#### World War One

Characterized by trench warfare, this war was the first time hot food and drinking water were delivered to troops in the trenches. A Trench Ration consisted of:

- 50 ½-lb (.23 kg) cans of hard bread
- 10 1-lb cans corned beef
- 5 1-lb cans roast beef
- 4 1-lb cans salmon
- 4 ¼-lb (.11 kg) cans sardines
- coffee, salt and sugar

Also available was the Reserve Ration (canned meat, canned bread, instant coffee), which contained the same food as the Trench Ration but acknowledged the need for protection from gas, spoilage, and dampness by being hermetically sealed in galvanized tins, which were only opened if no other food was available.





### World War Two

The US Military now had 23 different rations for a much varied force with different operational needs. One of the most infamous rations from this era was the "Ration, Combat Individual" or "C-Rat" which was composed of M units (meat and vegetables) and B units (bread, sugar and coffee). Troops ate C-Rations for up to 90 days and generally disliked them due to menu monotony and their lack of balanced nutrition.

Another ration from World War II was the K-Ration, which was first requested for paratroopers to carry in their pockets. The K-Ration was the most nutritionally balanced of any ration available at the time.



### Korean War

Research was starting to be put towards developing more nutritionally advanced rations, but Soldiers were forced to continue eating C-rations due to the surplus from WWII. Additional variety was attempted by including canned fruits, cakes, and bread.



### Cold War Era

In 1958, the Meal, Combat, Individual (MCI) replaced the C-Ration. The MCI consisted of 12 menus that provided an average of 1200 calories each and it was designed to meet a new concept of subsistence: "Soldiers should be supplied with nutritionally balanced meals as opposed to a full day supply of food."

### Vietnam Conflict

New processing and packaging technologies were employed to develop freeze-dried products that were used in NASA's first manned space flight in 1962 and also to develop a new ration, the Long Range Patrol (LRP), which included such entrées as freeze-dried chicken stew and escalloped potatoes.

Other major changes during this time were initial concepts of removing metal containers and cigarettes from rations. Thus began the start of the MRE™:

- **1956:** requirement established
- **1961:** DA approval
- **1970:** First prototype
- **1972:** Requirement revalidated:
  - Shelf life: min 3 yrs 80°F
  - Air-droppable
  - Storage: -60°F to 120°F
  - Nutritionally complete
- **1975:** Type classified
- **1980:** First procurement



### The Early '80s and into Operation Desert Storm

The Meal, Ready to Eat™ went into full production in 1980, with the first MREs™ hitting the field in 1983. Warfighter feedback from ODS indicated the need for improved quality and increased variety in the ration. A continuous improvement process was established in 1993, with menus being increased from 12 to 24 and including enhancements such as the flameless ration heater, vegetarian meals, and commercial items.



**Individual and group rations for American Warfighters have certainly come a long way!**



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