

Vinegar Use in the Civil War:

A compilation on the Federal Army Issue

by

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The Federal Civil War ration of vinegar has been a forgotten detail of army life that many living historians struggle to incorporate into their impressions. Most enthusiasts of the Civil War realize the vinegar ration was issued to help prevent scurvy and to maintain good health in a disease prone army. However, important details such as the quantities of vinegar issued, where it was procured, and how it was used by the common federal soldier may not be so clear. It is my hope that the primary sources and soldiers accounts in this document will aid living historians to better understand this ration of prevalence during the Civil War.

My interest in the federal vinegar ration can initially be traced back to 2002 while re-reading a small book on the Iron Brigade titled Echoes From the Marches of the Famous Iron Brigade. Among the treasure trove of Iron Brigade articles in this book appeared some unique information on the rations issued to this legendary fighting organization. According to Cullen B. "Doc" Aubery, who was the editor of the book Echoes From the Marches of the Famous Iron Brigade, "...24,241 gallons of vinegar..." were consumed in 1863 by the Iron Brigade, which consisted of men from the 2nd Wisconsin, 6th Wisconsin, 7th Wisconsin, 19th Indiana, 24th Michigan and the attachment from July 17th to August 5th of the 167th Pennsylvania Militia (52). Aubery, a newsboy who sold papers to the men of the Western Brigade (a.k.a. Iron Brigade) during the war, was prominent in post war efforts to compile stories of the Iron Brigade for their preservation and publication. Doc's source for this information was the original Quartermaster Reports of the 7th Wisconsin Volunteer Infantry Regiment that he owned in his relic collection. After reading this neat description of the Iron Brigade issuing substantial quantities of vinegar, I unfortunately placed this information on the side in lieu of more pressing matters. Then came along the North Freedom event of 2004, in which I had to present a workshop session on the federal vinegar ration during the Civil War. The following compilation is the result of my research from this effort and some additional first person accounts recently found by the author.

1. How is Vinegar made?

Basically vinegar is made from any fruit or vegetable by extracting the liquid to produce wine and then leaving the contents open to the air repeatedly until it turns sour. Grapes, raspberries, apples, and various veggies can be made into vinegar. Probably the most popular version for our use will be apple cider vinegar.

Here is an excerpt from the article "How to Make Vinegar" which appeared in The Scientific American issue dated May 31st, 1851:

The reason why cider or other fluid mixtures change their nature and become vinegar, is owing to a transformation of the particles and then a separation of one or more, and a combination of others. The

oxygen of the atmosphere, although it is not now as once believed, the only acidifier, still is a great one, and vinegar is formed by the cider parting with carbonic acid gas, which it cannot do without absorbing oxygen. The reasonable way, then, to make vinegar rapidly and surely is to expose the cider as much as possible to the atmosphere. The new way, and what is supposed by many to be a patent way to make vinegar, is to let the cider percolate over a very exposed surface. This is the way they make it in the vinegar factory. (290)

2. The US Civil War Ration

When time and allotment permitted, each soldier in camp was issued .32 gills of vinegar as the standard camp ration. Just for the sake of common measures, one gill is equivalent to four ounces. In lieu of the above information, it is important to note John Billings' thoughts on the army issue of vinegar. In his book Hardtack and Coffee, Billings' mentions for every 100 rations issued to the army, that four quarts of vinegar was dispensed as well being part of the camp ration (112). This is equal to .32 gills per man. Wilbur F. Hinman, in his excellent tale Corporal Si Klegg and His Pard, also verifies that for every 100 men, four-quarts of vinegar was issued as a garrison ration (211). If you are looking for the cost of vinegar during the war, on page 286 of Revised United States Army Regulations of 1861, Form 24 of the Subsistence Department-Forms details the cost of each gallon of vinegar to be sixteen cents. In comparison, a quart of apple cider vinegar today would cost well over \$4.00 to procure at a health food store or local grocer.

According to the War Department's Revised Regulations for the Army of the United States 1861, vinegar was issued to the army in wooden kegs. On page 277 the regulations detail under miscellaneous items:

Paint vinegar-kegs to prevent evaporation and to fill worm-holes; cap the bungs with tin. Block-tin liquid measures and scoops are, in the end, the most economical.

There is also evidence of vinegar being kept in barrels just before the war as evidenced by Major Robert Anderson of Fort Sumter fame. In the OR's dated January 27th, 1861 Anderson refers to his stock of vinegar at Fort Sumter as "... 3 barrels vinegar" (United States War Department 154). August V. Kautz also gives reference to vinegar being issued in barrels according to his table showing the weight and bulk of 1,000 rations contained on page 159 of Customs of Service. As to the quality of vinegar used, we can look for a general idea by reviewing the Revised Regulations once again. On page 269 of Revised Regulations for the Army of the United States 1861, Form 15 of the Subsistence Department-Forms details the Commissary's Receipt to Contractors including a description of vinegar as "gallons of good cider or wine vinegar."

3. Soldier Accounts of Vinegar

Charles A. Stevens (a.k.a. Charley of Nimrod), a correspondent with the Fox Lake Gazette & brother of the famed Captain George H. Stevens of the Citizens Guard, Company "A" 2d Wisconsin Volunteer Infantry Regiment, writes on June 11th, 1861 about the rations issued to the Citizens Guard while at Camp Randall in Madison, Wisconsin. Charley of Nimrod's article appeared in the June 13th, 1861 edition of the Fox Lake Gazette:

The boys are now furnished with butter at supper time, and fresh veal occasionally for dinner. The latter article, however, I do not believe will prove as good for them as the regular "beef and **vinegar**".

On July 10, 1861, Charles C. Dow of the “Portage City Guards”, Company G, 2d Wisconsin Volunteer Infantry Regiment wrote to his friend James from Arlington Heights, Virginia:

Our rations are not of the most palatable kind, but rather of the substantial and consists of the following articles: pork, fresh beef, rice, coffee, beans, hard and soft bread, and **vinegar**. We receive beef, rice, and soft bread every alternate day. (The Second Wisconsin Infantry 136)

Charles A. Stevens once again details the rations of the Civil War soldier while at Camp Randall on September 6th, 1861. This time he is an enlisted soldier with the 1st Regiment of the United States Sharpshooters while training in Madison, Wisconsin. Charley of Nimrod’s article appeared in the September 12th, 1861 edition of the Fox Lake Gazette:

I find things here considerably improved since the time when the Citizens Guard first came into quarters at this place last spring. The barracks and mess room are now waterproof while tents are freely supplied whenever needed. As for the victuals, it is enough for me to say that they are in a “sound and healthy condition” and of great variety, such as beef and potatoes, bread and butter, coffee and water, beans, soups and stews, with a goodly sprinkling of pepper and salt, **vinegar** and “lasses” and occasionally fruit, such as melons & c.

Charles D. Waldo, a soldier in Company "D" 12th Wisconsin Volunteer Infantry Regiment, the Union Guards (a.k.a. the West Bend Hard Heads) writes about the rations he procures on January 26th, 1862 from Weston, Missouri. Charles article appeared in the February 8th, 1862 edition of the West Bend Post stating:

I seldom drill with them, as I have been chosen commissary sergeant of the company, and my time is too much taken up in attending to the duties of said office, to attend to much else. To give you some idea of what our company consumes, daily, I will give you a list of what I draw from the Quartermaster; 116 lbs flour, or 87 lbs. had bread; 109 lbs. beef, or 65 lbs. bacon; 7 quarts of beans, or 9 lbs. rice; or in lieu thereof, 9 lbs. hominy; 9 lbs. coffee, or 1 1/2 lbs. tea; 14 lbs. sugar; **3 quarts of vinegar**, and 2 quars of slt.

Warren B. Pearson, of the 64th New York Volunteer Infantry Regiment, writes from his camp near Falmouth, VA on May 30th 1863:

Our bill of fare consists of a daily allowance of 1 lb. of bread 3/4-lb. pork or beef 2oz. sugar and what salt, **vinegar** and coffee we choose to use, also an occasional allowance of potatoes, sirup , and beans. We have a chance sometimes to buy some things at the brigade commesary department by getting an order from our officers. I have some dried apple, and some potatoes on hand now. Dried apple is 7¢ per lb, potatoes 50¢ per bushel. Sutler stores are dear, I buy but very little. Butter is 50¢ lb, cheese 40¢ lb, eggs 50¢ doz, apples 5¢ each, and other things in proportion.

George P. Risdon, a soldier in Company “F”, 20th Regiment Veteran Reserve Corps writes to his sister about not having vinegar to soak his salt pork. George Risdon is writing from Camp Hoffman-Point Lookout Maryland, June 28th, 1864. ***Because of the unique description of Civil War rations by Mr. Risdon to his sister, I will cite more than just the portion of his letter, which refers to vinegar.***

Dina make a strawberry short cake and eat a piece of it for me and think while you are eating it of from a good table with a white clothe upon it and earthen dishes to eat of from: of setting outside of your tent and eating a piece of Salt horse on a tin plate in your lap and a tin cup full of coffee setting on the ground by your side and a case knife in your hand and using your fingers for forks and when you get that piece eat wish you had some more of the same but can't get it because you have had you ration. Think of that and you might call it tough but then again let me call your mind to the front. While you are eating your strawberry short cake think of the soldier at the front, poor soldier, you would say. After marching all day

through the hot sun when he stops for the night drops his blanket and gun and starts off for a rail if he can get one if not he picks up such sticks as he can find and starts a fire, gets some water in his canteen and makes him a cup of coffee then pours in some cold water to settle it and then takes his hard tack from his haversack and a piece of Salt pork raw without any **vinegar** to put on it and eats his supper without any plate or knife at all. Think of that and then think how long the war has lasted and how much longer it is to last, how it was brought on in the first place; how many lives have been lost and how much suffering has been caused then get up, shake your self and Houle.

Alfred Wade recollects in his personal journal his rations at Libby Prison in Richmond Virginia. Wade was the Adjutant for the 73rd Indiana Volunteer Infantry Regiment. Confederate forces near Rome, Georgia captured him on May 3rd, 1863. This part of his account is from his journal dated July 4th, 1863:

... I may as well put our rations down here for the benefit of history. It consists of Bread ½ loaf (enough for two meals if we had other provisions plenty) Fresh beef ¼ lb. rice or beans ¼ as much as our man would eat salt and **vinegar** in very small quantities. This is all and is about 1/3 of the U.S. Govt. ration.

The Official Record's are also full of references to federal prison camps issuing vinegar especially one report from Camp Morton of Indiana fame. Please see section #7 for additional information.

4. Incorporating Vinegar in Our Impressions

Robert Braun makes the case for using vinegar to whiten brass in his article "The Care and Feeding of your Uniform and Equipage" formally on the 33rd Wisconsin Volunteer Infantry Website.

Army Regulations also required that accouterments be whitened as well as polished. Long a misunderstood term today whitening refers to the use of apple cider vinegar as a cleaning agent. A part of the Standard Army ration for decades, vinegar was made available to Sherman's troops in Georgia as part of their sustenance issue. Vinegar as a mild acid, works rather well as a cleaner of brass.

So if you are in camp and want to perform some general cleaning before Sunday inspections, get out that vinegar ration, some ash and a cloth and start whitening. Vinegar is also good at eliminating mold from leather items by applying it liberally to each growth. After waiting a few seconds, wipe off each spot and reapply until the mold is free from the leather piece.

However, vinegar was not only used as a cleaner. In Customs of Service, August V. Kautz gives an explanation for the use of vinegar in food preparation:

697. Vinegar if moderately used, is a great health-preserver in the army. With salt and pepper added to cold meat, and an onion finely cut up, it makes an excellent relish. Stale cold meat, soaked in Vinegar, and then stewed with potatoes and onions, makes a kind of ragout hash, that is very palatable. Cabbage, finely cut, with pepper, salt, and vinegar, is more palatable and digestible then when cooked. An excellent warm dressing for cabbage, salad, or cold potatoes sliced, is make by cutting a piece of fat salt pork or bacon in small pieces like dice, and frying out the fat, then adding a good proportion of vinegar when well heated, and pouring it over he salad, previously seasoned with salt and pepper; a sliced onion is a good addition. (266)

Kautz also has a table, which includes the issue amounts of vinegar on page 161 of his book Customs of Service.

As can be seen the use of vinegar can be anything from whitening brass to adding some taste if possible to salt pork. One should also remember the health benefits of vinegar as many period newspapers mention during the Civil War era. So if your brass is whitened and you have no need to garnish your meat ration, a sip of apple cider vinegar may be the cure all you are looking for.

5. From the Homefront

Now for those packages from home or a beverage from a sutler, one may choose to implement a period shrub or fruit vinegar in their impression. A fruit vinegar or shrub is a thirst quencher, which uses vinegar, water, and a selected fruit to make a refreshing beverage.

Here is one example of a fruit vinegar recipe common during the Civil War era. It is from the Housekeeper's Encyclopedia by Mrs. E. F. Haskell:

RASPBERRY VINEGAR

9 quarts raspberries
1 qt. wine vinegar
Ice water
Sugar (optional)

Pour one quart of wine vinegar over three quarts of raspberries; let it stand one day; press out the liquid, and continue the same operation for three days, and then bottle the liquid. Use it in ice water, with or without sugar.

6. Procurement & Accurate Storage of Vinegar

You can purchase a good quality Apple Cider Vinegar (5%) at any health food store and most grocery stores.

Please note: Do not place any type of vinegar in a tin cup, boiler or a canteen! The acids in the vinegar will react with the tin leaving you extremely ill!

James P. "Mickey" Sullivan, a member of Company "K", 6th Wisconsin Volunteer Infantry Regiment describes his problem with the vinegar issue, **how to store it**. Sullivan writes about a ration issue at Harrisburg, PA on July 11th, 1861:

....and consequently issued us damaged hard tack of the consistency and nutritiousness of sole leather, green coffee, rusty bacon, sugar, **vinegar (if you had anything to get it in)** and the everlasting bean. (Beaudot and Herdegen An Irishman in the Iron Brigade 29)

Now for a good garrison portrayal of a vinegar issue, I would recommend purchasing some fine glass bottles from Dog River Glassworks to hold your vinegar ration or a common fruit vinegar beverage. This is a safe and correct way to use your vinegar ration or carry a fine bottle of your favorite fruit vinegar.

7. Further Information:

1. The 10th Texas Website has a fine article from Scott McKay on the use of vinegar as a cure all in the South during the war. It is titled "Every Soldier His Own Physician." Please visit their site at: <http://members.aol.com/cbbelt/Food/cures.htm>.
2. Virginia Mescher has a fine article on period hot weather recipes such as fruit vinegar & shrubs, and other tips at : <http://www.vintagevolumes.com/>.
3. For a unique look at vinegar issues to prison camps, please review Series 2, Volume 7 of the Official Record's. The Camp Morton section is especially interesting on page 824.
4. The Scientific American has a rather technical article on the formation of vinegar in Volume 13; No. 13 dated September 23rd, 1865. This can be viewed at Cornell University's Making of America Journal Collection. http://cdl.library.cornell.edu/moa/moa_browse.html
5. Pickling with vinegar can also be furthered by reading Mrs. E. F. Haskell's Housekeeper's Encyclopedia. She has a fine explanation of vinegar and its required strength for pickling.

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