



Tactical Rations: Supply Chain and Research and Development August 14, 2025

Hosted by:

NC Military Business Center
NC Department of Agriculture &
Consumer Services



Federal Food Webinar Series

- August 7: How to do Business with the Defense Commissary Agency (DeCA)
- August 14: Tactical Rations: Supply Chain and Research and Development
- August 21: Dining Facility Troop Feeding: Operations and Business Opportunities
- August 28: Other Federal Agency and Department of Defense Opportunities

Contact Information

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Speakers:

- **Jasmine Brown, Division Chief, Operational Rations and Equipment and John Trunzo, Chief Subsistence Readiness Division, Defense Logistics Agency, Troop Support**
- Erin Stomberg, Division Chief, Combat Feeding, DEVCOM Soldier Center Soldier Sustainment
- Jon Allen, Professor & Director of Graduate Programs, Department of Food, Bioprocessing and Nutrition Sciences, North Carolina State University



DEFENSE LOGISTICS AGENCY

Established 1961



Operational Rations Introduction
By: Jasmine Brown and John Trunzo

THE NATION'S LOGISTICS COMBAT SUPPORT AGENCY



Stocked Items

- MRE 45
- Close Combat Assault Rations (CCAR)
- Meal Cold Weather (MCW)
- Modular Operational Ration Enhancement (MORE)
- Survival Items
 - ❖ Emergency drinking water, flexible pouch
 - ❖ Water, Drinking, Brick
 - ❖ Abandon Ship – Aircraft

Direct Vendor Delivery (DVD) Items

- Halal
- Kosher/Passover Kosher
- Tailored Operational Training Meal (TOTM)
- Performance Readiness Bar
- Health Comfort Pack



❑ Requirement

2.5M cases - 10/21/2024

1.8M cases - 12/01/2024

❑ Award Split

-  40%
-  40%
-  20%

❑ Deliveries Schedule: January through December





❑ Meal Cold Weather (MCW)

- O/H 22,525

❑ Modular Operational Ration Enhancement (MORE)

- COLD MORE : O/H 11,817
- HOT MORE: O/H 14,224

❑ Emergency drinking water, flexible pouch

- O/H DDJC 63,357 DDSP 81,700 DDSP 81,700

❑ Water, Drinking, Brick

- O/H DDJC 43,467 DDNV 43,547

❑ Survival, Abandon Ship – Aircraft

- O/H DDJC 26,956 DDNV 8,530

❑ Order Policy:

- ❖ CONUS 7-10 days
- ❖ Hawaii & Alaska- 45-60 days
- ❖ OCONUS 60-90 days





CLOSE COMBAT ASSULT RATION (CCAR)

☐ CCAR

- Awarded on 11/2024
- SOPAKCO
- 40,000 cases Ordered

☐ First Strike Ration

- Discontinued and phased out as of Q3FY25



CCAR
Close Combat Assault Ration



MORE - Performance Pack

❑ NSN: 8970-01-721-7872

- Provide an enhancement to individual rations
- Self-contained food packet (commercial components),
- Flexible meal bag, 3 different packs, 8 of each pack 24 total per case
- One pack - 1,400 calories
- 18 months shelf life at 80°F

Pack ONE	Pack TWO	Pack THREE
Sport Beans Assorted Flavors, Caffeinated Energy Chews, Salted Peanuts, Salted Electrolyte Drink Mix Jerky	Endurance Fuel Beef, Sea Salt and Pepper Bar Energy Chews, Caffeinated Electrolyte Drink Mix Energy Chews	Peanuts, Salted Energy Bar Endurance Fuel Electrolyte Drink Mix Energy Gel

❑ Pending Service Requirements

❑ Industry Survey

Minimum Qty per order 25,000 cases (60 days product lead time)



□ Halal Contract

- SOPAKCO
- 5-year contract; 24-month shelf life

□ Order Policy:

- CONUS East Coast- 7-10 days
- CONUS Central - 14 days
- CONUS West Coast- 21 days
- Hawaii & Alaska- 45-60 days
- OCONUS- 90 to 120 days





KOSHER KOSHER PASSOVER MEALS

□ Kosher

- 5 Years contract awarded in August 2024
- Labruite Meals

□ Order Policy:

- CONUS East Coast- 7-10 days
- CONUS Central - 14 days
- CONUS West Coast- 21 days
- Hawaii & Alaska- 45-60 days
- OCONUS- 90 to 120 days

□ Kosher for Passover

- April 12, 2025
- 1,000 minimum/1,200 maximum
- OCONUS, CONUS and Navy Ships

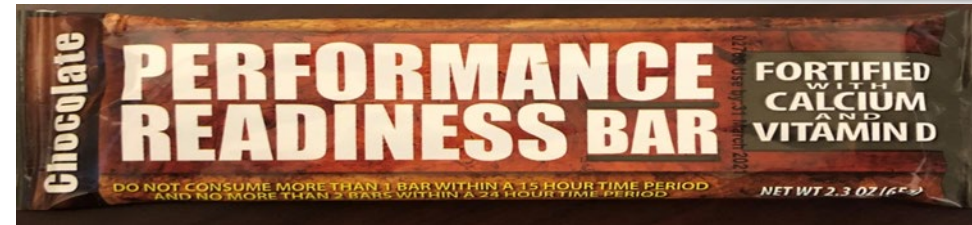




PERFORMANCE READINESS BAR



STERLING FOODS®
CELEBRATE TASTE



- 3-year contract
 - Chocolate flavor
 - Tart Cherry
 - Salted Caramel
- Direct Vendor Delivery Only (60 days lead time)
- Solicitation Closed 3QFY25



HEALTH AND COMFORT PACK (HCP)

- ❑ **Plum Select - SPE3S1-25-D-Z103**
 - 5-year contract
 - Direct Vendor Delivery Only
 - Each case supports 10 individuals
 - Three items
 - ✓ HCP-Type I: Individual Pack
NSN: 8530-01-368-9154
 - ✓ HCP-Type II: Female Supplemental pack
NSN: 8530-01-368-9155
 - ✓ HCP-Type III: Bathing Supplemental Pack
NSN: 8530-01-487-7488
- ❑ **Order Policy:**
 - CONUS 30 days
 - Hawaii & Alaska- 60-90 days
 - OCONUS 75-100 days





Unitized Group Rations (UGR)

- UGR Family
- How it Works
- Assembly Cadence
- Recent Awards
- Current & Upcoming Procurements
- Contact Information
- Questions





Unitized Group Rations

There are four rations in the UGR family:

- **UGR-Heat and Serve** consists of precooked, shelf-stable food issued in lightweight polymeric trays.
- **UGR-A** consists of both shelf-stable and perishable components. It delivers the highest-quality, most fresh-like field feeding available anywhere.
- **UGR-M** is the primary group ration of the USMC and includes commercial shelf stable products and some dehydrated items to meet the Corps' expeditionary requirements.
- **UGR-E** uses chemical heating technology to provide hot food anywhere. It is a compact module that does not require cooks or a field kitchen for preparation. With the simple pull of a tab, the UGR-E is ready to serve in 30-45 minutes.





	UGR-H&S	UGR-A	UGR-M	UGR-E
Components:	Shelf-stable, ready-to-eat entrées, sides, and desserts Ready-to-use commercial products Disposable service items	Perishable/frozen entrées Ready-to-use and quick-to-prepare commercial products Disposable service items	Shelf stable ingredients Easy-to-prepare commercial products Disposable service items	Shelf-stable, ready-to-eat entrées, sides, and desserts Ready-to-use commercial products Disposable service items
Configuration:	Unitized into 3-box modules containing 50 meals	Unitized into 2 semi-perishable boxes and 1 frozen box. Each 3-box module contains 50 meals	Unitized into 3-box modules containing 50 meals	Unitized into 1 shelf-stable box containing 18 meals
Shelf Life:	18 months at 80°F (27°C)	3 month CONUS 9 months OCONUS at 80°F (semi-perishable box) and 0°F (frozen box)	18 months at 80°F (27°C)	18 months at 80°F (27°C)
Menu Variety:	15 (5 Brk, 10 Lun/Din)	27 (7 Brk, 14 Lun/Din, 6 Short Order)	21 (7 Brk, 14 Lun/Din)	12 (4 Brk, 8 Lun/Din)



Assembly Cadence

UGR-H&S (Shelf-stable, ready-to-eat entrées, sides, & desserts):

- ADQ = 150,000
- Cadence = 12,500 / month.

• UGR-E (H&S Kitchen in a Carton):

- ADQ 115,000
- Cadence = 10,000 / month.

UGR-M (Dehydrated items):

- ADQ = 6,000
- Cadence = 500 / month.

Quantity can vary based on demand and component availability.





Recent Awards

- **UHT Milk:** [SPE3S1-24-D-Z205 Gossner Foods \(8/01/2024-7/31/2029\)](#).
 - 5-Year contract w/ EPA ; Five 12-Month Tiers; 5 Items.
 - Customer Direct Deliveries to (17) Locations.
 - Stocked at DDJC (Tracy, CA) and DDSP (Susquehanna, PA).
- **Dehydrated Items:** [SPE3S1-25-D-Z202 Readywise, Inc. \(2/27/2025 – 2/26/2030\)](#).
 - 5-Year contract; Five 12-Month Tiers; 2 New ACR-U-23 Items.
 - Yellow Curry w/ Rice, Chicken, and Vegetables.
 - Macaroni and Cheese.
- **Multiple Awards for UGR-E Disposable Items:**
 - SERVING SPOON, SOLID (UGR-E) [Ability One - Lighthouse](#)
 - SLOTTED SERVING SPOON (UGR-E) [Ability One - Lighthouse](#)
 - TRAYS, 3 COMPARTMENT 18 EA (UGR-E) [Ability One - Lighthouse](#)
 - DINING PACKETS (BG)(25/Bg.)30Bg/Bx) [Ability One – LC Industries](#)
 - DINING PACKETS, 9/BAG (6xs ea. Mod) (UGR-E) [Ability One – LC Industries](#)
 - BOX CUTTER (UGR-E)
 - SPATULA (UGR-E)



Recent Awards (continued):

- **Snack Mix:** *SPE3S1-25-D-5003 Trans-Packers (3/25/2025-3/24/2027).*
 - 2-Year contract; Two 12-Month Tiers; 1 Item.
- **Chocolate Disks:** *SPE3S1-25-D-D5002 Mars Wrigley (4/04/2025 – 4/03/2027).*
 - 2-Year contract; Two 12-Month Tiers; 1 Item.
- **PB Disks:** *SPE3S1-25-D5001 Hershey Company (4/04/2025 – 4/03/2028).*
 - 3-Year contract; Three 12-Month Tiers; 1 Item.

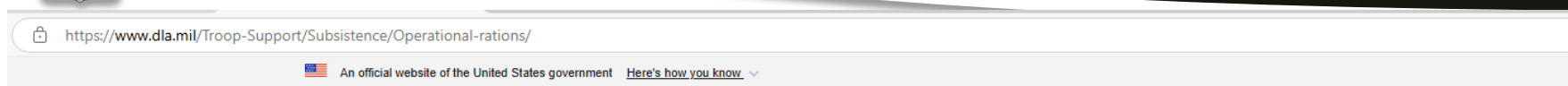


Current / Upcoming Procurements – Components:

- **Pouch Bacon (Turkey)** *SPE3S1-24-R-0004 / Solicitation Awarded May 14, 2025 to Epic Foods.*
- **Eggs Boil in Bag:** *SPE3S1-24-R-0015 / Solicitation Closed (Evaluation).*
- **UGR-A:** *SPE3S1-22-R-0012 / Solicitation Awarded August 11, 2025.*
- Dehydrated Juices - Change from Cans to Pouches (2) Items – Publish Solicitation May 2025.
- Disposable Gloves: (1) Item. Publish Solicitation May 2025.
- Dehydrated Juice (UGR-E) (2) Items. Publish Solicitation May 2025.
- UGR-E Components (12) Items. Publish Solicitation May 2025.
- PB&J Squeezers (2) Items. Publish Solicitation August 2025.
- Snacks UGR-E (3) Items. Publish Solicitation August 2025.
- Poly Tray Entrée: (27) Items. Publish Solicitation January 2026 (current contract expires December 2026).



Resource: <https://www.dla.mil/Troop-Support/Subsistence/>



DEFENSE LOGISTICS AGENCY
THE NATION'S LOGISTICS COMBAT SUPPORT AGENCY

Search Defense Logistics Agency

HOME WHAT DLA OFFERS ▾ WORKING WITH DLA ▾ ORGANIZATIONS ▾ CUSTOMER SUPPORT ▾ CAREERS ▾ ABOUT DLA ▾

HOME > TROOP SUPPORT > SUBSISTENCE > OPERATIONAL RATIONS

Subsistence

Field Feeding & Food Service Equipment

Food Safety +

Food Services +

Operational Rations -

ACR & PCR Listings

Close Combat Assault Ration

Commercial Item Descriptions (CIDs)

First Strike Ration (FSR)

Health & Comfort Pack (HCP)

Kosher & Halal

Meal, Cold Weather (MCW)

Meals Ready-To-Eat (MRE)

MRE, Pork-Free

Operational Rations

Operational Rations are the first line of Subsistence in a combat situation or humanitarian assistance mission. Items include:

- **Meals, Ready-to-Eat:** Individually packaged and used by the services to sustain individuals during military operations that preclude organized food service facilities
- **Unitized Group Rations:** Used when combat conditions permit the establishment of field feeding kitchens, they contain complete food and paper/plastic components to serve 50 meals



For questions regarding inspection of Operational Rations please e-mail the U.S. Army Veterinary Services at: usarmy.apg.hqda-otsg.mbx.food-protection@army.mil

Downloadable Resources

- [Prices](#) (PDF)
- [Weight & Cube](#) (PDF)
- [AmeriQual UGR-A Weight & Cube](#)
- [Wornick UGR-A Weight & Cube](#)

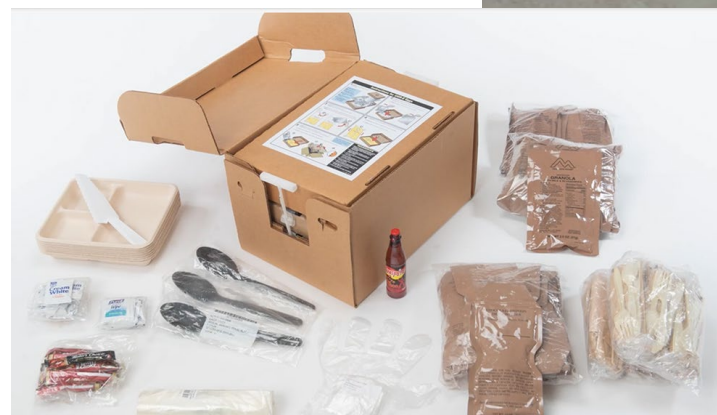


The Future of Operational Rations: What's Next?

John E. Trunzo
Chief – Subsistence Readiness Division



Questions ?



DEFENSE LOGISTICS AGENCY

Established 1961



PEOPLE ★ PRECISION ★ POSTURE ★ PARTNERSHIPS WARFIGHTER ALWAYS



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U.S. ARMY COMBAT CAPABILITIES DEVELOPMENT COMMAND SOLDIER CENTER

**Tactical Rations: Supply Chain and Research and
Development**

14 AUG 2025

	DEVCOM SC
	FCDD-SCD-SC
	None
	Distribution A
	Dr. Erin Gaffney-Stomberg

[SSD-CFD] |

DISCLOSURES



- None



OBJECTIVES

- Explain the unique nutrition requirements for warfighters.
- Describe the types of operational ration platforms currently available.
- Understand ongoing and future areas of innovation in feeding our nation's warfighters.

DEVCOM SOLDIER CENTER



**University of Southern California Institute for Creative Technologies
A University Affiliated Research Center (UARC)**
Playa Vista, CA



Natick Soldier Systems Center
Natick, MA



Central Florida Research Park
Orlando, FL



MILITARY EMPLOYEES
51

GOVT. CIVILIAN EMPLOYEES
681

CONTRACTORS
263

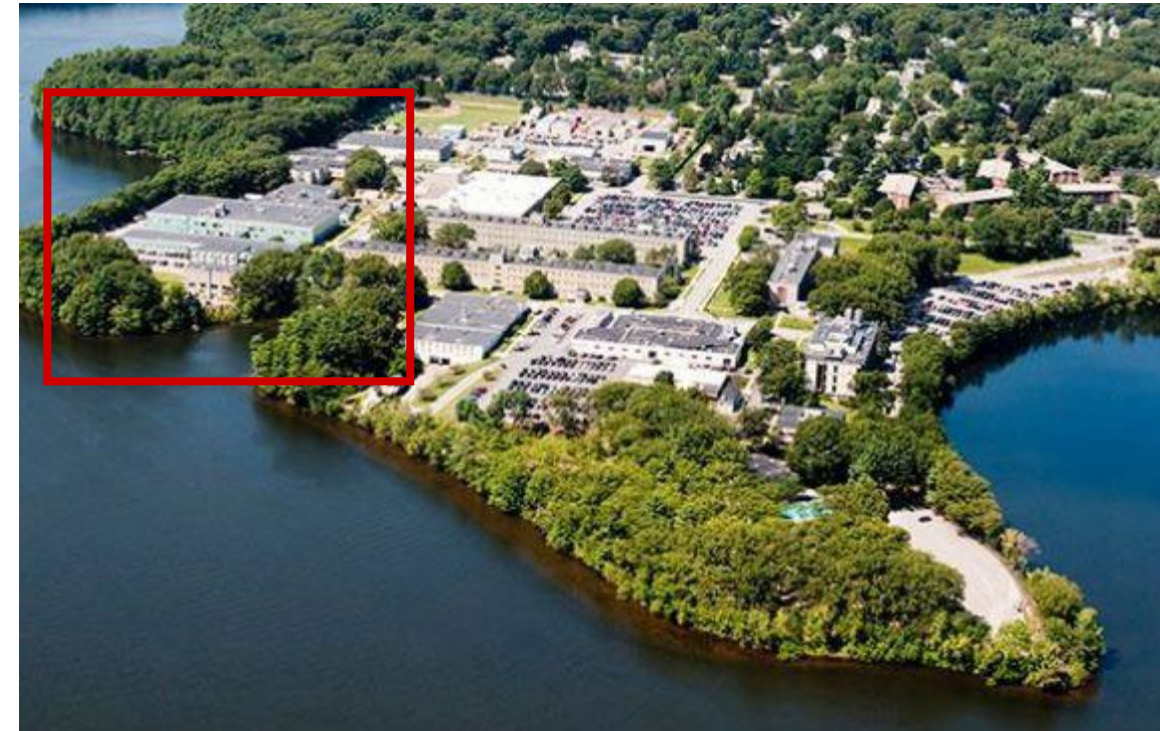
TOTAL EMPLOYEES
995 (+/-)

739 Natick, 80 Orlando,
176 Playa Vista



COMBAT CAPABILITIES DEVELOPMENT COMMAND SOLDIER CENTER (DEVCOM-SC) TECHNOLOGY AREAS

- Clothing and Protective Equipment – uniforms, helmets, vests, etc
- Human Systems Integration Sciences – training/simulation and performance
- Aerial Delivery – parachutes, gliders, etc
- Expeditionary Maneuver Support – shelters, containers, tents, etc
- **Combat Feeding**



DEVCOM SC COMBAT FEEDING DIVISION



DoD JOINT PROGRAM

ARMY • MARINE CORPS • NAVY • AIR FORCE • DEFENSE LOGISTICS AGENCY



UNIQUE FIELD FEEDING CONSTRAINTS



- Operating environment variable – arctic, desert, tropics, etc
- Logistics of moving food, water, and equipment – individual/vehicle/ship/air
- Shelf-life requirements – 1.5 to 3 years at 80 F and 6 mo at 100 F
- Waste disposal
- Nutrition needs vary –providing individually tailored food difficult
- Taste and convenience important – menu fatigue and underconsumption

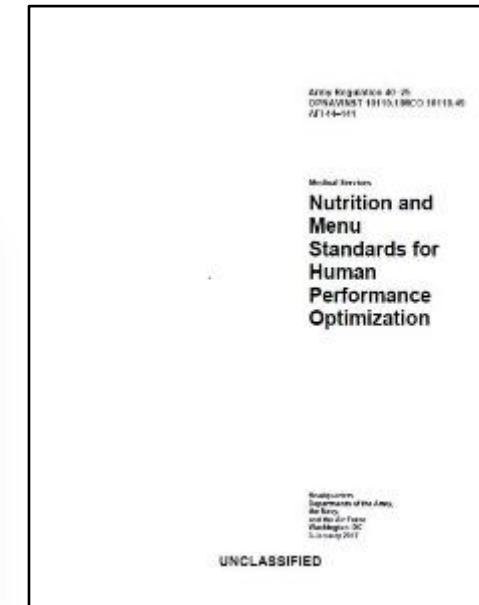




NUTRITIONAL REQUIREMENTS

Army Regulation (AR) 40-25, Nutrition and Menu Standards for Human Performance Optimization*

- Establishes nutritional requirements and recommended energy intake
- Current publication Jan 2017; updates going through approval
- Operational Ration Requirements:
 - Nutritional Standards for Operational Rations (NSORs)
 - E.g. Meal, Ready-to-Eat
 - Nutritional Standards for Restricted Rations (NSRRs)
 - E.g. First Strike Ration®



*http://www.apd.army.mil/epubs/DR_pubs/DR_a/pdf/web/AR40-25_WEB_Final.pdf

HISTORICAL INNOVATIONS FROM THE COMBAT FEEDING PROGRAM



Dehydrated milk &
Egg products



Converted rice



High pressure
processed foods



Shelf stable
sandwiches



Processed
cheese



Prepared
guacamole

KEY COMBAT RATIONS



General Purpose: Meal, Ready-to-Eat (MRE)

Assault: Close Combat Assault Ration (CCAR)

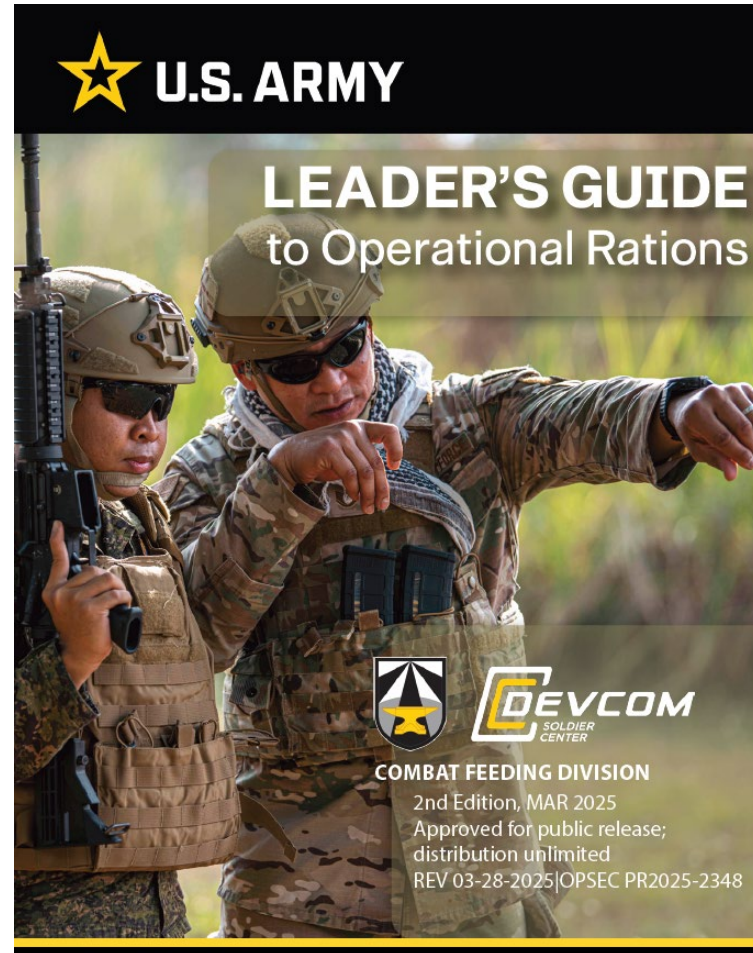
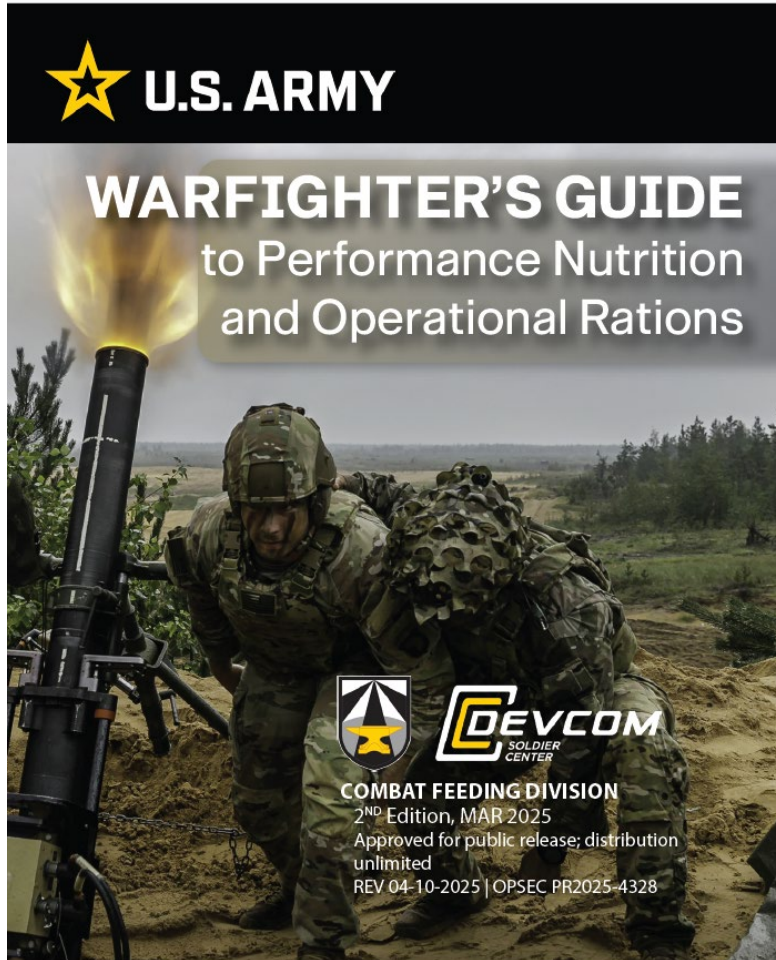
Special Purpose: Meal, Cold Weather (MCW)

Group: Unitized Group Rations – Heat and Serve (H&S);
A Option (A); Marine (M), and Express (E)

Supplements/Enhancements: Modular Operational
Ration Enhancement (MORE) - High Altitude/Cold
Weather and Hot Weather



RESOURCES ON HOW TO USE OPERATIONAL RATIONS



- Warfighter's and Leader's guides to operational rations
- Product of collaboration between CFD, US Army Research Institute of Environmental Medicine, the Uniformed Services University of Health Sciences, and the DoD Nutrition Committee
- Updated in March 2025

COMBAT FEEDING DIVISION GOALS



The research program supports the Joint Force to conduct combat feeding across all future operating environments to:

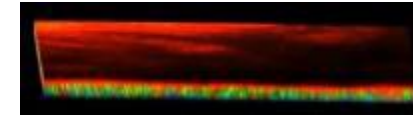
- Improve Warfighter health and performance
- Reduce combat load (individual) and class 1 logistics burden (supply chain)
- Provide mobile & efficient combat feeding equipment
- Protect food and water from contamination

SCIENCE AND TECHNOLOGY TEAMS



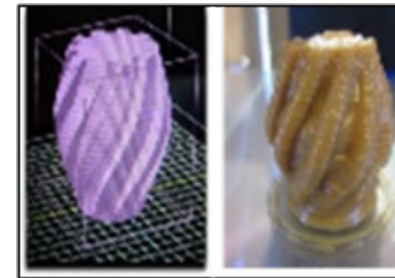
Functional Food and Nutritional Intervention

- Develop Human Performance Enhancing Ration Components**
- *In vitro* models (cell culture)
 - *In vivo* studies (human trials)
 - Functional food product development
 - Armed Forces Recipe Service



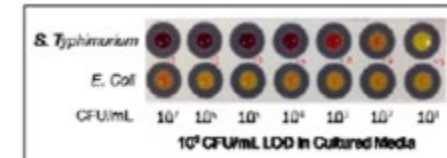
Food Engineering and Analysis

- Develop Technologies for Better Ration Components**
- Novel food processing and production technology
 - Chemical and physical analysis
 - Food additive manufacturing



Food Protection and Innovative Packaging

- Develop Technologies for Safer Rations and Better Packaging**
- Detect contaminants in water/food
 - Mitigate contaminants in water/food
 - Novel packaging solutions



ENGINEERING AND MANUFACTURING TEAMS



Combat Ration Engineering & Support

Test and Transition Rations for Field Feeding

- Sensory evaluation
- Field testing
- Develop specifications
- Engineering support



Joint Foodservice Engineering (Marine, Navy, Air Force)

Test and Transition Equipment for Field Feeding

- Design evaluate, and integrate feeding equipment including kitchens, refrigeration, & sanitation
- Life cycle Engineering support



US Army Soldier Sustainment Team (PdM-FSS)

Test and Transition Equipment for Field Feeding

- Design, evaluate, and integrate feeding equipment including kitchens, refrigeration, & sanitation
- Life cycle Engineering support

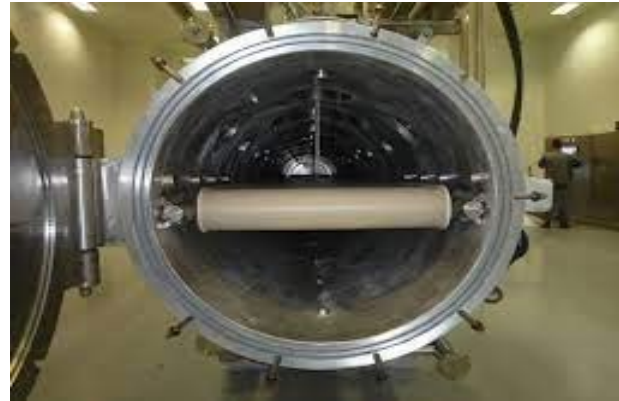


NEXT GENERATION RATIONS – EXAMPLE TECHNOLOGIES



- Reduce size and weight to reduce soldier load and logistics of shipping
- Close Combat Assault Ration (CCAR) – 39% volume reduction compared to First Strike Ration (74% smaller than Meal Ready-to-Eat MRE)

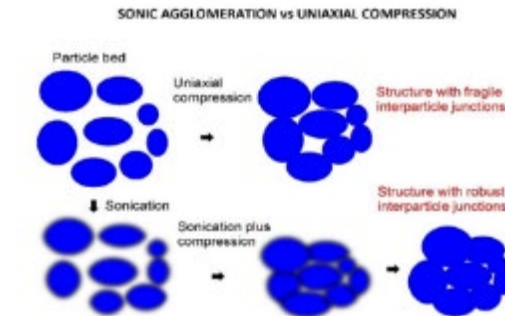
Vacuum microwave drying – remove water & retain quality



Advanced concentration technologies - membranes



Sonic agglomeration – densify with sound waves



Close Combat Assault Ration





**...EMPOWERING,
UNBURDENING, AND
PROTECTING our
Warfighters...To
OUTPERFORM and
OUTLAST any adversary,
anytime, anywhere...**





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Food Processing and Nutrition for Tactical Rations: Supply Chain and Research and Development

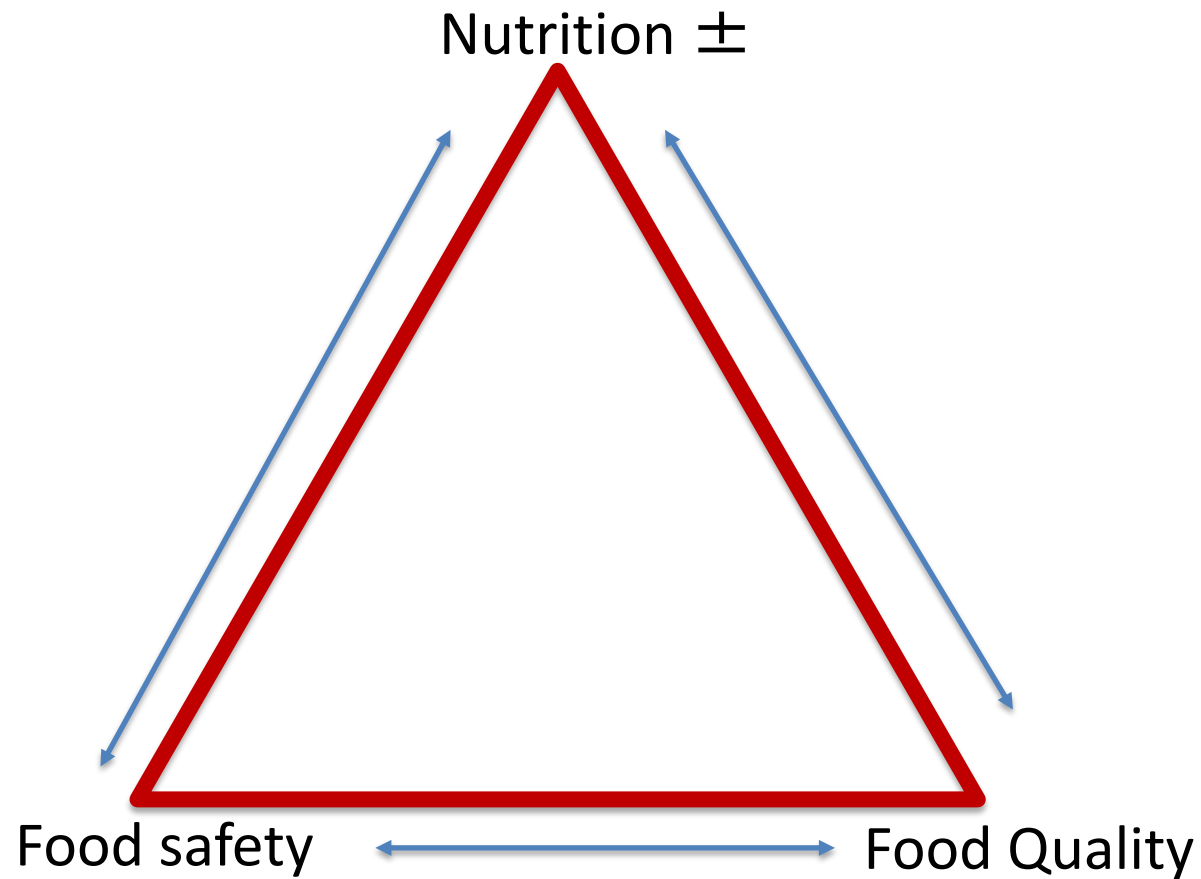
Jonathan Allen, Ph.D., C.N.S.

Professor, Director of Graduate Programs

Department of Food, Bioprocessing and Nutrition Sciences



Goals of Food Processing



Resources

- [Dietary Reference Intakes: The Essential Guide to Nutrient Requirements](#) (2006)
- [Department of Food, Bioprocessing Nutrition Sciences](#)
- [The Entrepreneurial Program - EI4F](#)
- [NC Food Innovation Lab](#)
- [FBNS Extension and Outreach](#)
- Jon_allen@ncsu.edu 919.513.2257

Nutrition Basics

- Macronutrients: Carbohydrate, lipids, protein
- Micronutrients: vitamins, essential minerals
- Beneficial components: phytochemicals
- Antinutrients and toxicants
 - Trypsin inhibitors
 - Heavy metals
 - Plant toxins

Protein Nutrition

- Adequate quantity
- 0.8 g/kg body weight
- Increase for children, greater activity, aging, pregnancy & lactation
- Protein quality
 - Plant protein often incomplete or poorly digestible
 - All amino acids needed in a certain ratio
 - Complementary foods or AA supplementation

Carbohydrates & lipids

- Energy sources and energy storage
- Structure of membranes
- Hormonal functions of EFA and sterols
- Carbohydrate -> fat (when in excess)
- Lipid oxidation -> health impacts and food quality

Ultraprocessed foods

- Food safety and shelf life improved
- Appeal and taste
- Cost
- Long term health effects
- Nutritional quality and content may be most important

Food processing

- Older techniques
 - Canning/ retort
 - Freezing, refrigeration
 - Smoking, drying
 - Salting
 - Fermentation & acidification
- Newer processes
 - High pressure (HPP)
 - Electrolyzed water
 - Cold plasma
 - Irradiation
 - Aseptic packaging
 - Microwave processing
 - Ultraviolet

Safety Concerns

- Pathogens
 - Aerobic
 - Anaerobic
 - Facultative anaerobic
 - Psychrotrophs
 - Food Sensitivities
- Allergens
 - Known Allergens (Big 9)
 - Minor – New foods
 - Protein Modification by newer processing methods creating an allergen
 - Transgenic foods

Packaging

- Rigid Can vs. flexible pouch
- Barriers to:
 - Bacteria, dirt
 - Oxygen
 - water
- Abundant Recalls for:
 - Labelling (allergens)
 - Physical contaminants, plastic & metal from machinery