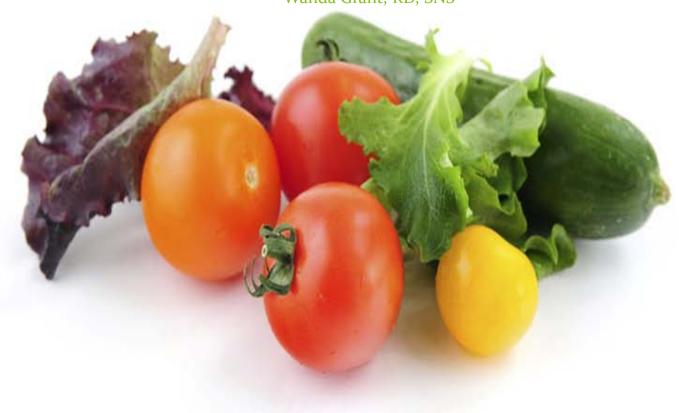


Understanding Clean Label Trends

With permission from:

Jennie-O Turkey Store

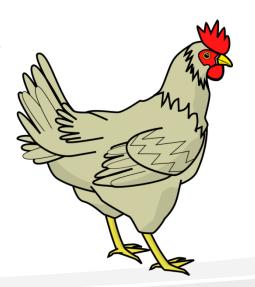
Wanda Grant, RD, SNS



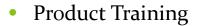


Understanding terminology in poultry

- RWOA Raised without antibiotics
- Antibiotic free
- Hormone free
- Steroid free









What is "All Natural" for protein?

- USDA FSIS regulations currently state that a "natural" meat product:
 - Contains no artificial ingredients, coloring ingredients or chemical preservatives
 - Is minimally processed
 - Minimally processed means that processing has not fundamentally altered the product





Cleaner Labels in Poultry Processing

- Replacing these ingredients with "cleaner or natural" options
 - Sodium Phosphate
 - Caramel Color
 - BHA/BHT, Propyl Gallate
 - Modified Food Starch
 - Sodium Nitrites
 - Sodium Eryothorbate
 - Lactates/Diacetates
 - Sodium





Caramel Color

- Purpose
 - Enhances the color in pre-cooked products patties) to make them more visually appea
- Cleaner Replacement
 - R & D has worked closely with ingredient s effective All Natural color enhancer
 - Experimented with different cooking ovens and temps to provide color



Product Training



Sodium Phosphate

- Purpose
 - Adjusts the PH
 - Binds Moisture
 - Improves Protein Extraction
- Cleaner Replacement
 - Baking Soda
 - Other All Natural Proprietary Ingresses Denia





BHA/BHT, Propyl Gallate

- Purpose
 - Effective Anti-oxidants
- Cleaner Replacement
 - R & D has developed a natural pro year to develop





Modified Food Starch

- Purpose
 - Moisture enhancement
 - Better mouth feel
- Cleaner All Natural Option
 - Rice Starch that is minimally processed







Sodium Nitrite/Erythorbate

- Purpose
 - Sodium Nitrite
 - Cures a product to enhance flavor and extend
 - Sodium Erythorbate
 - Cure accelerator
- Cleaner All Natural Options
 - Sodium Nitrite
 - Celery juice powder
 - Sodium Erythorbate
 - Cherry Powder





Acetates/Diacetates

- Purpose
 - Listeria Intervention in fresh products
- Cleaner Label
 - Vinegar





Sodium

- Purpose
 - Retains moisture
 - Add flavor
 - Aids in protein extraction
 - Helps bind product
- Sodium Reducers
 - Sea Salt
 - All Natural Salt Replacers





Cleaner Label Challenges

- All Natural/Cleaner Ingredients are more expensive
- All Natural/Cleaner Ingredients are often not as effective
- Potentially shortens the shelf life of the product
- Potentially lower yields which results in higher costs





Turkey Breast Label Comparison

- Turkey Breast Meat
- Turkey Broth
- Contains 2% or less Salt, Sugar, Rosemary extract, Baking
 Soda
 Contains less than 2% salt,

Turkey Breast

Turkey Broth

 Contains less than 2% salt, dextrose, potassium chloride, potassium phosphate, modified food starch, propionic acid, sodium hydroxide, trehalose



Clean Labeling for Snack Foods

- Emma Gottschall, M.S. Food Science
 - Product Developer
 - Snak King Corp.

Developing Clean Label Snacks

- Snack chips have 3 main components:
 - -Chip Base
 - Whole Grains
 - -Vegetable Oils
 - Expeller Pressed Vegetable Oils
 - -Seasonings*
 - Sea Salt
 - Cheddar Cheese
 - Jalapeno Cheddar
 - Barbecue



Added MSG, Synthetic Colors, Artificial Flavors, PHO's





Transforming Ingredients

"Unacceptable" Ingredients	Functional Replacements
Solvent Extracted Vegetable Oils	Expeller Pressed Vegetable Oils
Synthetic Colors (FD&C)	Natural Colors (Exempt from Certification)
Artificial Flavors	Natural Flavors
Monosodium	Yeast Extract*
*Naturally occurring glutamates	**Responsible sourcing concerns
Partially Hydrogena	ated Palm Oils**

Cheetos® Crunchy Flamin' Hot Cheese Snacks

Ingredients: Enriched Corn Meal (Corn Meal, Ferrous Sulfate, Niacin, Thiamin Mononitrate, Riboflavin, and Folic Acid), Vegetable Oil (Corn, Canola, and/or Sunflower Oil), Flamin' Hot Seasoning (Maltodextrin [Made From Corn], Salt, Sugar, Monosodium Glutamate, Yeast Extract, Citric Acid, Artificial Color [Red 40 Lake, Yellow 6 Lake, Yellow 6, Yellow 5], Sunflower Oil, Cheddar Cheese [Milk, Cheese Cultures, Salt, Enzymes], Onion Powder, Whey, Whey Protein Concentrate, Garlic Powder, Natural Flavor, Buttermilk, Sodium Diacetate, Disodium Inosinate, and Disodium Guanylate), and Salt.

CONTAINS MILK INGREDIENTS.



The Whole Earth® Jalapeno Cheddar Puffs

INGREDIENTS: WHOLE GRAIN CORNMEAL, ENRICHED CORNMEAL (CORNMEAL, FERROUS SULFATE, NIACIN, THIAMINE MONONITRATE, RIBOFLAVIN, FOLIC ACID), VEGETABLE OIL (SUNFLOWER, SAFFLOWER, CANOLA, CORN, COTTONSEED AND/OR RICE), MALTODEXTRIN, CHEESE POWDER [CHEDDAR CHEESE (CULTURED MILK, SALT, ENZYMES), WHEY, BUTTERMILK, MALTODEXTRIN, SALT], SALT, NATURAL BLUE CHEESE FLAVOR [BLUE CHEESE (PASTEURIZED MILK, CULTURES, SALT, ENZYMES), WHEY, MALTODEXTRIN, SALT], NATURAL CHEESE FLAVOR [PARMESAN CHEESE (PASTEURIZED MILK, CULTURES, ENZYMES), MALTODEXTRIN, WHEY, NATURAL FLAVORS, YEAST EXTRACT, SALT], ONION POWDER, CITRIC ACID, LACTIC ACID, GARLIC POWDER, YEAST EXTRACT, NATURAL FLAVORS, OLEORESIN PAPRIKA (FOR COLOR). CONTAINS MILK.



http://www.fritolay.com/snacks/pro duct-page/cheetos/cheetoscrunchy-flamin-hot-cheeseflavored-snacks

Cheetos® & Flamin'Hot® are registered trademarks of Frito-Lay North America, Inc.

The Whole Earth® is a registered trademark of Snak-King Corp.



Consumer concerns with Artificial colors

- Allergies
 - Hives
 - Asthma
- Hyperactivity
 - In Children
 - Possibly related to aspirin a
- Cancer
 - In mice/rats



http://articles.mercola.com/sites/articles/archive/2014/05/22/artificial-food-dyes.aspx



Challenges in converting to Natural Colors

- Cost
- Limited supply
- Increased demand may increase adulteration
- Some natural colors don't exist... yet
- Increased Food waste due to color stability
- Kids like bright colors



http://www.eater.com/2015/9/17/9345485/doritos-rainbows-what-do-they-taste-like

All Food Dyes are not created equal.....



Comparison of two Clean label seasonings to their Artificially Colored counterparts



Moving forward

- Trends are pointing toward cleaner and clearer labels
- Natural colors are more available than ever
 - However, supplies are still limited
- Education will be necessary
 - To prevent food waste
 - To make natural colors acceptable to kids

Clean labeling is an important trend in the food industry, but considerations should be made to offer food which students will *choose* to eat



Clean Labels for Bakery Products

- Presented by
- Shirley J. Brown, Ed.D, SNS
- sbrown@rich.com



A Clear or Clean Label on Bakery

- Easy to read & understand ingredients
- Limited number of ingredients
- Clearly marked shelf-life & expiration
- Identify location of manufacturing plant
- List any allergens that may be present or state that product is free of allergens or other ingredients of concern
- Nutrition Panel based on serving size
- Multi-lingual labels



Sensitive Ingredient Levels

Level 1		Level 2
CANNOT contain any of the following ingredients:		Must NOT EXCEED 20 ingredients
1. ADA-dough conditioner	Azodicarbonamide	(level 1 plus:)
2. BHA/BHT- antioxidants	Butylated Hydroxyanisole & Hydroxytoluene	13. Aluminum leavening
3. HFCS- sweetener	High Fructose corn syrup	14. Bromated oils
4. Bromate-flour additive		15. Disodium Guanylate
5. L-cysteine- conditioner		16. Glycerol Esters of Fatty Acids
6. MSG- flavor enhancer	Monosodium glutamate	17. Propyl Gallate



Sensitive Ingredient Levels

Level 1		Level 2
CANNOT contain any of the following ingredients:		Must NOT EXCEED 20 ingredients
6. MSG- flavor enhancer	Monosodium glutamate	17. Propyl Gallate
7. Caramel Color		18. Sulfites
8. Artificial Sweeteners		19. TBHQ
9. Artificial Colors		20. Titanium dioxide
10. Artificial Flavors		21. Benzoates
11. Hydrogenated Oils	Solidified fats w'hydrogen	
12. Partially Hydrogenated oils		Level 3 Must not exceed 15 Ingredients

Finding Acceptable Substitutions

- Preservative and Dough Conditioner replacements:
 - Natural preservatives- raisin juice concentrate or paste
 - Vinegar
 - Citric acid
 - Cultured ingredients like wheat starch or fl
 - Dry acid whey
 - Corn syrup solids
 - Dextrose
 - Maltodextrin
- Must often rely on more than one solution to compensate for the artificial preservative- thus longer ingredient lists





Clarifying Ingredients in Bakery Products

May Contain or processed in a plant with:

<u>Allergenic</u>

- Peanuts
- Tree Nuts
- Soy
- Eggs
- Milk/Dairy
- Wheat
- Gluten
- Sesame



More Acceptable

- Sugars
- Canola Oils
- Oats
- Rice flours
- Fruit Puree
- Cultured wheat flour
- Raisin juice
- Vinegar
- Citric acid
- Whey
- Corn syrup solids



Affecting Functional Ingredients

- Dough conditioners
 - emulsifiers, gluten strengtheners, enhance ter improves volume & stability
- Yeast food
 - Provides carbohydrates for yeast to grow
- Mold inhibitors
 - Keep baked goods fresh longer & add moisture
 - (Natural sources of fruit & vegetable purees)
- Natural Flavors & Sweeteners
 - Provide eye appeal, add a pleasant taste
- Natural Color- vegetable flours or powdered fruit/veggies



Why an Increasing Concern?

- Increased Awareness
- Growing market demand for products that deliver health & authenticity benefits
- Increased Media attention
- Increased # of products available
- Concern for liability
- Availability of detection methods
- Children are commonly involved
- The amount of allergen to elicit a reaction is unknown.



Comparison of Bakery Labels

FRENCH BREAD Label

FRENCH BREAD Label-

Ingredients:

ENRICHED UNBLEACHED WHEAT FLOUR (WHEAT FLOUR, MALTED BARLEY FLOUR, NIACIN, IRON AS FERROUS SULFATE, THIAMINE MONONITRATE, ENZYME, RIBOFLAVIN, FOLIC ACID), WATER, YEAST, CONTAINS LESS THAN 2% OF THE FOLLOWING: SALT, HIGH FRUCTOSE CORN SYRUP, DEXTROSE, WHEAT GLUTEN, SODIUM STEAROYL LACTYLATE, DATEM, ASCORBIC ACID, ENZYME. (1455-13)

CONTAINS: WHE AT, ADA

MAY CONTAIN MILK, SOY, EGG AND SESAME

Ingredients:

ENRICHED BREAD FLOUR (HIGH GLUTEN WHEAT FLOUR, NIACIN, IRON AS FERROUS SULFATE, THIAMINE MONONITRATE, ENZYME, RIBOFLAVIN, FOLIC ACID), WATER, YEAST, CONTAINS LESS THAN 2% OF THE FOLLOWING: SALT, SUGAR (2016-02)

(Allergen) CONTAINS: WHEAT



Challenges for Industry

- Gluten-free and allergen-free food items must have separate manufacturing and packaging area and facilities/plants
- Reformulation becomes expensive
- Increase inventory of products to meet the needs of more restrictions
- Finding acceptable substitutions for ingredients that perform well & taste great
- Maintaining quality products





Scientific Bases for the Claims?

- Misinformation and Confusion and few studies completed
- Even scientists tend to disagree
- Parents are bombarded with conflicting facts
- Too many "authorities" giving advice
- Many "good intentions"
- Everyone is trying to do the right thing for the kids
- Clear/Clean labeling will continue to grow as the Health & Wellness movement progresses
- So, how are foodservice directors addressing the clean label issues?



Understanding Clean Label Trends

Wanda Grant, RD, SNS Retired Nutrition Service Director/Consultant

- Food and Child Nutrition Services
- Information courtesy of Dallas ISD



Vision

 To be the exemplary Food and Nutrition Provider

Mission

 Provide nutrition that fuels successful learning

Recipe for Success

- Communicate
- Collaborate
- Cooperate
- Commit

Our Motto

- Quality Food...
- On the Line...
- All the Time...
- With a Smile!



Commitment: Serve meal that are...

Healthy and balanced, low in saturated fat, sugar and sodium including fresh fruits, vegetables, lean protein, low fat dairy and whole grains.

Nutritionally wholesome, Ecologically sound, Economically viable, and Socially responsible

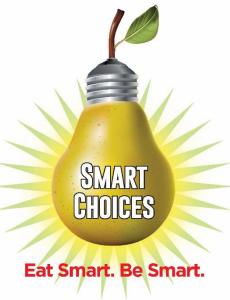


Commitment

- Nutritionally wholesome
- Ecologically sound
- Economically viable
- Socially responsible



- Nutrition Integrity
 - Must meet/exceed current USDA guideli
 - Smart Snack Guidelines
- Locally Sourced
- Ingredients and Labeling
 - Alignment with Urban School Food Alliance (USFA)
 - Food Focus for School Nutrition





Ingredient	Purpose/Use	Why Prohibit?
Butylated Hydroxyanisole (BHA) Butylated Hydroxytoluene (BHT)	Antioxidants, used to prevent fat oxidation & rancidity Household products, cosmetics, pesticides, rubber & petroleum products.	Studies link both BHA & BHT to behavior changes, cancers, and other health issues
Potassium Bromate (Flour Additive)	Oxidizing agent in baked products (causes flower to bulk up, strengthens dough, bread rises faster).	Banned in countries across the globe except for United States.
Artificial & Non-nutritiveSweetenersNutraSweet, Sweet 'n LowSplenda, Sugar Alcohols	Regulated by the FDA as food additives. Used as a sugar substitute, flavor enhancement, and calorie reduction.	Studies linked to cancer
Preservatives • Sulfites • Ammonium Hydroxide • Sodium Nitrate	Sulfites- help prevent enzymatic and non-enzymatic browning; control growth of microorganisms; act as bleaching agents, antioxidants, or reducing agents Ammonium Hydroxide- kills bacteria in beef & poultry; leavening & surface-finishing agent Sodium Nitrate- preservative in	Sulfites- Not carcinogenic, small percentage of sulfite sensitive and acute allergic reactions; reports to FDA about adverse health reactions to sulfite. Ammonium Hydroxide- Highly irritating to eyes and respiratory tract Sodium Nitrate- Increase risk for CVD due to damage to blood



Ingredient	Purpose/Use	Why Prohibit?
Preservatives • Sulfites • Ammonium Hydroxide • Sodium Nitrate	Sulfites- help prevent enzymatic and non-enzymatic browning; control growth of microorganisms; act as bleaching agents, antioxidants, or reducing agents Ammonium Hydroxide- kills bacteria in beef & poultry; leavening & surface-finishing agent Sodium Nitrate- preservative in processed meats (bacon, jerky and luncheon meats)	Sulfites- Not carcinogenic, small percentage of sulfite sensitive and acute allergic reactions; reports to FDA about adverse health reactions to sulfite. Ammonium Hydroxide- Highly irritating to eyes and respiratory tract Sodium Nitrate- Increase risk for CVD due to damage to blood vessels

Action Steps

Bid Specifications

84 T SAUSAGE 93) Turkey sausage patty, pres	150385 easoned, fully cooked, 1.17 oz	TURKEY SAUSAGE PATTY, ALL NATURAL equals 1 oz MMA equivalents, IQF, no artificial perservatives (E	BHA/BHT), contair		Jnits Size or gluten
2 LOG (2)	150382 TU	IRKEY HAM, ALL NATURAL, SLICING LOG, UNCU	RED Units	Units	Commercial
key ham, dark meat, slicing lo	og, 1.75" diameter, uncured, conta	ains no artificial nitrites and nitrates, minimally process, contains no	artificial ingredier	Size nts, contains no a	allergens or gluten

110 FRUIT 1 (2)

150551

FROZEN FRUIT, FOUR BERRY BLEND

Units

Units Size Commercial Unit

Case Price

Frozen fruit juice cup, cherry lemon, must be all natural flavors and not artificial colors, no added sweetener; must credit for 1/2 cup fruit.

"Prohibited Ingredients"

Ingredient	Purpose/Use	Why Prohibit?
Flavor Enhancers MSG (Monosodium Glutamate)	Flavor enhancer commonly added to canned vegetables, soups, and processed meats. Gives a savory, broth like or meaty taste.	Short-term reactions: headache, sweating, facial pressure/tightness, numbness/tingling/burning in the face, neck and other areas, heart palpitations, chest pain, nausea, and weakness. MSG, studies have not consistently triggered reactions.
Fat/Oil Substitutes Palm Oil Coconut Oil	Palm oil- used for frying, contributes to taste, heat stability, resistance to oxidation, texture and smoothness Coconut oil- 92% saturated fat Olestra- a fat substitute that adds no fat, calories, or cholesterol to products	Palm oil- may increase cholesterol; 50% saturated fat Coconut oil- may increase risk of cardiovascular disease due to high saturated fat content Olestra- depletion of fat-soluble vitamins (especially carotenoids); studies linked to gastrointestinal problems with intake

((T) 1 T				
Ingredient	Purpose	Why Restrict?		
Sweeteners High Fructose Corn Syrup	Food preservative and sweetener	2015 DGA recommend limited consumption of all added sugars, including HFCS; studies have linked HFCS consumption to obesity		
Fat/Oil Substitutes Partially Hydrogenated Oils	Preservative increase shelf life of food and cook as solid shortenings; replacement for butter, lard, palm oil, and coconut oil in processed foods	Studies show trans fat it increases cholesterol levels in blood (raises LDL cholesterol and lowers HDL cholesterol) and increases the risk of heart disease		
Flour Additives Azodicarbonamide (ADA, AZA)	Used a whitening agent/flour bleaching agent and as a dough conditioner	ADA increases ethyl carbamate content of commercially prepared breads- may result in injury to the kidneys and liver		
Artificial & Non- Nutritive Sweeteners Stevia	Used as a sweetener and sugar substitute	Only purified form of stevia is FDA approved. Whole-leaf stevia and crude stevia extracts for use as food additives have not been approved by the FDA because of concerns relating to blood sugar control, kidneys, cardiovascular and reproductive systems.		



"Clean" Labels

4 ingredients

Grapes, Strawberries, Bananas, less than 1% guar/acacia (a natural source of fiber)

Nutrition Facts Serving Size 1 Tube (57g) Servings Per Container 6 Amount Per Serving Calories 40 Calories from Fat 0 % Daily Value* Total Fat 0g Saturated Fat 0g 0% Trans Fat Og 0% Cholesterol Omg 0% Sodium Omg 0% Potassium 135mg 4% Total Carbohydrate 10g 3% Dietary Fiber 1g 4% Sugars 7g Proteins 0g Vitamin A 0% Vítamin C 15% Calcium 0% Iron 2% * Percent Daily Values are based on a 2,000 calorie diet. Your Daily Values may be higher or lower depending on your calorie needs: Calories: 2,000 Total Fat Less than 65g Saturated Fat Less than 20g Less than 300mg 300mg Cholesterol Less than 2,400mg 2,400mg Sodium Total Carbohydrate 300g 375g 30g Dietary Fiber Calories per gram: Fat 9 · Carbohydrate 4 · Protein 4

Products with a relatively LOW number of ingredients

Ingredients:

PORK, WATER, ORANGE JUICE, SALT, SPICE, DEHYDRATED GARLIC AND ONION, SUGAR, HYDROLYZED SOY PROTEIN, CITRIC ACID, NATURAL FLAVOR.

LIST OF INGREDIENTS: TURKEY, WATER, SEASONING (SUGAR, SPICES, GARLIC POWDER), CONTAINS 2% OR LESS SEA SALT, CULTURED CELERY POWDER, SALT NATURAL SMOKE FLAVORING



Not so "Clean" Labels

INGREDIENTS

Whole Grain Biscuit: Water, Whole Wheat Flour, Enriched Malted Flour (Wheat Flour, Malted Barley Flour, Niacin, Reduced Iron, Thiamin Mononitrate, Riboflavin, Folic Acid), Sugar, Palm Oil, Nonfat Milk, Leavening (Sodium Bicarbonate, Sodium Aluminum Phosphate, Calcium Acid Pyrophosphate, Potassium Bicarbonate, Sodium Acid Pyrophosphate). Contains 2% or less of the following: Brown Sugar (Sugar, Cane Syrups), Sea Salt (Potassium Chloride, Sodium Chloride, Magnesium Chloride), Dextrose, Artificial and Natural Flavors. Dairy Whey, Yellow Corn Flour.

acia I

Canola Oil, Buttermilk, Soybean Oil, Sorbic Acid (from Milk), Diacetters of Mon

Maltodextrin
Separated
Oxide, Zir
Vitamin A
Products with
a relatively
HIGH number

Mononitra of ingredients

WATER, PASTEURIZED PROCESS CHEESE (cheddar cheese [pasteurized milk, cheese culture, salt, enzymes], water, cream, sodium phosphates and potassium phosphates, seasoning [potassium chloride, flavor (contains maltodextrin)], paprika extract, annatto extract), MACARONI (whole durum wheat flour, enriched semolina [semolina, niacin, ferrous sulfate, thiamine mononitrate, riboflavin, folic acid], contains 2% or less of egg white, glycerol monostearate), NONFAT DRY MILK, CONTAINS LESS THAN 2% OF CHEESE FLAVOR (a dehydrated blend of whey, cheddar cheese [milk, cheese culture, salt, enzymes], butter, buttermilk solids, sodium phosphate, natural flavor), MODIFIED FOOD STARCH, BUTTER FLAVORING (whey solids, enzyme-modified butter [butter, buttermilk powder, enzymes], maltodextrin, salt, dehydrated butter [butter, buttermilk powder], guar gum, annatto and turmeric [for color]), SODIUM PHOSPHATES AND POTASSIUM PHOSPHATES



Moving Forward...



- Bid Language
 - Items without prohibited/restricted
- No Antibiotics Ever
 - New for 2015-2016 school year, menu features no antibiotic
 (NAE) chicken nuggets, and crispy chicken sandwich
 - District will continue to promote NAE with new products every school year
- No Salt Spice Bid
 - Collaboration with Urban School Food Alliance



Moving Forward...



- Major Districts
 - Advantage of being subsidized
- Moderate to Small Districts
 - No encroachment on the General Fund
- Realistic Expectations
 - Do some of something
 - Read labels
 - When like products are not alike!
 - Its not always price
 - Students still have to eat the products





Customers expectations...



- Students
 - More and more are health conscious
- Parents
 - Verbalize that they want home cooked real food
- School Food Service
 - Looking for balance
 - Integrity
 - Responsible





School District expectations...



- Administration
 - Food Service is a Support Service
 - Likes Department that runs without concerns
 - The fewer board resolutions the better



- Have many financial and public concerns
- Usually don't consider Food Service high priority
- School Food Service
 - Healthy Kids ready to Learn
 - Older failing facilities that don't support scratch production

