



Culinary Institute
of America

US Navy Culinary Training

Day Three: Batch Cooking, Plating,
Production Management



Learning Objectives

- Understand Production Styles used in High Volume Production and Batch Cooking.
 - Pan-frying and deep frying
 - Sauté and Stir Fry
 - Braising and Stewing
- Discuss considerations of Batch Cooking.
- Discuss production and plating methods.
- Identify considerations for Batch Cooking vs. Cook and Hold.

Pan Frying and Deep Frying



- Use neutral oils/ fats with high smoke points
- Items usually coated/ breaded
- Sauces (often mayo based) made/ served separately



Frying: Equipment

Pan-Frying

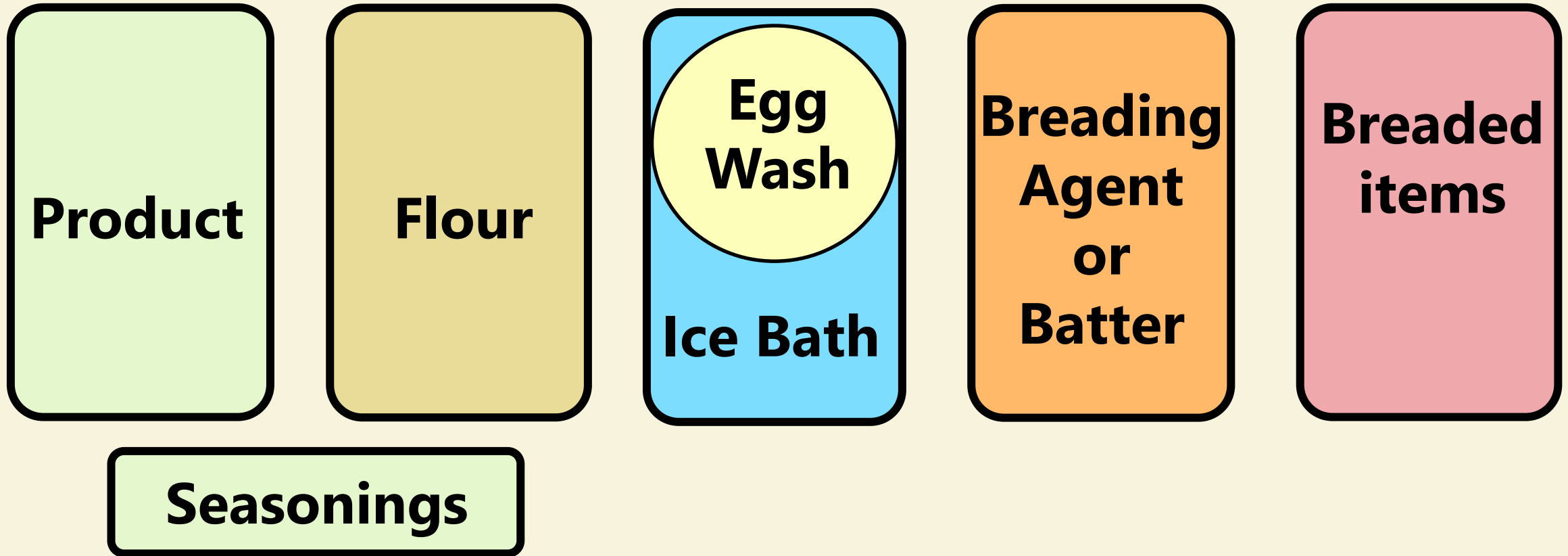
- Heavy pans with straight sides, flat bottoms
- Tilting skillet

Deep-Fat Frying

- Thermostat-controlled deep-fat fryer



Breading Method: Mise en Place



Deep-Fat Frying: Battering Method

**Product
to be
Battered**

Flour

Batter

Fryer

Fried Food: Panning

- **Panning**
 - Rack under items
 - Avoid shingling
 - Vent lid to avoid steaming
 - Serve sauce separately



Deep Fat-Frying: Tips

- ✓ Cook items at the proper temperature
- ✓ Cook as close to service time as possible
- ✓ Drain items well before serving
- ✓ Discard fat containing a lot of burnt particles

Enemies of Oil:

- X High temperatures
- X Prolonged heating
- X Free fatty acids (bacon fat)
- X Moisture
- X Exposure to air
- X Certain metals (i.e. aluminum)
- X Salt
- X Food particles

Deep-Fried Items: Quality Standards

- Tastes like the product, not the frying fat or other food fried in that fat
- **Exterior Crust:**
 - Flavorful
 - Crisp, not soggy or greasy
 - Golden brown to deep brown crust
- **Moist/ Tender Interior**



Batch Cooking for Frying



- Keep product at proper temperatures while prepping
- Keep frozen product frozen until time to fry
- Use racks in holding pans to avoid soggy food
- Cook batches to hold 30 min. or less
- Avoid very deep pans; bottom will become soggy even with a rack
- In a tilt skillet, use rows and columns, do not crowd the pan

Sauté

- “To jump”
 - High heat
 - Rapid technique
 - Perfect mise en place required
- Small amount of fat
- Sauces usually made in pan by:
 - Deglazing the pan
 - Reducing sauce to “nappé”



Sauté Ingredients



■ **Characteristics:**

- Tender
- Portion size or small pieces
- Cooked to order

■ **Suitable Foods:**

- Meats: loin, rib, tenderloin, breast
- Seafood
- High-moisture vegetables
- Pre-cooked vegetables (to finish or re-heat)
- Firm fruit

Stir Fry

- Similar to sautéing
- Items cooked over very high heat
- Uses very little fat
- Usually done in a wok
- Food constantly kept moving
- Sauces usually made in the pan



Stir-Fry Ingredients

- **Characteristics:**

- Tender
- Portion size or small pieces
- Cooked to order

- **Suitable foods:**

- Beef, veal, pork, lamb, poultry
- Seafood
- High-moisture vegetables
- Par-cooked vegetables and potatoes (to finish or re-heat)

Batch Cooking for Sautéing

- Avoid crowding the pan
 - Too deep collects excess moisture; no browning, just boiling
 - Crowding reduces moisture evaporation; vegetables are mostly water
- Avoid excess oil; want to sauté, not boil in oil
- **SBMO**: Smaller Batches, More Often



Combination Cooking Techniques

Dry Heat

- Sear main item (Maillard reaction)
- Improves color and flavor

Moist Heat

- Soften muscle tissue
- Provides body for finished sauce
- Breaks down connective tissue into gelatin



Braising and Stewing

- Tenderizing methods
- Hearty, home style dishes
- Covered cooking vessels



Braising and Stewing

Equipment

- Brazier with a tight-fitting lid
- Tilting skillet
- Steam jacketed kettle

Braising Ratio

- Main item 1 lb.
- Mirepoix 1 oz.
- Liquid 1 pt.



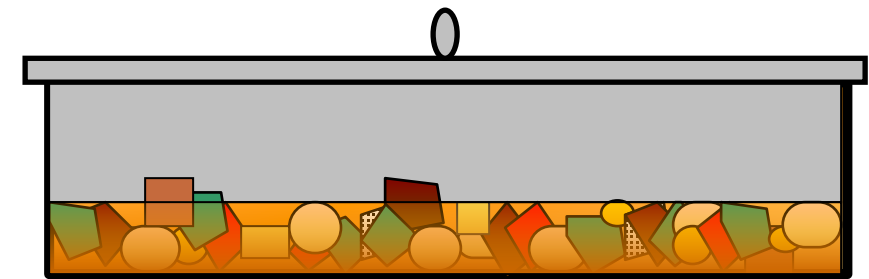
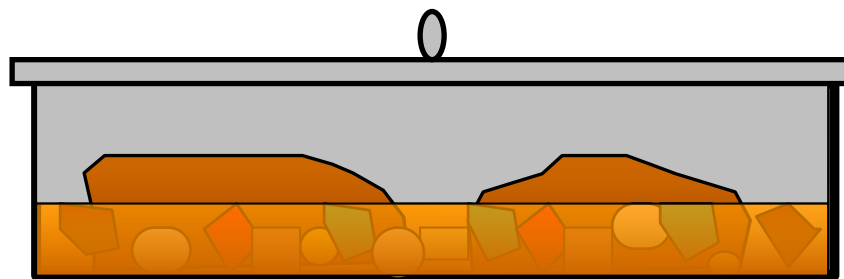
Stewing and Braising: Equipment

- Brazier
- Tilting Skillet
- Steam Jacket Kettle



Braising vs. Stewing

	Braising	Stewing
Size	large, multi-portion	small pieces
Liquid	covers $\frac{1}{3}$ to $\frac{1}{2}$ item or 3 to 4 oz. per portion	covers item
Garnish	cooked separately	cooked with item or separately
Sauce	strained, roux thickened	not strained, roux thickened
Cooked	in oven	in oven (covered) or on range (uncovered)



Braising and Stewing: Tips

- Use correct size cooking vessel in relation to amount of meat.
- Larding advisable on cuts with insufficient marbling.
- Marinating can help tenderize and contributes to flavor.
- Check doneness by resistance to fork or skewer, not temp.
- Do not allow liquid to boil during cooking (Causes meat to shrink excessively).
- Do not use too much liquid (weakens flavor of sauce).

Plating/ Panning



Plating

- Consider using soup plate
- Shingling in same direction and toward guest
- Appropriate amount of sauce

Panning

- Hold over moist heat
- Shingle uniformly
- Include appropriate amount of sauce

Batch Cooking for Braising

- Simmering is gentle, boiling is not
- Size of food braised must be consistent for even cooking
- Add vegetables in stages according to their cooking times





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Any Questions?