RECOMMENDED BEST HANDLING PRACTICES
TO PRODUCE PREMIUM QUALITY
LOUISIANA WILD CAUGHT SHRIMP
FOR LOUISIANA DIRECT PROGRAM

ICE BOATS

APPLIES TO
• Day Boats – Skimmers – Larger Boats (only last 2–4 days of catch )

TRIP LENGTH
• Your goal is not to fill the boat with shrimp, but to fill customers’ orders
• ONLY 2 to 4 days or nights of shrimping using these guidelines for premium shrimp
• Remember, shrimp must have several days of high quality left after unloading for customer assurance

REDUCE TOW TIMES
• Premium quality shrimp requires shorter pushing, towing, or drag times
  • Skimmers can work shrimp steadily, pulling up one side after the other
  • 2 hour max dragging when water is more than 80°F
  • 3 hours max dragging when water is less than 80°F
  • Shrimp start degrading once they die, whether in the net or on the deck

WORKING SHRIMP ON DECK
• Work shrimp immediately after landing one basket at a time
  • Sort, rinse, dip (if used), chill in ice slush, store in ice, then go to the next basket
  • Work in shade, not in full sun
  • Keep dip solution (if used) and ice slush in shade
  • Spray water or pour ice on shrimp pile to keep cool while working

♦ CULLING & SORTING
  ▪ Carefully remove & sort premium shrimp into separate baskets
  ▪ Do Not use a salt box to separate premium quality shrimp

♦ RINSING
  ▪ Rinse shrimp thoroughly to remove dirt and bacteria
  ▪ Rinse again – removing dirt and bacteria means higher quality
  ▪ Will help maintain proper action and use of Blackspot solution
BLACKSPOT TREATMENT (DIP)
- Fill basket with no more than 30 lbs of shrimp, or half full
- Soak and agitate basket, making sure all shrimp contact solution
  - 1 – 2 minutes for sulfites, label directions for alternative treatments
- Use fresh sea water
- Do Not use alternative treatments in ice slush
- Mix a new batch after 500 pounds or 16 baskets of shrimp, or at lease once a day
- Do Not spread dip or treatment directly on shrimp
- Do Not use TRI-POLYPHOSPHATES OR OTHER CHEMICALS

CHILLING
- Rapid chilling and low temperature are critical to produce high quality shrimp
- Slush ice chilled shrimp will melt less ice during storage
- Dip shrimp in slush ice (50:50 ratio ice:water)
  - Mark fill line on slush tank so slush with shrimp does not overflow tank
  - Fill slush barrel with one-half volume of ice
  - Add water to fill line to make 50:50 mixture
  - Fill basket with no more than 30 lbs of shrimp, or half full
  - Dip for at least 2 - 5 minutes, making sure all shrimp contact slush ice
  - And/remove water as needed to keep a 50/50 ratio of ice and water in the slush barrel
  - Maintaining this ratio and steady use should keep the slush near 32°F

ICING AND STORAGE
- 1 - 2 pounds of clean ice should be used for each pound of shrimp
- Ice shrimp immediately after slushing
- Remember, ice used in the slush tank should reduce ice melt in hold
  - Layer 6” of ice on floor and against sides
  - Layer of shrimp
  - Cover with layer of ice
- Be careful not to crush or damage the shrimp, do not pile above 2’ high
- Ice hold should not exceed 35°F – low temperature extends shelf-life and quality
- Keep shrimp separated based on market being sold to and days caught

UNLOADING
- Store and keep premium shrimp separate that can be easily unloaded
- Handle shrimp carefully and quickly during weighing and sale to customer
- Provide ice to prevent temperature increases during transportation

SANITATION OF Equipment AND VESSEL
- IMPORTANT-Prevents build-up of bacteria and enzymes that reduce shrimp quality
- Rinse deck and equipment after working each drag and before dumping next bag
- Clean and sanitize deck and equipment at the end of each day
- After each trip thoroughly clean and sanitize deck, equipment, and storage areas

PREPARED BY:
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FREEZER BOATS

REDUCE TOW TIMES
• Premium quality shrimp requires shorter towing or drag times
• **2 hour max when water is more than 80°F**
• **3 hours max when water is less than 80°F**

WORKING SHRIMP ON DECK
• Work shrimp immediately after landing, one basket at a time
  • Sort, rinse, dip, fill bags or boxes, place in brine tank, then go to the next basket
• Work in shade, **not** in full sun
• Keep dip treatment solution in shade

♦ CULLING & SORTING
  ▪ Carefully remove & sort premium shrimp into separate baskets
  ▪ Do Not use a salt box to separate premium quality shrimp

♦ RINSING
  ▪ Rinse shrimp thoroughly to remove dirt and bacteria
  ▪ Will help maintain proper action and life and Everfresh solution

♦ BLACKSPOT TREATMENT (DIP)
  ▪ Use dip (sulfite powder) in brine freezing tank (see below)
  ▪ For alternative treatments, follow label directions for amounts and soak time
    • Agitate basket and make sure all shrimp contact solution
    • Use fresh sea water
    • Mix a new batch after 500 pounds or 16 baskets of shrimp, or at lease once a day
  ▪ Do Not spread dip or treatment directly on shrimp
  ▪ Do Not use TRI-POLYPHOSPHATES OR OTHER CHEMICALS
Freezing and Storage – Brine Freezing

- Freeze shrimp as quickly as possible to reduce weight loss, salt intake, and drip loss upon thawing.
- Shrimp should freeze within 20 minutes if brine is working properly
  - Longer freezing times will add salt to shrimp and pull water out

Measure the gallon capacity of your brine tank

- Mark the “fill line” (height) and measure it in inches
- Measure the inside width and length of tank in inches
- Gallon capacity = (Height x Length x Width) ÷ 231
  - Ex. (36” x 84” x 36”) ÷ 231 = 471 gallons

Charge the brine system “before” each trip

- Fill tank with clean water to the fill line you marked
- Add salt and dip powder (if not using alternative treatment) according to the table below
- Keep the temperature below 5°F – monitor with a thermometer

<table>
<thead>
<tr>
<th>INGREDIENTS</th>
<th>PROPORTIONS</th>
<th>QUANTITY FOR 471 GALLON EXAMPLE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Food-grade salt</td>
<td>2.53 lb. per gallon</td>
<td>(2.53 x 471 gal.) = 1,192 lb.</td>
</tr>
<tr>
<td>Dip powder</td>
<td>0.074 lb. per gallon</td>
<td>(0.074 x 471 gal.) = 34.8 lb.</td>
</tr>
</tbody>
</table>

Freezing shrimp in bags or boxes

- Never load more that 15 pounds of shrimp to 100 gallons of brine
- Overloading system can cause soft centers and uneven freezing
- Do not overstuff bags or boxes – can result in poor brine circulation and slow freezing, causing hot spots and red shrimp
- Use Small Bags – 30# capacity – do not force shrimp in – fill naturally and tie off
- Shrimp need to be fully frozen before removing from brine and storing
- Keep track of the order bags/boxes are loaded in brine to know when to remove

Recharge brine system using Pounds or Refractometer Method

- Freezing shrimp decreases the brine concentration, so salt must be added to maintain correct concentration and proper freezing
- Dissolve salt in small amount of warm water before adding to tank
- Pounds Method - add 28 pounds of salt after freezing every 1,000 pounds of shrimp
- Refractometer Method – add salt when refractometer drops 2 percentage units from original reading according to instructions (recommended method)

Sanitation of Equipment and Vessel

- IMPORTANT - Prevents build-up of bacteria and enzymes that reduce shrimp quality
- Rinse deck and equipment after working each drag and before dumping next bag
- Clean deck and equipment at the end of each day with detergent and sanitizing solution
- After each trip thoroughly clean and sanitize deck, equipment, brine tank and storage areas

Prepared by: Dr. Jon W. Bell, LSU AgCenter, Department of Food Science, and Julie J. Falgout, Louisiana Sea Grant
Using information from Texas Cooperative Extension, Mike Haby & R. J. Miget
“The Marks of Quality Necessary to Produce Premium-Quality, Wild Domestic Shrimp”