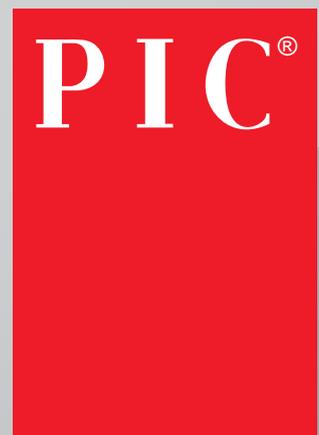




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PIC[®] Early Pig Care Guide





INTRODUCTION

The weaning and the first week after that is a stressful period for the piglets. They are separated from their dam and transported to a different location, mixed with piglets from different litters, associated with nutritional and physical changes in their diet. On top of that, a variable percentage of the newly weaned piglets will have problems to start to drink and to eat in the first 2-3 days after placement. Thus, the first week post-weaning is a critical stage in the pig's development and has the ability to influence the percentage of full value marketed pigs, and should not be overlooked.

PIC Technical Services team.





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TRANSPORT AND HANDLING

To avoid injury and lameness, weaned pigs should be handled gently, from weaning to the placement in nursery or wean to finish, including holding, if any. Do not drop or toss pigs. Pigs should not be picked up or carried by the front legs. At loading and unloading there should be no gaps between chute and trailer that can catch a pig's leg.

Trailers should be well bedded and

ventilation should be set up for weather conditions before pigs are loaded. Provide 0.06 m² of trailer space per pig.

Loading chute and chute area should be clean and dry. If pigs slip then some form of traction should be added. Weaned pigs should be handled with care. Injuries at this stage will reduce overall number of full value pigs.



FACILITIES PREPARATION

All-in-all-out by site is preferred. If all-in-all-out by site not possible all-in-all-out by barn is a minimum requirement.

Passive immunity to some pathogens begins to decline to very low levels by 3 weeks of age. Active immunity begins to build at 3 weeks of age, however an effective immune response can take longer. Pathogens left by the previous group can present a challenge that newly weaned pigs are poorly equipped to handle. For those reasons, rooms should be cleaned, inspected and dried prior to placement. All clothing and equipment, as well as the office,

should be cleaned between groups.

Room and zone temperatures should be achieved 12 hours prior to pig arrival for minimum stress in the new environment. Maintenance should be completed on the barn prior to fill. Several weeks prior to closeout preparations for maintenance need to be implemented.

Do not forget to wash and disinfect the loading/unloading chute after the building is emptied and prior to receive a new load of weaned piglets.



STOCKING DENSITY

Upon arrival, place pigs in a few pens and get an accurate count of pigs received. Pull out or sort off the special attention pigs first. Once pigs are sorted move the rest of the population into the needed pens for square foot recommendation. After sort is completed give the pigs a 2-hour rest period to get acquainted with the new environment and pen mates. After rest the next focus will be to ensure pigs have found water.

Provide 0.26 m² of floor space per head up to 22.7 kg. Pigs heavier than 22.7 kg will be crowded at that density so if vital space cannot be increased before they reach the 22.7 kg mark, the initial stocking should be at 0.33 m² per pig. Generally 5-10% of the barn space should be reserved as hospital or fall behind pens. Depending on the age, size, and health of pigs this space will need to be adjusted up or down. Do not include this 5-10% in the barn square footage for initial pig placement.

Double stocking wean to finish barns is a standard practice in the industry. It is important to understand that even in barns

properly designed for double stocking, pigs can be adversely affected, and they do not perform as well as single stocked pigs, ending up having 2% to 4% less full value pigs than single stocked barns.

There are several key factors to remember when double stocking a barn:

- Resources must be provided on a per head basis.
 - Feeder space/head
 - Cubic meter per hour/head
 - Water/head
 - Creep area/head
 - Zone heat/head
- Initial stocking density of 0.26 m² per head is recommended to 22.7 kg.
- If pigs are moved heavier than 22.7 kg stock at 0.33 m² per head.
- Pigs should not remain double stocked past 7 weeks placed.
 - Heavier feeder pigs do not transport well
 - Do not double stock longer than 4-5 weeks. If this occurs, the percentage of full value pigs marketed can be compromised.





AGE

A minimum wean age of 20 days (21-22 days average) is recommended for piglets placed in wean to finish buildings. When weaning to nurseries, the minimum age could be reduced

to a minimum of 17 days. Pigs younger than this require extra care and nutrition and will probably have higher morbidity and mortality rates.



FILL TIME

Fill time of the barn should be as short as possible. An age spread of 7 days or less within a room or barn is preferred. If a longer age spread is unavoidable pigs should be placed so that there is a maximum age spread of 7 days on a feed line.

Otherwise pigs may be either overfed or shorted on nutrients. If there is a greater than 14 day age spread within a common airspace (barn or room) the environment can be difficult to manage, particularly in extreme weather conditions.



SORTING ON ARRIVAL

On arrival it is recommended to remove the smallest 5% of the piglets and place them near the center of the barn/room. This area will give the best chance of having a warm draft free area. Double phase 1 diet these small pigs. It is extremely important to get these pigs started correctly in order for them to make full value market pigs.

The remaining 95% of the pigs should not be sorted by size. These pigs should be penned by delivery, but not by size. Penning pigs by delivery will ensure that all pigs receive the proper amount of the phase 1 feed. Various sizes of pigs will have no adverse affect and will also allow equal amounts of pigs to be removed from each pen when the first cut is taken out at marketing.



SOURCING

Filling a barn with pigs from a single source is recommended. Single-sourced pigs typically perform better than multi-sourced pigs.

If due to system constraints multi-sourcing barns is unavoidable, take efforts

to group pigs of similar health status. Design the system with enough flexibility that if a source farm's health status should change then it can be flowed separately. Otherwise the one source farm will compromise all pigs in the flow.



CREEP AREA

Zone heating should be adequate to provide a temperature that makes pigs feel comfortable and make them to look for the feed. In general, try to emulate the temperature that the piglets had in the last 3-4 days in farrowing and to do that get in contact with the sow farm personnel to act in coordination. As a rule of thumb, temperature at receiving should be 21° C in the barn and 28° C in the creep area. In too many cases, pigs are exposed to higher temperatures, which depress appetite and daily feed intake.

Pigs should be provided with 0.05 m² per head of mat space for a creep area. Mats should be placed in the area of the pen that pigs prefer to lie under the heat source. Mats should be removed when pigs no longer use them or pigs begin using the mat as a dunging area, typically 1 or 2 weeks post placement.

Mats must be thoroughly washed, disinfected and dried prior placement of every group of newly arrived piglets.



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FEEDERS

Space

- › Wean pigs require a 10-13 cm feeder space and no more than 10 pigs per space. A 5-hole finisher feeder with 33 cm holes will provide 10 wean pig feeder spaces. This will be enough for 100 wean pigs up to 22.7 kg.

Feeder Coverage

- › Fresh feed should be in the feeders when pigs are placed. Feed pan should have 50% coverage. Feed pans should be checked twice

daily and cleaned of old, wet, or soiled feed.

Feeder Type

- › Bulk feeders whether dry feeders or wet/dry feeders are recommended. If wet feeders are used turn water off to feeder, as long as the pigs have a supplemental water source, so that the feed will stay dry and fresh for the first 1-2 weeks pigs are placed. Feeders should have a low lip of no more than 8-13 cm in height so that pigs can access feed comfortably.



INITIAL FEEDING MANAGEMENT

Ensure enough light intensity (a person should be able to read a newspaper) and 12-14 hours of light to have more chances for all the piglets to start to eat sooner.

Temporary small round feeders are recommended for the first 2 weeks placed. Pigs generally find these more comfortable to eat out of and also provide a communal feeding atmosphere, however, they need to get use to the definitive feeders as soon as possible.

Creep feeding is recommended for newly

weaned pigs. This stimulates the pigs to eat and helps them find feed. Scatter 0.45 kg of feed per 30 head, on the mat 4-6 times per day. Discontinue creep feeding after one week. The purpose of creep feeding is to stimulate the pigs' appetite so that they go looking for feed when the mat is cleaned. Creep feeding for too long or with too much feed, trains the pigs to wait for the caretaker.

Before ordering the first load of nursery feed, make sure the bulk feed bin is empty and does not have any leftover finishing feed from the

previous group. If there is any leftover finish feed it should be removed from the bins. If this is not possible, transfer feed to one bin and feed the first three diets from the other bin prior to blending feed. Feeding a few pounds of finishing feed to weaned pigs will cause low feed intake, higher than desired feed: gain ratio, fall behinds and variation in your group. It is recommended to clean the

inside of the feed bins between every group. Prior to placing feed into the feeders go through and completely close the feeder settings and then move to desired position. Ensure all mechanics work on the feeder prior to feed arrival. Once feed is placed in feeder move the agitator for feed delivery to pan. This step is a final check that all pieces are working properly.



WATER

Water intake is critical for weaned pigs. It is important that pigs find fresh water as soon as possible after being placed. All water sources in the pen should be turned on. If possible have nipples opened so that they are dripping the first 8-12 hours pigs are placed. There should be 1 nipple per 10 pigs or 1 bowl or trough water per 20 pigs and the water flow should be no less than 1 cup per minute (250 cc per minute). A good rule of thumb for height of nipple waterers is level with the shoulder of the smallest pig in the pen.

Let the water run just prior to pig delivery so water is cool. This practice is very important during the warmer months of the year as pigs will search out water first.

For the first three days post delivery one should move the pigs toward the water source to ensure all pigs have found the water.

Check for dehydration during the first week of placement. Sunken-eyes or lack of moisture on nose are signs of dehydration. A practice that is suggested when transporting piglets longer than 6 hours is to add electrolytes for a day or so in order to restore the saline equilibrium faster.

Table 1

Determining Nipple Height	
Piglet Weight	Nipple Height
< 5.4 kg	10-15 cm
5.4-13.6 kg	15-31 cm

It is important to remember that there are extreme nutritional changes occurring in the pig at time of weaning. Only good caretakers and good husbandry can minimize the negative impact of all the changes that weaned piglets face (Table 2).

Table 2

Changes From Lactation to Weaning	
Piglets on Sows	At Weaning
Told when to eat by the sow and given equally spaced small meals through the day.	Piglets tell themselves when and how much to eat.
Conditioned to eat at the same time.	Unfamiliar with feed delivery system which does not stimulate group feeding.
Feed is: <ul style="list-style-type: none"> • Liquid • Highly digestible • Changes its nutritional composition to the litter needs. 	Feed is: <ul style="list-style-type: none"> • Dry (meal or pellet) • Less digestible (starch, vegetal proteins) • Changes as feed budgets are in place.

Feed Quality

➤ Weaned pigs should be provided a high quality starter ration that provides for all nutrient requirements. Fresh feed should be presented to them. Fill feeders with no more than 2 days worth of feed. Only fill the feeders for the pigs being received. For example don't fill all feeders with a 2-3 day spread in delivery. Feed will become stale and lose freshness prior to pig arrival. Clean feeders twice daily.

Feed Allocation

➤ Remember the gut of a newly weaned pig is going through significant changes. Enzymes needed to digest food are changing from a milk-based diet to a dry feed diet. This process occurs as the pig ages and is not dependent on weight. All pigs should consume the budgeted amount of the first stage feed. Don't underfeed the larger pigs and never limit feed nursery pigs. Below is an example feed budget and lactose levels for healthy pigs.

- 6.5 - 7.5 kg pig (20% lactose)
- 7.5 - 9 kg pig (15% lactose)
- 9 - 11.5 kg pig (7.5% lactose)

Table 3

Feed Budget for Avg. 20 day old 6.5 kg Pigs		
Phase	Pig Weight (kg)	Amount Fed (kg)
1	6.5 - 7.5	0.9
2	7.5 - 9	1.8
3	9 - 11.5	3.2

Make sure all of the pigs receive all diets. Sometimes the smaller pigs are fed more of the Phase 1 diet, but the rest of the barn is switching diets faster and could be on Phase 3, causing the fall behind pen to go from Phase 1

to Phase 3. Intake and performance are hurt, if diets are skipped. Therefore, ensure that the fall behind pen will always be fed all phases.

Gruel Feeding

➤ Gruel feeding is recommended for pigs that have trouble starting on dry feed. Ideally gruel feeding will only need to be done in fall behind pens. Gruel feed should be made out of water and commercially available specialized gruel products. Mixed gruel

should have the consistency of oatmeal. Use a bowl or pan for gruel feeding. The pan should be washed and filled with fresh gruel twice daily. Pigs that do not voluntarily eat gruel may be force-fed using a 12cc syringe with the tip cut off. Hand feeding pigs that do not eat on their own. Twice daily feeding should be sufficient to keep these pigs from starving. This can give them a chance to start on feed themselves.



TEMPERATURE

The ideal effective temperature for a newly weaned pig is 28° C. Barns should be 21° C when the pigs are placed and kept there for the first 4 weeks. A desired temperature of 28° C can be achieved using zone heating. Zone temperature can be dropped 2 degrees per week placed. This is a guideline. Pig comfort should determine when to drop or increase zone temperature. Typically zone heat is needed for 2 to 4 weeks depending on pig size, health, and environment.

General rule for zone heating in the creep area is that pigs should lay 1 ½ deep (Figure 1). Pigs should lay touching each other with heads on neighbors' flanks directly under the heater. If pigs are piled 2-3 layers deep (Figure 2) they are too cold and zone heaters should be turned up or lowered closer to the floor. If pigs are lying in a doughnut shaped ring avoiding the area under the heater then the area is too hot and the heater should be turned down or raised.

Figure 1 Pigs with good 1 1/2 deep laying pattern.



Figure 2 Pigs that are chilled and piling.





AIR FLOW

Ventilation should be adequate to provide 2.5 - 3.4 m³/hour per head at minimum setting and 39 m³/hour per head at maximum at

placement of wean pigs. As pigs grow ventilation requirements change. (See Table 4).

Temperature and CFM Requirements* by Stage of Growth**									
Age (weeks)	Weight (kg)	ADG (g)	Weekly Intake (kg)	Feed to Gain	Cumulative Feed Intake (kg)	Desired Room Temp °C	Minimum CFM/Head	Air Exchange Rate Summer	m ³ /hour per Head Summer
3	6.8	163	1.2	1.06	1.2	28.9	1.9	40 sec	42
4	8.6	290	2.4	1.14	3.6	27.8	2.4	40 sec	42
5	11.3	390	3.5	1.21	7.1	26.7	2.7	40 sec	42
6	14.5	454	4.4	1.27	11.5	25.6	3.2	40 sec	42
7	19.1	617	6.3	1.33	17.8	24.4	3.7	40 sec	42
8	23.6	685	7.6	1.40	25.4	23.3	4.4	40 sec	42
9	28.6	712	8.4	1.46	33.8	22.2	5.1	35 sec	42
10	34.0	776	9.9	1.53	43.7	21.1	5.8	35 sec	42
11	39.9	830	11.3	1.60	55.0	20.6	6.8	35 sec	127
12	46.3	880	12.7	1.67	67.7	20.0	7.8	35 sec	127
13	52.6	907	13.9	1.74	81.6	19.4	8.8	35 sec	127
14	59.0	939	15.1	1.81	96.7	19.4	9.2	35 sec	203
15	69.9	957	16.1	1.87	112.8	18.9	10.2	35 sec	203
16	72.6	971	17.0	1.94	129.8	17.8	11.4	35 sec	203
17	79.4	980	17.8	2.00	147.6	17.8	12.4	35 sec	203
18	86.2	980	18.4	2.06	166.0	17.8	13.6	35 sec	203
19	93.0	980	19.0	2.11	185.1	17.8	14.8	35 sec	203
20	99.8	971	19.5	2.17	204.6	17.8	16.0	35 sec	203
21	106.6	953	19.9	2.22	224.5	17.8	17.2	35 sec	203
22	112.9	948	20.2	2.27	244.7	17.8	18.3	35 sec	203
23	119.7	925	20.5	2.32	265.2	17.8	19.5	35 sec	220
24	126.1	903	20.8	2.37	286.0	17.8	20.7	35 sec	220
25	132.0	880	21.0	2.42	307.0	17.8	34.8	35 sec	220
26	137.9	857	21.2	2.47	328.2	17.8	50.3	35 sec	220
27	143.8	835	21.3	2.52	349.6	17.8	67.2	35 sec	254

* NPPC Swine Care Handbook

** Growth and intake curves from PIC internal research

Growth curve for PIC337 sired barrows and gilts fed 3307 NRC Kcal ME. Growth curves are available for all PIC Sire lines fed high, medium, and low energy diets.



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DRAFTS

Drafts affect weaned pigs more severely than older pigs. All efforts should be made to eliminate drafts. Watch pig's laying and dunging pattern to identify drafty areas. Pay attention

and fix holes and curtain sags when found as they create drafts. Ensure all inlets are equalized for even airflow throughout the barn. Place creep mats and zone heat accordingly.



PEN WALKING & FALL BACK/SICK PIG IDENTIFICATION

➤ Pens should be walked twice daily to:

- Check feeders.
- See every pig from snout to tail, head to toe – spend about 2 sec per pig.
- Identify, pull, and treat sick pigs.
- Check waterers.
- Creep feed.
- Fill supplemental feeders.
- When finding any issue that is unknown or suspicious, call your supervisor and or your herd veterinarian to get advice.

➤ It is important to provide sick pigs or pigs that are falling behind with extra care,

which starts with a timely identification.

Signs of falling back are:

- Rough hair coat or fuzzy appearance.
- Sucked in flanks. Obvious empty belly. It's a good idea to pick the pig up and feel the belly. A rough looking pig with a full belly is probably okay.
- Depressed or lethargic. Head down or droopy.
- Not active or competing. Often these pigs will be huddled together or off by themselves.
- Temperature of $>39^{\circ}\text{C}$.

Figure 3a



Figure 3b



Fall Behind Pigs

Sucked in flanks and stomach are a good indication that a pig has not been eating.

Figure 4



Healthy Pigs

Some pigs have rough hair coats which is typical 3-6 days post wean but bellies are round indicating that the pigs are on feed and doing well.



FALL-BACK MANAGEMENT

Fall-back pigs are pigs that simply had trouble starting on solid feed and competing with their pen mates. There is generally no disease issue with these pigs. Once identified, fall-back pigs should be placed in a pen with other fall-back pigs. This pen should have extra resources for these pigs including:

- Extra supplemental heat;
- Extra mat space;
- Gruel feeding station;

- Small round supplemental feeder.

Extra time should be spent managing the fall behind pen. Gruel feed should be freshened twice daily. Bowl should be dumped and rinsed out before fresh feed is placed. If pigs do not voluntarily eat gruel feed, then they should be hand fed. Hand feeding fall-back pigs 4-6 times per day can be enough to keep these pigs from starving and give them a chance to recover.



HOSPITAL PEN MANAGEMENT

Once a pig has been identified as being sick it either needs to be treated in its current pen or removed, treated, and placed in a hospital pen. If the pig is still fairly active and competitive then it can be treated and left in its current pen. Mark the pig so that it can receive follow-up treatments and observation. If a pig is deemed non-competitive then it needs to be removed and placed in a hospital pen. The pig will have a better chance of recovery in the hospital pen.

Hospital pens should be located in the middle or end of the barn. Hospital pens should also be half-sized pens to make pig management and

observation easier.

Consult your herd veterinarian for the proper treatment for the clinical signs observed. Once a pig has recovered then it should be moved to a recovery pen.

Once it is determined that a pig doesn't have a reasonable chance of recovery or does not respond to treatment within two days it should be humanely euthanized using an approved method. The US National Pork Board and AASV have published guidelines for the humane euthanasia of pigs for your use as reference.



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