

Table 1. Benchmark Analysis By Non-Productive Days
(246 Sow Farms, US & Canada combined, 2012)

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	Bottom 10%	Bottom 33%	Avg	Top 33%	Top 10%
Non-Productive days (w/o gilt pool)	60.3	50.1	38.1	27.8	23.9
No. Farms	25	82	246	82	25
No. Sows	51,419	186,000	527,000	154,042	35,522
Total Productivity Index™ (mated)	40.9	43.1	46.4	49.2	50.4
Pigs weaned / mated female / yr (PWMMFY)	21.2	22.4	24.1	25.6	26.2
Pigs weaned / farrowing space / yr (PWCY)	127.1	140.2	150.6	155.4	144.9
Litters / mated female / yr (LMFY)	2.13	2.22	2.32	2.39	2.40
Weaned and served < 7 days %	78.5%	80.0%	83.9%	86.4%	86.6%
Weaned and served > 7 days %	21.2%	19.6%	14.8%	11.9%	10.5%
Repeat services %	16.0%	12.3%	8.6%	5.5%	4.3%
Gilt services %	20.6%	19.1%	18.5%	19.5%	20.4%
Multiple matings %	86.7%	90.1%	89.6%	90.9%	94.2%
Matings per service	2.0	2.0	2.0	2.1	2.2
Wean-1st service (days)	9.3	8.6	7.5	6.7	6.4
Previous week wean bred within 7 days %	66.4%	67.6%	70.9%	71.5%	72.0%
% Pregnant at day 35	88.0%	89.5%	91.2%	93.0%	94.1%
% Pregnant at day 72	83.4%	85.9%	88.6%	91.1%	92.2%
% Pregnant at day 105	79.9%	83.4%	86.8%	89.9%	91.0%
Farrowing rate	78.3%	81.9%	85.7%	89.2%	90.3%
Farrowed as % of mated inventory	4.0%	4.3%	4.4%	4.5%	4.5%
Avg total born	12.7	12.9	13.1	13.3	13.5
Avg born dead	1.4	1.4	1.2	1.1	1.2
Avg Stillborn	1.0	1.0	0.9	0.8	0.8
Stillborn %	7.9%	7.4%	6.8%	6.2%	6.0%
Avg Mummified	0.4	0.4	0.3	0.3	0.3
Mummified %	3.1%	3.1%	2.5%	2.2%	2.6%
Avg live born	11.3	11.6	11.9	12.2	12.3
Average farrowing interval	151.9	149.7	146.7	144.4	143.7
Pre-wean mortality %	13.6%	13.3%	12.7%	12.7%	11.8%
Average lactation length	19.6	19.6	19.9	20.3	20.8
Average wean age	19.9	19.6	20.0	20.4	21.0
Pigs weaned / sow	9.5	9.7	10.1	10.4	10.7
Pigs weaned / sow farrowed	9.6	9.9	10.3	10.6	10.8
Pigs weaned per lifetime per female	36.5	38.3	41.3	44.6	44.5
Herd parity (w/o gilt pool)	2.5	2.5	2.6	2.6	2.6
% Pregnant	80.1%	80.7%	80.3%	79.9%	80.2%
% Lactating	11.0%	11.4%	12.4%	13.1%	13.1%
% Weaned Not Yet Served	7.6%	6.7%	6.3%	6.4%	6.2%
% Open	1.3%	1.2%	1.0%	0.7%	0.5%
Annual culling %	45.9%	46.6%	48.5%	50.7%	53.7%
Annual sow death %	7.3%	7.3%	6.0%	4.9%	4.3%
Annual sows destroyed %	1.1%	1.2%	1.9%	2.8%	2.3%
Annual sow removals %	55.1%	56.6%	58.6%	62.7%	66.8%
Average gilt arrival age (days)	243.0	241.0	220.5	204.6	198.4
Average gilt arrival weight	291.1	292.5	284.8	283.3	272.7

Benchmarking non-productive days across sow farms

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We are reporting results from an analysis of the MetaFarms' Sow Manager database that shows averages and distributions for non-productive days across a substantial number of sow farms located in the United States or Canada (Table 1).

As expected, total sow farm productivity as measured by Pigs Weaned/Mated Female /Year or Total Productivity Index™ is much higher for the farms with the lowest, i.e. best, average non-productive days (the Top 10%). Interesting differences in certain component parameters stand out as one looks from the Bottom to the Top 10% viz. % Pregnant at 35d, 70d, 105d; Farrowing Rate; % Weaned Sows Served > 7 Days; Repeat Services %; and, Farrowing Interval. Some of these relationships have been reported previously; on the other hand, this is the first time it has been shown that there are large differences in % Pregnant at various gestational days as well as large differences in the proportion of pregnant sows that drop out between each gestational day checkpoint, i.e. in the Bottom 33 and Bottom 10% farms, a much larger percent of pregnant sows drop out between 0 to 35 d as well as between 35 and 70 d than in the Top 33 and Top 10% farms.

Minor differences in Lactation length or Age at Weaning contribute very little to the large differences in Non-Productive Days. Average herd parity was not different from the Bottom to the Top 10%. Of interest, there is an obvious and consistent relationship between Average Gilt Arrival Weight and Non-Productive Days, i.e. farms with lower (better) Non-Productive Days have lower Gilt Arrival Weights compared with the Top 33%, Bottom 33%, and Bottom 10%.

MetaFarms was founded in 2000 with the intent of developing new Web software applications for animal agriculture. The strategic intent was to create a software and database foundation that could meet the needs of multiple species – swine, beef, poultry,

dairy, and aquaculture. Feedback and requests from producers guided the original database design. The common theme was the need for a data foundation and set of applications that “tie everything together.”

i-Production™ (Integrated Production Management)™ is the set of MetaFarms' software applications and services for the pork industry. It is built-from-scratch, Web software for managing live hog production systems. It includes applications for managing sow farms (Sow Manager™), nursery-finishing (Finishing Manager™), and sales/carcass data (Sales Manager™) It includes modules for managing feed data along with richly-featured and robust functionality for tracking movements, flows, and “products.” i-Production™ also provides interfaces to the main feed mill software programs used in North America. Customers use these interfaces each day to download feed deliveries (diets, ingredients, and costs) and automatically link the feed to sow farms and nursery/finishing/wean-to-finish groups. Similarly, each day – using interfaces we've built —customers download kill sheet load (lot) summary data and individual carcass data from major pork processors and link it to their finishing/wean-to-finish groups.

As of December, 2012, over 2,000 users were tracking over 1 million sows across farms in the US and Canada combined.

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