

Performance Research

Crystal Spring® Wet/Dry Finishing Feeders



**CRYSTAL
SPRING**

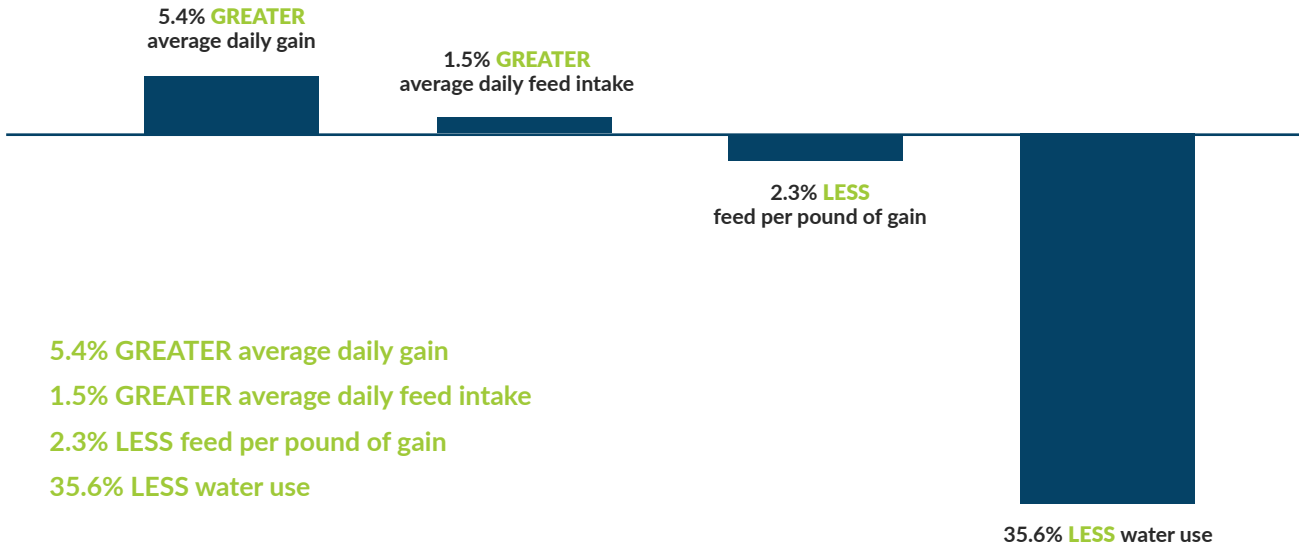
HOG EQUIPMENT

Research conducted by
Gro Master, Inc.
gromaster.com

Crystal Spring® Wet/Dry Finishing Feeder Comparison

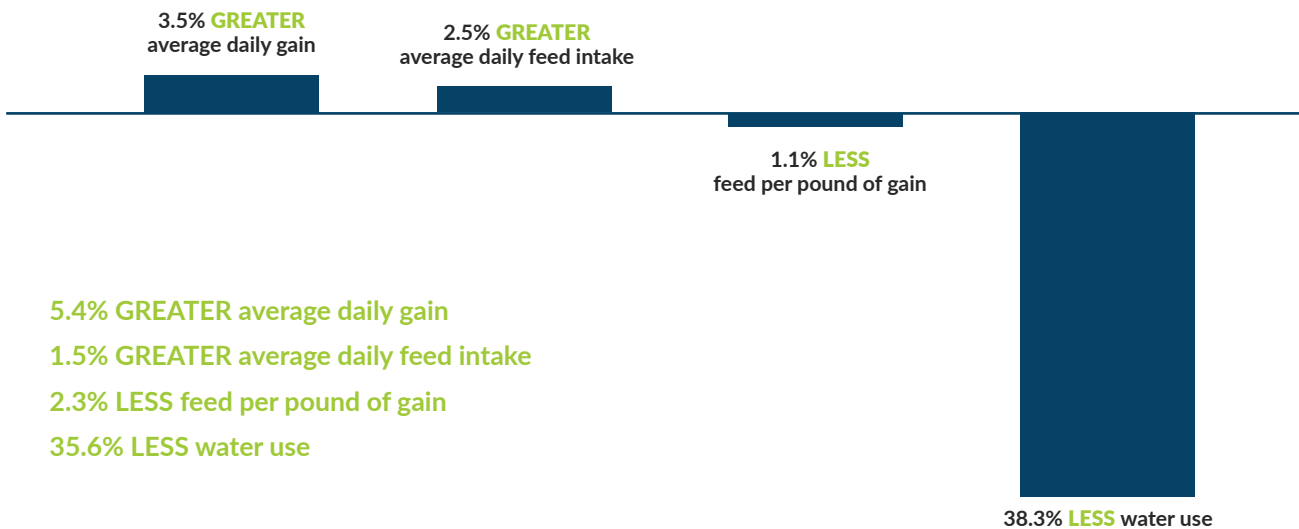
28 FIELD TRIALS

Comparison of Crystal Spring® feeders to dry feeders for grow/finish pigs in 28 field trials with 79,637 pigs.



UNIVERSITY TRIALS

Comparison of Crystal Spring® feeders to dry feeders for grow/finish pigs in 15 university trials with 3,632 pigs.



In test after test the Crystal Spring® Feeding System out performs other feeders in both farm and university research. Increased growth, increased savings of feed and water result in:

13 lbs increased growth performance in 130 days

2.3% improved feed conversion

35% less water wastage

ECONOMICS

	Crystal Spring® Advantage
Feed Advantage per pig	\$3.93
Water Advantage per pig	\$1.93
Total Advantage per pig sold	\$5.35
Advantage per feeder (90 pigs/feeder)	\$482.50

RETURN ON INVESTMENT

	Crystal Spring® Advantage
3 Space-Crystal Spring® feeder, welded wet/dry Feeder cost	\$805
Return on Investment	1.7 Turns
5 Space-Crystal Spring® feeder, bolted wet/dry Feeder Cost	\$1,115
Return on Investment	1.4 Turns

Economic data obtained and summarized from farm and university studies using 15 pigs/space. **Assumptions:** Corn \$3.50/bu, soybean meal \$300/ton, water (pumping, knifing, etc) \$0.0125/gal, live pork \$45/cwt, feed conversion 2.8.

Crystal Spring® Wet/Dry Finishing Feeder Comparison

ILLINOIS PRODUCER

47,142 Total Pigs

	Crystal Spring® Wet/Dry Feeders	Dry Feeders
Number of Pigs Placed	13,647	33,495
Number of Pigs Sold	13,140	32,220
Average Start Weight (lbs)	11.9	11.9
Average Sale Weight (lbs)	276.0	267.1
Average Days on Feed	147.1	149.6
Average Gain (lbs)	264.1	255.2
Average Adjusted Gain to equal days on feed (lbs)	268.4	255.2
Average Increased Gain/Pig (lbs)	13.2	
Average Daily Gain (lbs)	1.72	1.62
Average Daily Feed Consumption (lbs)	4.1	3.8
Feed/Gain	2.36	2.37
Standardized Feed Cost (\$)	0.208	0.207
Standardized Feed Cost/Pig	\$50.94	\$49.37
Full Value Pig (%)	94.45	94.16
Carcass Characteristics	Crystal Spring® Wet/Dry Feeders	Dry Feeders
Average Fat Depth	0.69	0.67
Average Loin Depth	2.76	2.75
Average Lean (%)	55.56	55.74
Average Yield (%)	76.78	76.93

KANSAS STATE UNIVERSITY

Effect of feeder type on growth performance of finishing pigs

	Crystal Spring® Wet/Dry Feeders	Average of 2 Different Dry Feeders	Crystal Spring® Advantage
Starting Weight (lbs)	109	109	
Sale Weight (lbs)	238	229	9
Gain/Pig (lbs)	130	121	9.00
Average Daily Gain (lbs)	1.85	1.72	0.13
Average Daily Feed (lbs)	6.70	6.62	0.08
Feed/Pig [Feed/Gain x Gain] (lbs)	462	464	- 2.00
Feed/Gain	3.57	3.85	- 0.28
Water Usage (gal/pig/day)	1.24	2.15	- 0.91

Goodband et al., - 1994. J. Anim. Sci. 72:375 (Suppl. I)

ECONOMIC ADVANTAGE OF CRYSTAL SPRING® WET/DRY FEEDERS

Economic Advantage/Pig	\$4.81
Value of extra gain is \$0.45/lb x 9.0 lbs	\$4.05
Value of less feed is \$0.06/lb x 2.0 lbs	\$0.12
Cost to remove excess water (\$0.01/gal x 0.91 gal/day x 70 days)	\$.064
Economic Advantage/Feeder/Turn (50 pigs/feeder)	\$240.50

Crystal Spring® Wet/Dry Finishing Feeder Comparison

KANSAS STATE UNIVERSITY

Effect of feeder type on growth performance of finishing pigs

	Crystal Spring® Wet/Dry Feeders	Dry Feeders
Number of Pigs Placed	621	621
Number of Replications	23	23
Average Start Weight (lbs)	63.2	63.1
Growth Data		
Average Daily Gain (lbs)	2.03	1.88
Average Daily Feed Intake (lbs)	5.26	4.86
Feed/Gain	2.59	2.58
Average Sale Weight (lbs)	234	221
Water Usage		
Gallons of Water/Pig/Day	1.48	1.68
Gallons of Water/lb Gain	0.73	0.89

Adapted from Bergstrom et al. 2008. (KSU Fall Swine Days 2008)

Water is not only a precious nutrient but a precious commodity. The more water wasted, the more water in the pit, the more waste that needs to be removed.

Crystal Spring® Wet/Dry Feeders:

- Save almost a gallon of water/day/pig
- Friendly to the environment and the wallet
- Decrease time spent pumping pits and hauling manure
- Decrease fuel cost of manure spreading
- Increase your fertilizer value

EACH CRYSTAL SPRING® FEEDER WILL SAVE MONEY VS. OTHER WATERING SYSTEMS

Type of Waterers	Crystal Spring® Savings (%)	Estimated Water Wasted (Gal/Pig/Day)	Cost/Turn/Pig	2 Space Double Sided Feeder (60/Pigs/Feeder)	2.5 Turns/Year
Fence Line Nipples	35-45	0.85	\$1.02	\$61.20	\$153
Swinging Nipples	25-35	0.50	\$0.60	\$36.00	\$90
Water Cups	10-15	0.20	\$0.24	\$14.40	\$36

Cost based upon \$0.01/gallon to spread excess water. Assuming 120 DOF/pig.

Crystal Spring® Wet/Dry Finishing Feeder Comparison

SOUTH DAKOTA PRODUCER

	Crystal Spring® Wet/Dry Feeders	Dry Feeders	Crystal Spring® Advantage
Number of Turns	10	6	
Number of Pigs Placed	4,685	2,861	
Number of Pigs Sold	4,592	2,788	
Liveability (%)	98.0	97.5	0.5
Starting Weight (lbs)	45	46	-1
Average Sale Weight (lbs)	249	241	8
Average Gain (lbs)	204	195	9
Average Pig Days on Feed (lbs)	127	125	2
Average Daily Gain (lbs)	1.77	1.70	0.07
Feed/Pig [Feed/Gain x Gain] (lbs)	588	571	17
Feed/Gain	2.88	2.93	- 0.05

Meal ration. PIC Genetics. Only gilts were used in these turns

ECONOMIC ADVANTAGE OF CRYSTAL SPRING® WET/DRY FEEDERS

Economic Advantage/Pig	\$3.40
Value of extra gain is \$0.50/lb x 9.0 lbs	\$4.50
\$3.40/pig x 50 pigs/feeder	\$170.00
2.6 turns/year at \$170/turn	\$442.00

Extra income from ONE
feeder in ONE year!




SOUTHEASTERN PRODUCER

	Crystal Spring® Wet/Dry Feeders	Dry Feeders	Crystal Spring® Advantage
Number of Pigs/Pen	22	22	
Number of Pigs Placed	1,565	1,523	
Starting Weight (lbs)	49	46	
Sale Weight (lbs)	260.26	254.22	
Average Daily Gain (lbs)	1.55	1.52	0.03
Feed/Gain	2.81	2.91	- 0.10
Feed/Pig [Feed/Gain x Gain] (lbs)	594	607	14
Feed Cost/Pig @ \$200/Ton	\$59.37	\$60.74	\$1.37
Value of Gain @ \$55/cwt	\$116.20	\$114.81	\$1.39

ECONOMIC ADVANTAGE OF CRYSTAL SPRING® WET/DRY FEEDERS

Economic Advantage/Pig	\$2.76
Advantage/turn is \$2.76/pig x 44 pigs	\$121.44
Advantage/year is \$121.88/turn x 2.6 turns/year	\$170.00
Advantage/barn is \$316.89 x 22	\$442.00

Real money in
YOUR pocket!



Crystal Spring® Wet/Dry Finishing Feeder Comparison

THREE FIELD STUDIES*


	Crystal Spring® Wet/Dry	Tube Feeders	Crystal Spring® Advantage
Number of Pigs Placed	34,353	17,633	
Average Weight Gain (lbs)	203	192	11
Average Daily Gain (lbs)	1.73	1.67	0.06
Feed/Gain	3.06	3.13	0.07
Feed Cost/Pig	\$37.32	\$36.06	-1.26

ECONOMIC ADVANTAGE OF CRYSTAL SPRING® WET/DRY FEEDERS

Economic Advantage/Pig	\$3.69
Value of extra gain is \$0.45 x 11 lbs	\$4.95
Advantage/feeder is \$4.95 x 50 pigs/feeder	\$181.50
Advantage/year is \$181.50 x 2.5 turns/year	\$461.25

* Values were weighted per number of pigs in each test.

Extra Income from
ONE feeder in
ONE year!



CENTRAL US PRODUCER

	Crystal Spring® Wet/Dry	Tube Feeders	Crystal Spring® Advantage
Number of Buildings	6	1	
Number of Groups/Building	8	8	
Total Number of Pigs Placed	28,545	4,828	
Average Start Weight (lbs)	51	55	
Average Sale Weight (lbs)	257	252	
Average Gain (lbs)	206	197	9
Average Pig Days on Feed	112.0	110.8	1.20
Average Daily Gain (lbs)	1.79	1.72	0.07
Average Adjusted Gain to equal days on feed (lbs)			6.74
Feed/Gain	3.11	3.17	-0.06
Feed/Pig (lbs)	642	626	

ECONOMIC ADVANTAGE OF CRYSTAL SPRING® WET/DRY FEEDERS

Economic Advantage/Pig	\$3.58
Advantage/feeder is \$3.58/pig x 50 pigs	\$179.00
Advantage/year is \$179.00 x 2.5 turns/year	\$447.50

The Crystal Spring® feeder can feed more pigs/inch of linear feed space, increasing the economic advantage/feeder.

Extra income from ONE feeder in ONE year!

Crystal Spring® Wet/Dry Finishing Feeder Comparison

IOWA PRODUCER

	Crystal Spring® Wet/Dry	Aqua Tube Feeders	Crystal Spring® Advantage
Number of Pigs Placed	1167	1169	
Average Starting Weight (lbs)	51	51	
Number of Pigs Sold	1150	1144	
Average Sale Weight (lbs)	241	237	
Average Days on Feed	126	130	
Gain (lbs)	190	186	4
Average Daily Gain (lbs)	1.51	1.43	0.08
Liveability (%)	98.5	97.9	0.60
Average Adjusted Gain to equal days on feed (lbs)			10.3
Feed/Gain	2.86	2.88	
Feed/Pig [Feed/Gain x Gain] (lbs)	543	536	

ECONOMIC ADVANTAGE OF CRYSTAL SPRING® WET/DRY FEEDERS

Economic Advantage/Pig	\$4.22
Value of extra gain is \$0.45/lb x 10.3 lbs	\$4.64
Value of extra feed is \$0.06/lb x 7 lbs	-\$0.42
Advantage/feeder is \$4.22 x 50 pigs/feeder	\$211.00
Advantage/year is \$211.00 x 2.5 turns/year	\$527.50

Extra income from ONE
feeder in ONE year!



IOWA PRODUCER

	Crystal Spring® Wet/Dry	Tube Feeders	Crystal Spring® Advantage
Number of Pigs Placed	4,641	11,636	
Average Starting Weight (lbs)	46	48	-2.70
Average Sale Weight (lbs)	235	236	-0.60
Average Gain (lbs)	189	187	2
Average Daily Gain (lbs)	1.44	1.44	0.00
Average Feed/Pig (lbs)	536.8	547.6	10.80
Feed/Gain	2.84	2.93	0.09
Liveability (%)	92.24	92.16	0.08
Culls (%)	6.26	6.28	0.02
Cost/lb	\$0.369	\$0.373	\$0.004
Cost/Pig Sold	\$86.75	\$87.88	\$1.13

(cost x average market wt.)

ECONOMIC ADVANTAGE OF CRYSTAL SPRING® WET/DRY FEEDERS

Economic Advantage/Pig	\$1.93
Value of extra gain is \$0.40/lb x 2 lbs	\$0.80
Cost/pig sold (cost x ave. pig weight sold)	\$1.13
Advantage/barn (4280 pigs)	\$ 8,260

Real money in
YOUR pocket!





THANK YOU

If you have any question, please contact us:

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