



June 2014
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www.RCMInternationalllc.com

International Experience

RCM has provided consulting services in Armenia, Australia, Belize, Canada, Chile, China, Colombia, Costa Rica, Ecuador, Estonia, Ireland, Italy, Japan, Korea, Mexico, Mongolia, the Philippines, Poland, Spain, and Taiwan.

Digester Systems

Dairy and Codigestion

Complete Mix

- ❖ February 2014 Greenwood Dairy, Canton, NY 1,500 cows, 400 kW, Separator
- ❖ December 2013 **CODIGESTION** Longview Dairy, Hadley, NY, 350 cows, substrates, 300 kW
- ❖ October 2013 Diamond K Dairy, Altura, MN 1300 cows, 300 kW, Separator
- ❖ March 2013 **CODIGESTION** Keefer Dairy, Chambersburg, PA 500 cows, substrates, 225 kW, Separator
- ❖ January 2013 **CODIGESTION** Yippie Farms, Mt Joy, PA, 1,100 cows, substrates 500 kW, separator
- ❖ December 2012 **CODIGESTION** Reinford-Frymoyer, Mifflintown, PA 400 heifers, substrates, 225 kW, Separator
- ❖ Sept 2012 - **CODIGESTION** Sensenig Farms, Lancaster County, PA, 250 cows, 2200 finisher pigs, 33,000 hens, 200 kW, separator
- ❖ July 2012 - **CODIGESTION** Maplehurst Farms, Greensboro, VT, 400 cows, 150 kW, separator
- ❖ April 2012- **CODIGESTION** Mill Creek Dairy, OH, 2000 cows, 450 kW, Separator
- ❖ Feb 2012 – **CODIGESTION** Walker Farms, Fort Ann, NY, 1200 cows, 300 kW, separator
- ❖ Dec 2011 – **CODIGESTION** Oak Hill Farm, Nottingham, PA, 100 cows & 4,500 pigs, 40 KW
- ❖ April 2011 – Pennwood Dairy, Berlin, PA, 600 cows, 180 kW, separator
- ❖ Feb 2011 – **CODIGESTION** Kish View Farms, Belleville, PA, 400 cows, 130 KW, separator
- ❖ Nov 2010 – **CODIGESTION** S&A Kreider & Sons Farms, Quarryville, PA, 750 cows, 225 kW, separator
- ❖ Oct 2010– **CODIGESTION** Landyshade Farms, Lancaster, PA, 500 cows, 180 KW, separator
- ❖ July 2010– **CODIGESTION** Chaput Family Farms, North Troy, VT, 1600 cows, 300 KW, separator
- ❖ July 2010 – Roach Dairy, Venice Center, NY, 2500 cows, 450 KW, separator
- ❖ Dec 2009 – **CODIGESTION**, Zuber Farms, Byron, NY, 1800 cows, 399 KW, separator
- ❖ May 2008 – **CODIGESTION** Reinford Dairy, Mifflintown, PA, 450 cows, substrates, 130 KW, separator
- ❖ December 2007 – **CODIGESTION** Brubaker Dairy, Mt. Joy, PA, 700 cows, substrates, 225 KW, separator
- ❖ July 2007 – Wanner's Pride-n-Joy, Lancaster PA, 600 cows, 120 KW, generator, separator
- ❖ August 2006 – Penn England, Williamsburg, PA, 800 cows, 120 KW, generator, separator
- ❖ October 2005 – **CODIGESTION** Patterson Dairy, Auburn, NY, 1,200 cows, organic wastes, 450 KW, building heat, separator.
- ❖ November 2001– **CODIGESTION** Ridgeline Dairy (formerly Matlink Dairy), Clymer, NY, 400 cows, organic wastes, 165 KW, building heat, separator



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Heated Mixed Lagoon Digester

- ❖ April 2009– **CODIGESTION**, Tollenaar Holsteins, Elk Grove CA, 1,000 cows, 225 KW.

Ambient Mixed Lagoon Digester

- ❖ October 2009 – Agricola Ganadera Los Lujan, Delicias, Mexico, 7,000 cows, 600 KW
- ❖ August 2008 – Bullfrog Dairy, Imperial, CA, 3,300 cows 300 KW generator
- ❖ May 2008 – Cal-Denier Dairy, Galt, CA, 600 cows 60 KW generator
- ❖ August 2004 – Castelanelli Dairy, Lodi, CA, 1,600 cows plus replacements, 300 KW generator
- ❖ July 1995 – 1998- Cal Poly Dairy, San Luis Obispo, CA – Process design, 400 cow capacity

Plug Flow

- ❖ October 2006 - Dovan Farms, Berlin, PA, 500 cows, 135 KW, generator, separator
- ❖ July 2006 – Schrack Farms, Loganton, PA, 1,000 cows, 230 KW, generator, separator
- ❖ July 2006 – Sunny Knoll Farm, Perry NY, 1,500 cows, 230 KW, generator, separator
- ❖ July 2006 – Four Winds Dairy, Ulysses, PA, 700 cows, 120 KW, generator, separator
- ❖ May 2006 – Emerling Dairy, Perry, NY, 1,200 cows, 230 KW, generator, separator
- ❖ January 2006 – Eden Vale Dairy, Lemoore, CA, 1,000 cows, 140 KW, generator, separator
- ❖ February 2005 –Van Ommering Dairy, Lakeside, CA, 600 cows, 85 KW generator, separator
- ❖ June 2004 – Meadowbrook Dairy, El Mirage, CA, 1,400 cows digester, 180 KW generator, separator
- ❖ October 2003 – **REGIONAL**, Port of Tillamook Bay, Tillamook, OR, 8 farms combined at 2,000 cow regional digester, 240 KW, building heat, separators
- ❖ September 2003 – Northern Plains Dairy, Saint Peter, MN, 3,000 Jersey cow digester, 270 KW, building heat, separators
- ❖ October 2002 – Hillcrest Dairy (formerly New Horizons Dairy), Elmwood, IL, 2,000 cow digester, 240 KW, building heat, separators
- ❖ May 2002– Stencil Dairy, Denmark, WI, 1200 cows, 160 KW, building heat, separator
- ❖ January 2002 – Rebuild, update and expand non-RCM digester, Koetsier Dairy, Visalia, CA 1500 cows, 210 KW, building heat, separator
- ❖ October 2001 – New Hope View Farm (formerly DDI), Homer, NY, 1000 cows, boiler, experimental gas turbine, building heat, separator
- ❖ September 1999 – ICF, Inc./AgSTAR, Haubenschild Dairy, Princeton, MN - 1000 cows, 135 KW engine, building heat, separator
- ❖ September 1997 – ICF, Inc./AgSTAR, Freund Dairy, E. Canaan, CT, - 250 cows, boiler, building heat, separator
- ❖ September 1997 – ICF, Inc./AgSTAR, AA Dairy, Candor, NY - 1000 cows, 120 KW engine, boiler, building heat, separator
- ❖ December 1996 – Craven Dairy, Cloverdale, OR - 1000 cows, 120 KW, separator
- ❖ December 1985 – Luiz Dairy, Lodi, CA - Rebuild non-RCM 900 cows, 140 KW,
- ❖ February, 1985 – M&M Dairy, Gonzales, CA - 400 cows, 60 KW, separator
- ❖ June, 1983 – Frey Dairy, Conestoga, PA - 600 cows, 100 KW, separator
- ❖ December, 1982 – **CODIGESTION** Langerwerf Dairy, Durham, CA - 500 cows, 85 KW, building heat, separator

Beef Cattle and Substrate

Complete Mix

- ❖ October 2006 – **CODIGESTION**, E3 Biofuels, Mead, NE, 28,000 beef feeders, ethanol stillage

Chicken

Complete Mix

- ❖ October 1999 – Yerman Egg Ranch, CA, 140,000 layers, 110 kW

Swine

Complete Mix

- ❖ July 2011 – **CODIGESTION**, Ideal Family farms, 11,000 finishers, substrates, 180 kW
- ❖ March 2008 – Ballard Hog Farm, Provo, UT, 400 sows farrow to finish, 60 kW
- ❖ October 2005 – **CODIGESTION**, Dodge, NE, Kluthe Hog Farm – 8,000 Finishers, 80 KW
- ❖ September 2004 – Wheatland, WY, Wyoming Premium Farms - 18,000 finishers, 180 KW
- ❖ December 2003 – Wheatland, WY, Wyoming Premium Farms - 5,000 sow farrow to wean, 80 KW
- ❖ October 2000 – **CODIGESTION**, Rebuild, update and expand non-RCM digester, Rocky Knoll Farms, Lancaster, PA, 4,000 pigs and organic waste, 120 KW generator
- ❖ September 1999 – ICF, Inc./AgSTAR, Colorado Pork, Lamar, CO - 5,000 sow farrow to wean, 80 KW generator
- ❖ July 1999 – ICF, Inc./AgSTAR SWUSA, Thayer, IA, - 5,000 sow farrow to wean, 80 KW generator
- ❖ October 1997 – Seoul National Technical University, 5 m³ - research digester
- ❖ October 1989 – NMP, Tokyo, Japan - Kazuno Farm - 2 digesters - 925 sow farrow to finish (21,000 hogs), 80 KW
- ❖ January 1989 – NMP, Tokyo, Japan, Yokohama Farm, Aomori - 2 digesters, 1250 sow farrow to finish (30,000 hogs), 120 KW, building heat
- ❖ November 1988 – Sugar Creek Hog Farm, Crawfordsville, IN - 3000 sow farrow to finish (36,000 hogs), 400 KW
- ❖ August 1988 – Ireland, Private Client - Complete mix digester, 250 sow farrow to finish
- ❖ March 1986 – DJ Acres, Seven Valleys, PA - 1800 sow farrow to finish (18,000 hogs), 150 KW, building heat

Ambient Mixed Lagoon Digester

- ❖ September 2013 - Cameron Pastoral (Lapunyah) Gundiwindi, QLD, Australia, 1200 sow farrow to finish, 170 kW,
- ❖ November 2012 – Pronaca (Campo Lindo), Ecuador, 200 sow farrow to finish, flare
- ❖ September 2009-Pronaca (Tropicales), Ecuador, 11,200 finishers, flare
- ❖ February 2009- Pronaca (Colorados), Ecuador, 10,000 nursery, flare
- ❖ Nov 2008 – Pronaca (Zaracay), Ecuador, 10,500 nursery, flare
- ❖ July 2008 - Pronaca (Toachi) , Ecuador, 8,000 sows and 24,000 nursery, flare
- ❖ May 2008 - Pronaca (Oro), Ecuador, 11,200 finishers, flare
- ❖ March 2008 - Pronaca (Socorro), Ecuador, 7,200 finishers, flare
- ❖ Winter 2004 – 5 - Agricola Ltda., Santiago, Chile, 22,000 sows farrow to wean flare
- ❖ Winter 2004 – 5 - Agricola Ltda., Santiago, Chile, 13,500 sows farrow to wean flare
- ❖ Winter 2004 – 5 - Agricola Ltda., Santiago, Chile, 18,000 sows farrow to wean, flare
- ❖ April 2003 – Agricola Ltda., Santiago, Chile, 20,000 sows farrow to feeder, flare



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❖ **Ambient Mixed Lagoon Digester (continued)**

- ❖ July 2002 – **REGIONAL**, Agricola Ltda., Santiago, Chile, **90,000** finish hogs, flare
- ❖ September 1998 – ICF, Inc./AgSTAR, Piney Woods School, Rankin County, MS, 120 pigs, flare
- ❖ June 1998 – ICF, Inc./AgSTAR, Boland Farm, Williamsburg, IA, 2,700 nursery pigs, flare
- ❖ April 1997 – Martin Hog Farm, S. Boston, VA - 600 sow, farrow to feeder, flare
- ❖ December 1996 – ICF, Inc./ AgSTAR, Barham Farm, Zebulon, NC - 4000 sows, farrow-wean, 120 KW, building heat
- ❖ October 1992 – Palmer Farm, Yell County, AR - 300 sow, farrow to feeder, flare

Heated Mixed Lagoon Digester

- ❖ September 2013 Cameron Pastoral, (Limebush) Gundiwindi, QLD, Australia, 12,000 finishers, 170 kW,
- ❖ March 2003 – **REGIONAL**, Agricola Ltda., Santiago, Chile, **120,000** finish hogs, boiler
- ❖ February 2003 – **REGIONAL**, Agricola Ltda., Santiago, Chile, **238,000** finish hogs, boiler
- ❖ December 2000 – **REGIONAL**, Agricola Ltda., Santiago, Chile, **120,000** finish hogs, boiler
- ❖ June 1998 – Apex Pork, Rio, IL, 8,900 finish hogs, boiler

Representative Non-Farm Clients

Electrical Generation Service

- ❖ January 1986 – Salinas STP #1 Monterey Co., CA - 150 KW generator with heat recovery

Government

USEPA, USDA-NRCS- AgSTAR Program
Mojave Tribe – Arizona
Ak-Chin Tribal Utility – Arizona
Tulalip Tribe – Washington
California Energy Commission
Minnesota Department of Agriculture

University

Washington State University
California State University, San Luis Obispo
State University of New York, Morrisville
E. Kentucky State University
South Dakota State University
Cornell University Vet School

Commercial -Industrial

MEAD Project, Tillamook Co., OR
Alliant Energy WI
Saphire Energy (algae), NM
North State Rendering, CA
Sonoma County, CA
Recology (Solid waste), CA

International

Methane to Markets - *Hog Farm* – Mexico, *Meat Packer* – Colombia, *Meat Packer* – Mongolia, *Hog Farm* – China, *Dairy* - Argentina
Eloka – Regional digester Cyprus
Carandini Dairy, Torre im Pietra, Rome, Italy
Ainia, Valencia, Spain
Sustainable Energy, Victoria, Australia
Ontario Hydro, Toronto, Canada
Metz Farms, New Brunswick, Canada
Canadian Pork Council, Ottawa, Canada
Nippon Meat Packers, Japan
Silk Roads, Ltd. Philippines
Del Sur Hog Farm, Lipa City, Philippines
Agricola Super, Ltda., Santiago, Chile
Poricultores de Jalisco, Mexico
Poricultores de Colombia, Bogota
Consejo Mexicano de Porcicultura - Mexico
Private Client – Chicken producer, Romania
Delicias Juices SA, Guatemala City
Danone Milk Products, Mexico
Ovobrand Egg Producers, Argentina
Adecoagro Dairy, Argentina
Private Ethanol Producer, Poland