



# The Poultry Informed Professional



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## Campylobacter jejuni Strains from Patients with Guillain-Barré Syndrome

In Japan, O:19 is the most common serotype among GBS-associated *C. jejuni* strains. To determine whether serotype O:19 occurs among GBS-associated strains in the United States and Europe, researchers serotyped seven such strains and found that 2 (29%) of 7 GBS-associated strains from patients in the U.S. and Germany were serotype O:19.

To determine whether GBS-associated strains may be resistant to killing by normal human serum (NHS), researchers studied the serum susceptibility of 17 GBS- and 27 enteritis-associated strains (including many O:19 and non-O:19 strains) using *C. jejuni* antibody positive (pool 1) or negative (pool 2) human serum. Using pool 1

Guillain-Barré syndrome (GBS), an acute demyelinating peripheral neuropathy, may be triggered by an acute infectious illness; infection with *Campylobacter jejuni* is the most frequently reported antecedent event.

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Broiler Performance Data (Region)  
Live Production Cost

	SW	Midwest	Southeast	Mid-Atlantic	S-Central
Feed cost/ton w/o color	144.30	138.23	150.39	151.28	145.85
Feed cost/lb meat	13.69	13.23	14.60	15.20	14.91
Days to 4.6 lbs	48	46	49	46	46
Med. cost/ton	2.45	1.96	3.40	2.83	2.41
Chick cost/lb	4.36	3.98	4.05	3.85	3.65
Vac-Med cost/lb	0.06	0.05	0.09	0.07	0.10
WB & 1/2 parts condemn. cost/lb.	0.22	0.25	0.30	0.25	0.32
% mortality	4.86	4.76	5.39	4.48	5.91
Sq. Ft. @ placement	0.80	0.77	0.81	0.79	0.87
Lbs./Sq.Ft.	5.70	6.45	6.10	6.44	6.26
Down time (days)	14	10	9	12	10

Data for week ending 08/22/98.

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## **Campylobacter jejuni Strains from Patients with Guillain-Barré Syndrome**

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serum, they found that 1 (6%) of 18 serotype O:19 strains compared with 11 (42%) of 26 non-O:19 strains were killed; results using pool 2 serum were nearly identical. Finally, 8 O:19 and 8 non-O:19 strains were not significantly different in their ability to bind complement component C3. Serotype O:19 *C. jejuni* strains were over-represented among GBS-associated strains in the U.S. and Germany and were significantly more serum-resistant than non-O:19 strains.

The increasing awareness of the importance of *C. jejuni* infection in triggering GBS is another example of how previously well-described diseases have emerged as sequelae of acute infectious illnesses. This study attempts to begin to characterize the nature of this association; however, there is much to learn about how an acute gastrointestinal infection results in ascending paralysis. One fact is quite clear: many more people are infected with *C. jejuni* than contract GBS subsequently. Perhaps some persons are predisposed to contracting GBS after infection with campylobacters that might cause only uncomplicated enteritis in another patient. Conversely, some strains may be more likely than others to trigger GBS. No associations between human leukocyte antigen (HLA) types and GBS have been found. However, in Great Britain and Japan, an association between HLA type and *C. jejuni*-associated GBS has been suggested. Perhaps some combination of familial susceptibility, HLA type, strain serotype, or other host or strain characteristics together play a role in the pathogenesis of *C. jejuni*-induced GBS.

The relative serum-resistance of O:19 strains correlates with mechanism. Furthermore, the relevance of these in vitro assays to the susceptibility of organisms in vivo cannot be known with certainty. Researchers speculate that the relative insensitivity of these strains to the lytic effects of complement allows them to trigger a heightened specific immunologic response. We further speculate that this heightened immunologic response leads to injury of peripheral nerve structures. Since only a small fraction of infections caused by *C. jejuni* O:19 lead to GBS (estimated incidence 1 in 158), additional factors also must be involved in vivo.

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**Source:** *Emerging Infectious Diseases*. April-June 1998.

### **Excerpts from the latest Economic Research Service and National Agricultural Statistics Service USDA Reports**

**“Livestock, Dairy and Poultry Situation and Outlook (ERS)”**

**“Broiler Hatchery” and “Chicken and Eggs” (NASS)**

are expected for the last half and for the year as a whole. This would be the lowest production increase since a 1-percent rise in 1982.

### **Broiler Production Increasing Slowly**

The Economic Research Service (ERS) reports that broiler production increased fractionally in the second quarter of 1998, relative to a year ago. Hatchery supply flock problems limited increases in bird numbers and hot weather allowed growth rates in some of the leading southern production areas. Slightly stronger increases in broiler-type chick hatch in the second quarter, relative to the first quarter, indicate a stronger production increase in the third quarter. A recovery in slaughter weights is expected as hot weather eases in August. Production increases of about 2 percent

**Excerpts from the Latest ERS and NASS USDA Reports**  
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Wholesale prices for whole broilers rose more than 20 percent between mid-May and early August, to nearly 8 cents above last year. Prices typically rise seasonally, but price increases have been stronger than normal. Slower production increases and escalating demand are probably responsible for the price increases. Currently prices are projected to set a record high in 1998.

Strength in the fast food market is reflected in stronger prices for skinless boneless breast meat and wings up about 10 percent and 20 percent from a year ago, respectively, for May through early August. Leg quarter prices have strengthened about 5 cents a pound since June and are expected to be about 15 percent above a year ago during August. Slow increases in production and strengthening exports are probably behind the increase.

Production is expected to increase 5 percent in 1999 as the hatchery supply flock increases and heightened producer profitability make production increases more attainable and attractive. Producer net returns are expected to be near record highs this summer as prices have increased and feed costs are expected to be about 20 percent below a year ago. Pullet hatch for potential placement in the hatchery supply flock was 15 percent above a year ago in June, the largest increase since November 1997.

**Broiler Eggs Set Up 1 Percent**

The National Agricultural Statistics Service (NASS) reports commercial hatcheries in the 15-state weekly program set 175 million eggs in incubators during the week ending August 22, 1998. Up 1-percent from the corresponding week a year earlier. Average hatchability during the week was 80 percent.

**Broiler Chicks Placed Up Slightly**

Broiler growers in the 15-state weekly program placed 137 million chicks for meat production during the week of August 22, 1998. Up slightly from the comparable week in 1997. Cumulative placements from

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**Broiler Performance Data (Company)**  
**Live Production Cost**

	Average Co.	Top 25%	Top 5 Co's
Feed cost/ton w/o color	148.30	142.48	138.90
Feed cost/lb meat	14.58	13.43	13.28
Days to 4.6 lbs	46	47	48
Med. cost/ton	2.72	1.81	1.53
Chick cost/lb	4.05	4.00	3.75
Vac-Med. cost/lb	0.08	0.04	0.04
WB & 1/2 parts condemnations cost/lb	0.27	0.17	0.30
% Mortality	5.15	4.05	5.02
Sq. Ft. @ placement	0.60	0.77	0.78
Lbs/Sq. Ft.	6.12	6.06	6.11
Down time (days)	11	11	12

Data for week ending 08/22/98.

**Broiler Whole Bird Condemnation (Region)**

	SW	Mid-West	S. East	Mid-Atlantic	S. Central
% Septox	0.270	0.371	0.212	0.275	0.300
% Airsac	0.073	0.053	0.272	0.135	0.197
% I.P.	0.076	0.083	0.236	0.214	0.231
% Leukosis	0.005	0.006	0.016	0.022	0.022
% Bruise	0.010	0.010	0.019	0.012	0.037
% Other	0.023	0.018	0.109	0.015	0.024
% Total	0.457	0.541	0.866	0.673	0.813
% 1/2 parts condemnations.	0.421	0.454	0.355	0.331	0.488

Data for week ending 08/22/98.

**Excerpts from the Latest ERS and NASS USDA Reports**  
(continued from page 3)

January 4, 1998, through August 22, 1998 were 4.61 billion, up slightly from the same period a year earlier.

The July hatch of broiler-type chicks, at 723 million, was up 2 percent from July 1997. Leading breeders placed 6.73 million broiler-type chicks for future domestic hatchery supply flocks during July 1998, down 6-percent from the relatively high level of 7.17 million in July 1997.

**July Egg Production Up 4 Percent**

U.S. egg production totaled 6.68 billion during July 1998, up 4 percent from the 6.44 billion produced in 1997. Production included 5.64 billion table eggs and 1.04 billion hatching eggs, of which 982 million were broiler type and 57.0 million were egg type. The total number of layers during July 1998 averaged 308 million, up 3 percent from July 1997. July egg production per 100 layers was 2,172 eggs, up 1 percent from 2,155 eggs in July 1997.

Egg type chicks hatched during July totaled 36.6 million, up 8 percent from July 1997. Eggs in incubators totaled 28.9 million on August 1, 1998, up 2 percent from a year ago.

**Turkey Net Returns Positive**

After 2.5 years of negative returns for turkey producers, reductions in feed costs (27 percent below a year ago) and seasonal increases in turkey prices allowed producers to breakeven in July. Returns are expected to continue positive through the fall even though large pork supplies will limit turkey price increases. Lower feed costs are the major factor in increased net returns. Turkey production is expected to decline 3 percent from a year ago in 1998 as lower poult placements limit turkey slaughter numbers. Production is expected to be nearly unchanged in 1999 as higher slaughter weights nearly offset the decline in birds.

**Broiler Whole Bird Condemnation (Company)**

	Average Co.	Top 25%	Top 5 Co.'s
% Septox	0.277	0.232	0.241
% Airsac	0.151	0.048	0.062
% I.P.	0.172	0.066	0.032
% Leukosis	0.014	0.008	0.005
% Bruise	0.018	0.010	0.007
% Other	0.044	0.019	0.015
% Total	0.676	0.382	0.362
% 1/2 parts condemnations	0.405	0.307	0.423

Data for week ending 08/22/98.



# Meetings, Seminars and Conventions

## 1998 September

**September 9-10: Improving Your Sanitation Program Workshop**, Best Western Airport Hotel, Charlotte, N.C. Contact: Dr. Estes Reynolds, University of Georgia. Phone (706) 542-2574. Or, Dr. N.G. Marriott, Virginia Polytechnic Institute & State University. Phone (540) 231-7640.

**September 9-10: Texas Broiler Symposium**, Fredonia Hotel & Convention Center, Nacogdoches, TX. Contact: Dr. John B. Carey, Poultry Science Dept., Texas A&M University, College Station, TX 77843-2472. Phone (409) 845-4319.

**September 9-12: 4th Annual ABC's International Conference on Commercial Opportunities & Clinical Applications of Cloning & Transgenics**, Westin St. Francis Hotel, San Francisco, CA. Contact: IBC USA, 458 Park Ave., Worcester, MA 01610-1227.

**September 13-15: Western Regional Conference for AG Health & Safety**, University of California, Buehler Alumni Center, Davis, CA. Contact: Eleanor Wood, manager, UC Agricultural Health & Safety Center, ITEH Building, Old Davis Road, University of California, Davis, CA 95616-8757. Phone (530) 752-5253.

**September 15-16: Alabama Processors Workshop**, Sheraton Hotel, Birmingham, AL. Contact: Alabama Poultry & Egg Association, P.O. Box 240, Montgomery, AL 36101. Phone (334) 265-2732.

**September 15-17: HACCP Training for Rendered Poultry Products**, Adam's Mark Hotel, Charlotte, N.C. Contact: U.S. Poultry & Eggs Assn., 1530 Cooledge Road, Tucker, GA 30084-7303. Phone (770) 493-9401.

**September 15-17: Arkansas Nutrition Conference**, Clarion Inn, Fayetteville, AR. Contact: Judy Kimbrell, Arkansas Poultry Federation, P.O. Box 1466, Little Rock, AR 72203. Phone (501) 375-8131.

**September 16-17: Poultry Production and Health Seminar**, Atlanta, GA. Contact: U.S. Poultry and Egg Association, 1530 Cooledge Road, Tucker, GA 30084-7303. Phone (770) 493-9401. Fax (770) 493-9257.

**September 19: Veterinary Open House**, University of Pennsylvania, New Boston Center, University of Pennsylvania's School of Veterinary Medicine, Chester County, Route 926, Kennett Square, PA. Phone (610) 444-5800 ext. 2182.

**September 23: Delmarva Breeder, Hatchery and Grow-out Conference**, Micomico Youth & Civic Center, Salisbury, MD. Contact: University of Delaware Cooperative Extension, R.D. 6, Box 48, Georgetown, DE 19947. Phone (302) 856-7303.

**September 24-25: California Poultry Industry Federation (CPIF) Annual Conference**, Doubletree Hotel, Modesto, CA. Contact: Bill Mattos, CPIF, 3117-A McHenry Ave., Modesto, CA 95350.

**September 25-27: Louisiana Poultry Federation Convention**, Sheraton Pierremont, Shreveport, LA. Contact: Dr. Rosilyn Williams, Louisiana State University, Knapp Hall, Baton Rouge, LA 70803.

**September 28-30: HACCP for Meat & Poultry Processors Seminar**, University of Georgia Center for Continuing Education, Athens, GA. Contact: Dr. A. Estes Reynolds, University of Georgia, Extension Food Science, 207 Four Towers, Athens, GA 30602. Phone (706) 542-2574.

**September 28-30: Missouri Poultry Federation**, Holiday Inn (University Plaza Inn) Springfield, MO. Contact: Johanna B. Derda-Echols. Phone (573) 761-5610.

**September 29-30: Georgia Poultry Conference**, Classic Center, Athens, GA. Contact: Dr. Dan Cunningham, Extension Poultry Science, Four Towers Bldg., Athens, GA 30602. Phone (706) 542-1325.

**September 29-Oct. 1: US Poultry Intro to HACCP Training Class**, Radisson Hotel of Atlanta, GA. Contact: U.S. Poultry & Egg Assn., 1530 Cooledge Road, Tucker, GA 30084-7303. Phone (770) 493-9401.

**September 30-Oct. 1: Practical HACCP for Food Processors**, Adam's Mark Denver Hotel, Denver, CO. Contact: Silliker Laboratories, Education Services Dept., 900 Maple Rd., Homewood, IL 60430.

## 1998 October

**October 5-9: Laboratory Methods in Food Microbiology**, Silliker Laboratories Corporate Research Center, Teaching Laboratory, South Holland, IL. Contact: Silliker Laboratories, Education Services Dept., 900 Maple Rd., Homewood, IL 60430.

**October 6-7: Alabama Broiler Industry Seminar**, Auburn University Hotel & Conference Center, Auburn, AL. Contact: Alabama Poultry & Egg Association, P.O. Box 240, Montgomery, AL 36101. Phone (334) 265-2732.

**October 7-8: Florida Poultry Institute**, Gainesville, FL. Contact: University of Florida, Institute of Food & Agricultural Sciences, Dairy & Poultry Sciences Dept., P.O. Box 110920, Gainesville, FL 32611-0920. Phone (352) 392-1981.

**October 7-9: NBC Annual Conference**, J.W. Marriott Hotel, Washington, D.C. Contact: National Broiler Council, 1015 15th St., N.W., Suite 930, Washington, D.C. 20005. Phone (202) 296-2622.

**October 12-14: Penn State Sanitation Short Course**, Nittany Lion Inn, University Park, PA. Contact: Ag Conferences & Short Courses, Pennsylvania State University, 306 Ag Administration Bldg., University Park, PA 16802. Phone (814) 865-8301.

**October 14-15: N.C. Turkey Industries Days Conference**, Jane S. McKimmon Center, North Carolina State University, Raleigh, N.C. Contact: Dr. Jesse L. Grimes, Extension Turkey Specialist, College of Agricultural & Life Sciences, Extension Poultry Science, Scott Hall, Campus Box 7608, Raleigh, N.C. 27695. Phone (919) 515-5406.

**October 14-16: National Meeting on Poultry Health & Processing**, Ocean City, MD. Contact: Sharon Webb, Delmarva Poultry Industry, P.O. Box 47, Georgetown, DE 19947-9575. Phone (302) 856-9037.

**October 15: SPCF Golf Tourney**, Albin S. Johnson Memorial Captain's Choice Golf Tournament, Championship Walker Course, Clemson University, Clemson, S.C. Contact: South Carolina Poultry Federation, 1921-A Pickens St., Columbia, S.C. 29201. Phone (803) 779-5002.

**October 16-17: U.S. Poultry By-Products Seminar**, Nashville, TN. Contact: U.S. Poultry & Egg Assn., 1530 Cooledge Road, Tucker, GA 30084-7303. Phone (770) 493-9401.

**October 19-21: National Poultry Waste Management Symposium**, Holiday Inn N.W. Arkansas, Springdale, AR. Contact: Nick Zimmerman, University of Maryland, LESREC, 11990 Strickland Drive, Princess Anne, MD 21853-9802. Phone (410) 651-9111.

**October 19-23: United Egg Producers Annual Meeting**, Monterey Plaza Hotel, Monterey, CA. Contact: United Egg Producers, 1303 Hightower Trail, Suite 200, Atlanta, GA 30350. Phone (770) 587-5871.

**October 27-30: Expoaviga, International Poultry & Livestock Technology Show**, Montjuic Trade Fair Center, Fira de Barcelona, Spain. Contact: F. Xavier Castells, Manager, Expoaviga, Avda. Reina Mo. Cristina, s/n 08004 Barcelona, Spain. Fax +34 9 2332299.

**October 28-29: N.C. Broiler Breeder & Hatchery Management Conference**, Statesville, N.C. Contact: Mike Wineland, North Carolina State University. Phone (919) 515-5529.

## 1998 November

**November 5-6: AEB Meeting**, San Diego, CA. Contact: American Egg Board, 1460 Renaissance Drive, Park Ridge, IL 60068. Phone (847) 296-7043.