



**SURVEY OF RETAIL EGGS  
FOR *SALMONELLA***

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FOR *SALMONELLA***

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## SUMMARY

This survey assessed the presence of *Salmonella* in and on eggs available through retail outlets in Auckland and Christchurch.

A total of 514 sample units of eggs were tested over a twelve-month period. Samples were retail packs of at least six eggs and were representative of the three production systems (cage, free range and barn). All samples were purchased and analysed within their stated shelf life.

Fortynine different brands or sub-brands were identified. Twenty-eight of the sample units were in unlabelled cartons.

One egg from each sample unit was tested quantitatively for surface contamination and the remaining eggs from each retail pack were tested qualitatively for *Salmonella* species (3,710 eggs).

*Salmonella* was isolated from nine shell surface samples (overall prevalence 1.8%). All isolates were identified as *Salmonella* Infantis and all were from cage laid eggs (3.6% of cage laid eggs). Levels of *Salmonella* on eight of the samples were <5 MPN/egg and the other sample had a count of 44 MPN/egg. *Salmonella* positive samples were from four different brands and identified brands originated from three different farms.

No egg contents were positive for *Salmonella*.

Although the difference in prevalence between cage and free-range production was considered statistically significant, the number of barn egg samples was insufficient (and positive rate in cage eggs too low) to demonstrate a statistically significant difference between cage and barn production.

The results of this survey are consistent with two previous studies in indicating an absence of internal contamination of New Zealand eggs and enumeration tests have shown that the number of *Salmonella* present on the surface of contaminated eggs is low.

The pilot study suggests that, in New Zealand, the risk to consumers from *Salmonella* in eggs is low. Food handling practices that minimise the possibility of cross contamination from shells will further reduce the risk.

## 1 INTRODUCTION

Salmonellosis is one of the most frequently reported foodborne illnesses in New Zealand and ranks high for NZFSA risk management action.

*Salmonella* contamination in and/or on eggs has been shown to make a significant contribution to human illness in several overseas countries (Lake *et al.* 2004). However, in New Zealand the relationship between the consumption of eggs and human salmonellosis is not clear. Although egg and egg dishes are often recorded as a suspect vehicle in reported foodborne illness episodes (15 outbreaks in the period 1998 to 2005) there have been no confirmed outbreaks of salmonellosis due to the consumption of eggs in New Zealand. In a two person outbreak in 2001 the same strain of *Salmonella* was isolated from both the cases and the implicated food (raw egg mayonnaise). However, contamination of the food after illness could not be discounted (Lake *et al.* 2004; ESR 2006).

*Salmonella* Enteritidis phage type 4 (the predominant type associated with internal contamination overseas) and other *S. Enteritidis* strains associated with eggs and egg related illness are not endemic in New Zealand and have not been detected in locally produced eggs.

Other *Salmonella* serotypes have, however, been isolated from the shells of eggs in New Zealand. A small survey targeting specific brands and retail outlets was undertaken in Auckland in 2001 as part of a case control study investigating a possible *S. Typhimurium* DT103 outbreak. Specific brands and retail outlets were sampled and *Salmonella* was isolated from the surface of 13 of 93 samples (each sample was at least six eggs). *Salmonella* was not isolated from any of the contents (a total of approximately 700 eggs) and the serotypes isolated from the shells (*S. Thompson*, *S. species 6,7 : k : -* and *S. Infantis*) were not the same as the outbreak strain (Lake *et al.* 2004).

An earlier qualitative survey in the South Island in 1994 examined the shells of 341 samples of 6 eggs (2,046 eggs in total) and contents of 339 samples of 6 eggs (2,037 eggs in total). *Salmonella* was not detected in any sample (Johnson 1995).

A recent survey of retail eggs in the United Kingdom found an overall prevalence of *Salmonella* contamination of 0.34% (FSA 2004) and a survey of 5,000 samples in Northern Ireland and the Republic of Ireland found only two positive samples (Murchie *et al.* 2007). A 2006/06 survey of non-UK produced eggs on retail sale in parts of England showed a prevalence estimate of 3.3% (Little *et al.* 2006).

This pilot, quantitative survey was undertaken in 2005 – 2006 to provide baseline information for New Zealand and more robust data to enable a more accurate estimate of exposure to *Salmonella* from eggs. The study focused on eggs from all three production systems available at retail outlets in two major urban areas.

All *Salmonella* strains isolated during the survey were sub-typed and submitted to the National Typing Database to provide data for subsequent comparison with *Salmonella* types causing human infection.



Extensive contextual and background information relevant to *Salmonella* and eggs has been presented in a recent risk profile prepared for the NZFSA (Lake *et al.* 2004). This information is not repeated in this report.

## 2 MATERIALS AND METHODS

### 2.1 Samples

The samples were representative of cage laid eggs, free-range eggs and barn laid eggs available at retail outlets (supermarkets, dairies and fruit and vegetable shops) in two metropolitan areas.

Free-range and barn laid eggs were over sampled in relation to their production rate in order to gain sufficient data to compare systems. The majority of eggs produced in New Zealand is by cage production (90%) with free-range and barn about 7% and 3% respectively.

The proportion of samples from each production systems was targeted at 50% (250 samples) cage laid, 30% (150) free-range and 20% (100) barn laid. It was estimated that this sample split would provide a 95% probability that at least one sample from each production system would be positive, assuming a minimum *Salmonella* prevalence of 1.5% for cage laid, 2% for free range and 3% for barn production.

Sample units were pre-packaged retail packs and, while the preferred sample size was a carton of six eggs, larger sample units such as trays of 30 eggs and 10 to 18 egg cartons were purchased when smaller retail units were not available.

Samples not labelled as either free-range or barn laid were assumed to be cage production.

The full list of samples tested is given in Appendix 1.

### 2.2 Methods

Egg samples were purchased in Auckland and Christchurch between July 2005 and June 2006 and analysed for *Salmonella* within their shelf life. All samples were tested within a week of purchase. Those not tested within 24 hours of purchase were stored below 15°C.

Individual eggs in the retail pack were visually examined for cleanliness. Samples were described as “clean” (no visible surface contamination), “trace” (any minor extraneous material, general dirt or staining from cracked eggs in the pack) or “dirty” (obvious contamination of shell with faecal, feather or other organic material) (Wilson *et al.* 1998). Any eggs found to be cracked were excluded from analysis.

One egg from the sample unit was examined for *Salmonella* contamination of the surface by rinsing and massaging the intact egg in enrichment broth. A portion of the rinse fluid was retained and the remainder (containing the whole unbroken egg) was pre-enriched and selectively enriched before testing for *Salmonella* using methods in accordance with the Compendium of Methods for the Microbiological Examination of Foods (Downes and Ito 2001).

The retained portion was held refrigerated at 4°C until the result of the presence/absence test was known. Samples positive for *Salmonella* were reanalysed quantitatively to estimate levels of the organism present. A further presence/absence test on retained portions was performed on negative samples.

The surfaces of the remaining eggs in the sample unit were sterilised and their contents pooled, pre-enriched, selectively enriched and tested for *Salmonella*.

Overseas studies have shown that, in eggs that are internally contaminated, *Salmonella* is likely to be present only in low numbers unless the eggs are over three weeks old and have been stored at warm temperatures (Humphrey 1994). In order to increase the sensitivity of the test, pooled samples were pre-incubated before enrichment (Downes and Ito 2001). Enrichments were supplemented with iron to further enhance growth of isolates (Gast 1993).

*Salmonella* isolates were serotyped by ESR Enteric Reference Laboratory and further sub-typed in accordance with the requirements of the national typing database.

Specific details of the analyses are given below.

### **2.3 Egg Surface Analysis (Presence/Absence)**

One egg was taken from the sample unit and placed in a sterile bag with 150 ml Trypticase Soy Broth (TSB, 211825, Becton Dickinson, Sparks, MD, USA) that had been pre-warmed to 30°C. The surface of the sample was thoroughly rinsed and massaged and allowed to stand at room temperature for 60 minutes.

A 33 ml portion was removed and stored refrigerated at 4°C. The remaining broth (containing the whole egg) was incubated at 35°C for 24 hours.

Following pre-enrichment replicate 1.0 ml portions of enrichment broth were transferred to 10 ml of Selenite-cysteine broth (SC, 1.07709, Merck, Darmstadt, Germany) and to 10 ml of Tetrathionate Broth (TT, 210430, BD) and incubated for 24 hours at 35°C.

Incubated SC and TT broths were streaked onto Bismuth Sulphite agar (BS, 273300, BD), Xylose Lysine Deoxycholate agar (XLD, 278850, BD) and Hektoen Enteric (HE, 285340, BD) agar. Plates were incubated for 24 hours at 35°C. BS plates with no suspect colonies or no growth after 24 hours were incubated for an additional 24 hours. Plates were examined for the presence of colonies typical of *Salmonella* species. Two or more suspect colonies were picked from each plating media and standard biochemical and serological identification tests for *Salmonella* performed.

A most probable number test (MPN) was performed on the retained 33 ml portion if the presence/absence test was positive. If *Salmonella* was not detected the retained portion was tested qualitatively as above.

## 2.4 Egg Surface Analysis (Enumeration)

The retained 33 ml portion was divided into three 10 ml portions and three 1 ml portions. Sufficient TSB was added to the 1 ml portions to bring the volume up to 10 ml. Samples were incubated at 35°C for 24 hours.

Selective enrichment and isolation tests as described above were performed on each portion and results calculated from the MPN index.

## 2.5 Egg Content Analysis (Presence/Absence)

All remaining eggs in the sample unit were washed with a stiff brush and water 10°C warmer than the eggs. Excess moisture was drained and the eggs soaked in a warm 200ppm chlorine solution containing 0.1% sodium dodecyl sulphate for 30 minutes.

Eggs were cracked aseptically into a sterile container and yolks and whites mixed thoroughly by stomaching. The pooled contents were incubated at 35°C for 48 hours (Humphrey 1994).

A 25 gram portion of the pre-incubated pooled sample was added to 225 ml TSB supplemented with ferrous sulphate (Gast 1993) and mixed well before incubation at 35°C for 24 hours.

Selective enrichment and isolation tests were performed as described in section 3.1.

## 2.6 Typing

One confirmed *Salmonella* isolate from each positive sample was serotyped using the Kauffman-White method (Popoff and Le Minor 2001) and further genotyped by macrorestriction analysis with the restriction enzyme digestion of genomic DNA by *Xba*I (Anon 2006). The digested fragments were separated by pulsed field gel electrophoresis (PFGE), using a CHEF-DR III system (Bio Rad) for 20 h with an initial switch time of 2.2 sec and a final time of 63.8 sec at an angle of 120°. *Salmonella* Braenderup H9812 DNA digested with *Xba*I was used as a standard. After electrophoresis, gels were stained with ethidium bromide, visualised under ultraviolet light, the image scanned and saved in a Tiff format. The images were analysed by Bionumerics, Version 4.0 software (Applied Maths, Saint-Martens-Latem, Belgium). After conversion and normalisation of gels, the PFGE images were submitted to the PulseNet Aotearoa/New Zealand *Salmonella* database where *Xba*I pattern designations were assigned.

## 3 RESULTS AND DISCUSSION

A total of 395 cartons of six eggs, 116 cartons containing 10 to 18 eggs and 3 samples of trays were purchased. Samples of caged bird production included 20 different brands or sub-brands. Twenty-seven samples were unlabelled. Free-range samples included 21 brands and one unlabelled carton. Eight different barn brands were sampled.

Analyses for *Salmonella* were performed on the 514 sample units - 250 (49%) cage, 166 (32%) free range, and 98 (19%) barn.

Samples of caged bird production included 20 different brands or sub-brands. Twenty-seven samples were unlabelled. Free-range samples included 21 brands and one unlabelled carton. Eight different barn brands were sampled.

### 3.1 Results

*Salmonella* was isolated from nine shell surface samples. All isolates were identified as *Salmonella* Infantis and all were from cage laid eggs. Counts from 8 of the samples were <5 MPN/egg, and the other had a count of 44 MPN/egg (Table 1).

**Table 1: *Salmonella* Infantis isolated from cage laid eggs**

Source	<i>Salmonella</i> shell surface result				
	Date sampled	Egg size	Pack size	Presence/Absence	Count MPN egg <sup>-1</sup>
NI Brand D	July 05	7	12	Present	<5
NI Unlabelled E	Aug 05	n/a	12	Present	<5
NI Brand D	Jan 06	7	12	Present	<5
NI Brand D	May 06	7	6	Absent*	Present
SI Brand A	Oct 05	7	6	Present	<5
SI Brand B	Nov 05	Mixed	12	Present	<5
SI Brand A	Feb 06	8	10	Present	<5
SI Brand A	Mar 06	7	6	Present	44
SI Brand C	Mar 06	6	6	Present	<5

NI North Island, SI South Island

(\* *Salmonella* result for this sample was negative in the initial presence absence test but positive in the retained sample. The estimated MPN for this sample is 1 MPN/egg but the result has been expressed as <5 MPN/egg in this report.)

The positive samples were from five different brands (including two house brands and one unlabelled carton).

No contents (3,710 eggs) were positive for *Salmonella*.

The overall prevalence of *Salmonella* per sample unit for the two sampling locations combined was 1.8% (95% CI: 0.8% - 3.3%).

The prevalence for cage laid eggs alone was 3.6% (95% CI: 1.7% - 6.7%), free-range 0% (0% - 2.2%) and barn laid 0% (0% - 3.7%).

Using Fisher's exact test the difference between the rates found for cage and free-range production was considered statistically significant (p = 0.013) and considered not statistically significant between cage and barn production (p = 0.066).

Three of the five positive samples collected in the South Island were of the same producer brand (brand A). The other positive samples were from two different supermarket house

brands (brands B and C). The Egg Producers Federation of New Zealand (EPFNZ, Michael Brooks pers com., May 2007) has confirmed that all these samples originated from the same farm. The positive samples were detected over a six month period implying ongoing contamination at the source.

Excluding the two house brands, 7% (3/44) of the samples of brand A collected in the South Island were positive. When the two house brands are included the contamination rate is 5/61 (8.1%). None of the 25 samples of brand A or 26 house brands B and C tested in the North Island was positive.

Three of the four positive samples from the North Island were brand D, identified by EPFNZ as product supplied by two different farms. The fourth positive sample was from an unlabelled carton (E).

Although the source of the unlabelled eggs was not conclusively identified, results of the PFGE typing show the strain is indistinguishable from the isolate from one of the labelled cartons (see Appendix 2). The sample was purchased from the same premises supplying two other positive brand D samples suggesting that the eggs may be from one of the farms supplying branded product. As the retail premises re-pack bulk eggs on site, cross-contamination is another possible explanation for the positive result. The positive samples were detected over a 10 month period.

Of the brand D samples collected in the North Island 18% (3/17) were positive. None of the 12 samples of this brand tested in the South Island were positive.

### **3.2 Comparison with United Kingdom Study**

A recent survey of 4,753 retail egg samples (mostly cartons of six eggs) in the United Kingdom (England, Wales, Scotland and Northern Ireland), showed an overall *Salmonella* prevalence of 0.34% (95% CI: 0.17% - 0.62%) (Food Standards Agency 2004). The highest prevalence among the individual countries was 1.5% in eggs sampled in Wales. The study found that there was no statistically significant difference in *Salmonella* prevalence between the different production types (caged, organic, free range and barn).

Although the overall *Salmonella* prevalence (1.8%) for eggs sampled in the New Zealand survey is slightly higher than the overall UK prevalence, the confidence intervals are much wider in the NZ study due to the relatively small sample size used here. It should be noted that in the UK study Wales, which had the highest prevalence also had the smallest sample size of all the countries (179 samples).

Although the difference between cage and free-range production was considered statistically significant, the number of barn egg samples was insufficient (and positive rate in cage eggs too low) to demonstrate a statistically significant difference between cage and barn production.

The small number of farms with positive samples and proximity of at least one of those farms to the sampling area means that the results from this pilot study cannot necessarily be extrapolated to reflect the total egg production in New Zealand. However, the results of the

survey are consistent with both previous studies in indicating an absence of internal contamination of New Zealand eggs. The high prevalence of external surface contamination suggested in the 2001 study was not confirmed. The highly targeted sampling of particular brands and retail outlets may have biased the result of the earlier survey.

### 3.3 *Salmonella* Infantis in New Zealand

Surveillance data for New Zealand *Salmonella* isolates are available on the Public Health Surveillance website ([http://www.surv.esr.cri.nz/enteric\\_reference/human\\_salmonella.php](http://www.surv.esr.cri.nz/enteric_reference/human_salmonella.php) and [http://www.surv.esr.cri.nz/enteric\\_reference/nonhuman\\_salmonella.php](http://www.surv.esr.cri.nz/enteric_reference/nonhuman_salmonella.php))

*Salmonella* Infantis is endemic in New Zealand and has been consistently among the top six most common human *Salmonella* strains isolated in New Zealand over the past few years. However, when compared with total isolates and with the most prevalent strain, *Salmonella* Typhimurium phage type 160, numbers are relatively low (Table 2).

**Table 2: *Salmonella* Infantis isolates from humans 2002-2006**

	<b>Total</b>	<b>S. Infantis</b>	<b>S. Typhimurium PT 160</b>
2003	1601	89 (6%)	334 (21%)
2004	1229	63 (5%)	221 (18%)
2005	1460	67 (5%)	248 (17%)
2006	1404	58 (4%)	260 (19%)

*Salmonella* Infantis is not the most prevalent serotype related to poultry sources in New Zealand but isolates received by ESR Enteric Reference Laboratory from non-human sources show there is a close association. Table 3 lists the source of *S. Infantis* isolates received by the reference laboratory between 2003 and 2006.

**Table 3: *Salmonella* Infantis isolates from non-human sources 2003-2006**

	<b>Total</b>	<b>Poultry</b>			<b>Meat/bone meal</b>	<b>Other</b>
		<b>Environment</b>	<b>Feed</b>	<b>Product/Misc</b>		
2003	77	4	6	20	2	44
2004	45	5	4	3	7	26
2005	53*	13	3	7	15	15
2006	57*	13	0	5	19	20

\*Excludes isolates from special projects

The predominant serotype/s isolated in the 2001 Auckland egg survey were *Salmonella* Thompson and the antigenically related *Salmonella* species: 6,7:k:-. Only one of the 19 isolates was *Salmonella* Infantis.

Pulsed field gel electrophoresis (PFGE) patterns for the egg shell isolates are shown in Appendix 2. Comparison with other *Salmonella* Infantis isolates on the database show that the isolates are different from two overseas strains but most are closely related to other New Zealand strains. The two isolates from one of the North Island farms are indistinguishable

from each other as are an isolate from the other North Island farm and an isolate from an unlabelled carton.

### **3.4 Labelling**

Twenty-eight of the sample units were purchased in plain "unlabelled" packaging. One of these samples was a tray of 30 eggs and the others were cartons of six or twelve eggs. All unlabelled samples were purchased from small dairy or fruit and vegetable type premises. One was marked "free-range" but the others were presumed to be cage production. Only 6 of the unlabelled cartons had best before dates. None had storage instructions.

Some of the unlabelled samples were displayed in racks or near signage that indicated the name of possible suppliers.

These samples did not comply with the Australia New Zealand Food Standards Code (Standards 1.2.2 – 1.2.10) that requires food for retail sale to be labelled with the name of the food, lot identification, supplier details, date marking, directions for use and storage, and nutritional information.

### **3.5 Dirt on Shells**

Thirty-nine samples contained at least one "dirty" egg. The majority contained just one or two soiled eggs but three sample units contained a significant proportion of dirty eggs (a carton of cage eggs with 5/6 soiled, a carton of barn eggs with 6/12 soiled and a tray of cage production with 10/30 dirty eggs). There was no significant difference (Fisher's exact test,  $p > 0.05$ ) in cleanliness between production systems with 9% (23/250) of cage, 6% (10/166) of free-range and 6% (6/98) of barn produced egg sample units containing at least one dirty egg. None of the "dirty" eggs were considered "very dirty" i.e. soiled area greater than the area specified in the industry Code of Practice.

All other packs contained eggs that were considered by the analysts to be acceptably clean, although many contained at least one egg with trace soiling or staining from other eggs that had become cracked.

Of the egg samples that tested positive for *Salmonella* 4/9 sample units contained "dirty" eggs (Table 4).

**Table 4: Cleanliness of eggs in *Salmonella* positive sample units**

Source	Pack Size	Dirt on Shells (per pack)		
		Clean	Trace	Dirty
NI Brand D	12	10	1	1
NI Unlabelled E	12	1	10	1
NI Brand D	12	5	6	1
NI Brand D	6	2	4	0
SI Brand A	6	6	0	0
SI Brand B	12	6	6	0
SI Brand A	10	7	1	2
SI Brand A	6	3	3	0
SI Brand C	6	4	2	0

NI North Island, SI South Island

Dirty eggs were excluded from the 2003 UK study but an earlier survey in 1995/96 showed no statistically significant differences in prevalence between clean and dirty or soiled eggs (Food Standards Agency 2004). Similar findings were also demonstrated in the Northern Ireland survey in 1996/97 (Wilson *et al.* 1998) but a strong association between *Salmonella* contamination and presence of faecal matter was shown for Canadian eggs in study in 1998 (Lake *et al.* 2004).

According to information received from the EPFNZ the South Island farm that produced 5 of the positive samples does not wash their eggs and the two North Island farms wash only if eggs are visually dirty. As the number of farms with contaminated product was limited, the effect of washing practices was not otherwise assessed.

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## APPENDIX 1: SAMPLES

### BARN

Job Number	Brand	Size	Batch/BB date	Unit size
CPH0590466	Barney's	Large	010805 4	6
CPH0590518	Barney's	Large	22 AUG 2005	6
CPH0590560	Barney's	Large	19 SEP 2005	6
CPH0590662	Barney's	Large	31 OCT 2005	6
CPH0590703	Barney's	6	21 NOV 2005	6
CPH0590793	Barney's	Large	26 DEC 2005	6
CPH0690042	Barney's	Large	20 FEB 2006	6
CPH0690060	Barney's	large	27 FEB 2006	6
CPH0690135	Barney's	Large	-3 APR 2006	6
CPH0690224	Barney's	Large	-8 MAY	6
CPH0690259	Barney's	Large	29 MAY 2006	6
CPH0690325	Barney's	Large	12 JUN 2006	6
AMC0690697	Barney's	Large	13/03/2006	6
AMC0690944	Barney's	Mixed	-3 APR 2006	6
AMC0691168	Barney's	Large	1 MAY 2006	6
AMC0592497	Barney's	Large	22 Aug 2005	6
AMC0592600	Barney's	Large	22 Aug 2005	6
AMC0592816	Barney's	Large	19 Sep 2005	6
AMC0592928	Barney's	Large	19 Sep 2005	6
AMC0593241	Barney's	Large	31 OCT 2005	6
AMC0593353	Barney's	Large	17 OCT 2005	6
AMC0593678	Barney's	Large	21 NOV 2005	6
AMC0594084	Barney's	n/a	26 DEC 2005	6
AMC0690206	Barney's	Large	16 JAN 2006	6
AMC0690399	Barney's	Large	20 FEB 2006	6
AMC0690854	Barney's	Large	10 APR 2006	6
AMC0691369	Barney's	Large	15/05/2006	6
AMC0691947	Barney's	Large	?10 JUL 2006	6
AMC0592076	Bennik's	7	18 Jul 2005	6
AMC0592593	Bennik's	7	12 Sep 2005	6
AMC0593575	Bennik's	7	28 NOV 2005	6
AMC0594084	Bennik's	7	26 DEC 2005	6
AMC0690022	Bennik's	7	30 JAN 2006	12
CPH0590493	Farmer Brown	n/a	-8AUG 05	6
CPH0590590	Farmer Brown	n/a	1-OCT-05	6
CPH0590602	Farmer Brown	n/a	10OCT 05	6
CPH0590735	Farmer Brown	n/a	3-DEC 05	6
CPH0590775	Farmer Brown	Mixed	25DEC-05	6
CPH0690148	Farmer Brown	Mixed	2APR 06	6
CPH0690198	Farmer Brown	n/a	24APR-06	6
CPH0590672	Farmer Brown	n/a	6 NOV 05	10
CPH0690042	Farmer Brown	n/a	14FEB-06	10
AMC0593167	F'mer Brown (Harold's)	n/a	4 OCT 05	10
AMC0592242	F'mer Brown (Harold's)	n/a	23 Jul -05	10
AMC0691295	Henergy	Jumbo	30 APR 2006	6
AMC0691534	Henergy	6	21 MAY	6
AMC0691834	Henergy	Jumbo	28 JUN 2006	6

CPH0590466	Henergy	7	01 AUG	6
CPH0590518	Henergy	7	21 AUG	6
CPH0590560	Henergy	7	18 SEP	6
CPH0590662	Henergy	7	06 NOV BARN	6
CPH0590703	Henergy	6	23 NOV BARN	6
CPH0590775	Henergy	7	2 1 DEC BARN	6
CPH0690003	Henergy	7	25 JAN	6
CPH0690060	Henergy	7	22 FEB BARN	6
CPH0690135	Henergy	7	26 MAR BARN	6
CPH0690148	Henergy	Jumbo	05 APR 2006	6
CPH0690224	Henergy	Jumbo	07 MAY 2006	6
CPH0690259	Henergy	7	31 MAY BARN	6
CPH0690295	Henergy	Jumbo	14 JUN 2006	6
CPH0690325	Henergy	7	14 JUN	6
AMC0690697	Henergy	6	05 MAR 2006	6
AMC0592242	Henergy	7	24 Jul	6
AMC0593106	Henergy	7	16OCT	6
AMC0593241	Henergy	7	02 OCT	6
AMC0593353	Henergy	7	30 OCT	6
AMC0593766	Henergy	6	30 NOV Barn	6
AMC0593974	Henergy	7	18 DEC Barn	6
AMC0690064	Henergy	6	22JAN BARN	6
AMC0691427	Henergy	7	14 MAY	6
AMC0690064	New Day	6	21 01 06 0 1 3	6
AMC0690466	New Day	6	24 02 06 0 1 3	6
AMC0690697	New Day	6	31 MAR 2006	6
AMC0691295	New Day	6	-5 MAY 2006	6
AMC0691534	New Day	6	26. 05 .06 C112	6
AMC0691834	New Day	6	23. 06 06 ?03.14	6
CPH0590493	Pam's	6	10 AUG	6
CPH0690003	Pam's	6	2 2 ?	6
CPH0690148	Pam's	6	22MAR	6
CPH0690198	Pam's	6	23-May	6
CPH0690259	Pam's	7	17 MAY 2006	12
AMC0691947	Pam's	7	02 JUL	6
AMC0592339	Pam's	7	10 Aug 2005	6
AMC0593766	Pam's	6	27 NOV ??	6
AMC0691834	Pam's	6	14 JUN	6
AMC0691534	Pam's	7	? 28 MAY	12
CPH0590602	Signature	6	24 SEP - A	6
CPH0590466	Signature	7	-2AUG 05	12
CPH0590672	Signature	7	14NOV-05	12
CPH0590735	Signature	6	4 DEC-05	12
CPH0590775	Signature	6	18DEC-05	12
CPH0590793	Signature	7	18DEC 05	12
CPH0690081	Signature	7	18FEB-06	12
CPH0690295	Signature	6	3-JUN-06	12
AMC0594084	Signature	7	07 01 06 0 1 3	12
AMC0690759	Signature	6	31 MAR 2006	12
CPH0690148	Signature	6	25MAR 06	12

**CAGE**

<b>Job Number</b>	<b>Brand</b>	<b>Size</b>	<b>Batch/BB date</b>	<b>Unit size</b>
AMC0691947	Albert's New Generation	7	02 JUL 2006	12
CPH0590518	Basics	Mixed	31AUG - A	12
CPH0590662	Basics	Mixed	- 9 NOV - A	12
CPH0590735	Basics	Mixed	- 7 DEC - A	12
CPH0590793	Basics	Mixed	- 4 JAN - A	12
CPH0690060	Basics	Mixed	25FEB	12
CPH0690148	Basics	Mixed	12 APR - A	12
CPH0690295	Basics	Mixed	14 JUN - B	12
AMC0592594	Basics	Mixed	05 Sep	12
AMC0592816	Basics	Mixed	3-9-05	12
AMC0592949	Basics	Mixed	n/a	12
CPH0690198	Brooklea Farm	Mixed	05 MAY 2006	12
CPH0690198	Canterbury Country	7	08 MAY 2006	6
AMC0691748	Country Life	6	05 JUN	12
AMC0592076	Country Life	5	25.07.05	15
AMC0592593	Country Life	5	05.09.05	15
AMC0690021	Country Life	5	30JAN06	15
AMC0691056	Country Life	5	17/04/06 17-04-6	15
CPH0590493	Country Life	7	13AUG05	12
AMC0593672	Craddock	7	3- 12 0.5	6
AMC0593678	Craddock	7	22 11.05	6
AMC0593974	Craddock	7	27. 1. 2 0 5	6
AMC0690206	Craddock	7	27 01. -6	6
AMC0690697	Craddock	6	22. 3. -06	6
AMC0691676	Craddock	6	10. 6. - 06	6
AMC0592949	Craddock	7	30-90.5	12
AMC0593575	Craddock	7	25 11. 05	12
AMC0690530	Craddock	7	1. 2 0 3 0. 6	12
AMC0691427	Craddock	7	2. - 6 -0.6	12
AMC0691748	Craddock	8	17 JUN 2006	12
AMC0592075	Farmer Brown	7	14 Jul	6
AMC0592338	Farmer Brown	7	04 Aug	6
AMC0592425	Farmer Brown	6	15 Aug	6
AMC0592817	Farmer Brown	7	01-09-5	6
AMC0593233	Farmer Brown	7	24. 10. 05	6
AMC0593575	Farmer Brown	6	27. 10. 05	6
AMC0594084	Farmer Brown	8	12/12/05	6
AMC0594091	Farmer Brown	7	02/01/06	6
AMC0690021	Farmer Brown	8	30/01/06	6
AMC0690206	Farmer Brown	6	19/01/06 19JAN-6	6
AMC0690316	Farmer Brown	8	16/02/06 16FEB-6	6
AMC0690399	Farmer Brown	7	13/02/06 13FEB06	6
AMC0690530	Farmer Brown	7	27/02/06 27-02-6	6
AMC0690759	Farmer Brown	7	27.03/06 27MAR06	6
AMC0690944	Farmer Brown	7	15 04	6
AMC0691056	Farmer Brown	8	20/04/06 20-04-6	6
AMC0691168	Farmer Brown	6	27/04/06 27APR06	6

AMC0691369	Farmer Brown	6	18/05/06 18MAY06	6
AMC0592929	Farmer Brown	8	25 SEP	10
AMC0593353	Farmer Brown	8	03 NOV	12
AMC0593234	Farmer Brown	6	31 OCT	15
AMC0592496	Farmer Brown	7	24 Aug	18
AMC0592928	Farmer Brown	7	22.09.05	18
AMC0592949	Farmer Brown	7	25.09.05	18
AMC0593407	Farmer Brown	7	07-11-5	18
CPH0590493	Farmer Brown	6	13 AUG - A	6
CPH0590493	Farmer Brown	7	-6 AUG - B	6
CPH0590518	Farmer Brown	6	24AUG05	6
CPH0590560	Farmer Brown	6	14 SEP - B	6
CPH0590590	Farmer Brown	7	5 OCT - A	6
CPH0590602	Farmer Brown	7	-8OCT05	6
CPH0590662	Farmer Brown	7	- 5 NOV - B	6
CPH0590735	Farmer Brown	7	3 DEC-A	6
CPH0590775	Farmer Brown	6	2 4 DEC	6
CPH0590775	Farmer Brown	6	2 8. DEC	6
CPH0590793	Farmer Brown	6	24DEC	6
CPH0690003	Farmer Brown	7	2 1 JAN -	6
CPH0690003	Farmer Brown	6	1 4 JAN	6
CPH0690042	Farmer Brown	6	15 FEB -	6
CPH0690042	Farmer Brown	7	11 FEB - A	6
CPH0690060	Farmer Brown	7	-1. MAR - B	6
CPH0690081	Farmer Brown	6	25 FEB	6
CPH0690081	Farmer Brown	7	1 MAR - B	6
CPH0690135	Farmer Brown	6	25MAR - B	6
CPH0690148	Farmer Brown	7	-5. APR	6
CPH0690198	Farmer Brown	8	3MAY06	6
CPH0690198	Farmer Brown	6	29APR	6
CPH0690224	Farmer Brown	Standard	6 - MAY - B	6
CPH0690224	Farmer Brown	Standard	29APR06	6
CPH0690258	Farmer Brown	Jumbo	17 MAY	6
CPH0690295	Farmer Brown	7	14JUN 06	6
CPH0690325	Farmer Brown	7	28JUN06	6
CPH0690325	Farmer Brown	6	28 JUN	6
CPH0590493	Farmer Brown	8	13AUG05	10
CPH0590518	Farmer Brown	8	20AUG05	10
CPH0590560	Farmer Brown	8	17SEPT05	10
CPH0590590	Farmer Brown	8	28SEPT05	10
CPH0590602	Farmer Brown	8	-1OCT05	10
CPH0590662	Farmer Brown	8	5NOV05	10
CPH0590672	Farmer Brown	8	5NOV05	10
CPH0590703	Farmer Brown	8	16NOV05	10
CPH0590735	Farmer Brown	8	10DEC05	10
CPH0590793	Farmer Brown	8	31DEC05	10
CPH0690060	Farmer Brown	8	18FEB06	10
CPH0690135	Farmer Brown	8	29MAR06	10
CPH0690148	Farmer Brown	8	-1 APR	10
CPH0590466	Farmer Brown	7	-6AUG05	12
CPH0590703	Farmer Brown	6	19 NOV	12
CPH0690295	Farmer Brown	7	17 JUN - A	12

AMC0592339	Farmer Brown Nutraegg	n/a	20 07	12
AMC0593678	Farmer Brown Omega	n/a	26 11	6
AMC0594091	Farm Fresh	7	11 DEC 2005	6
AMC0593862	Farm Fresh	7	13 DEC 2005	12
AMC0690399	Farm Fresh	6	27 FEB 2006	12
AMC0690873	Farm Fresh	6	10 APR 2006	12
AMC0691947	Farm Fresh	6	23 JUN 2006	12
AMC0593352	Farm Fresh	7	02 NOV 2005	6
AMC0593862	Farm Fresh	6	03 DEC2005	6
AMC0593862	Golden Harvest	Large	05 DEC 05	6
AMC0690064	Heart Beat Omega Plus	7	20 JAN 06	6
AMC0592075	Heart Beat Omega Plus	7	06 Jul 05 C128	6
AMC0593167	Heart Beat Omega Plus	7	14. 10. 05 C10.9	6
AMC0690466	Heart Beat Omega Plus	7	24FEB06 C116	6
AMC0690697	Heart Beat Omega Plus	7	17.03.06 C 1 . 1	6
AMC0691295	Heart Beat Omega Plus	Mixed	28 APR 06 C121	6
CPH0590466	Long View Poultry	Large	11.AUG.05	6
CPH0590493	Long View Poultry	Mixed	10.AUG.05	6
CPH0590518	Long View Poultry	Large	01.SEP.05	6
CPH0590560	Long View Poultry	Large	29.SEP.05	6
CPH0590590	Long View Poultry	Mixed	11.OCT.05	6
CPH0590602	Long View Poultry	Mixed	12.OCT.05	6
CPH0590672	Long View Poultry	Mixed	07.NOV.05	6
CPH0590703	Long View Poultry	Mixed	01.DEC.05	6
CPH0590793	Long View Poultry	Large	05.JAN.06	6
CPH0690042	Long View Poultry	Mixed	23.FEB.06	6
CPH0690081	Long View Poultry	Mixed	15.MAR.06	6
CPH0690148	Long View Poultry	Mixed	18.APR.06	6
CPH0690259	Long View Poultry	Large	30.MAY.06	6
AMC0592423	Morning Harvest	7	08.08.05	6
AMC0592593	Morning Harvest	7	22.08.05	6
AMC0593105	Morning Harvest	7	14. 1. 0	6
AMC0593241	Morning Harvest	6	Unreadable	6
AMC0593352	Morning Harvest	7	4. 1.1	6
AMC0593672	Morning Harvest	7	25 NOV 2005	6
AMC0690316	Morning Harvest	7	30 01 06	6
AMC0690530	Morning Harvest	7	1 03. 06	6
AMC0691056	Morning Harvest	6	20.04.06	6
AMC0691427	Morning Harvest	8	29 -05 06	6
AMC0691609	Morning Harvest	7	2 JUN 2006	6
AMC0592336	Morning Harvest	7	15AUG05	12
AMC0592668	Morning Harvest	7	10 Sep 2005	12
AMC0592949	Morning Harvest	6	30. 9. -	12
AMC0594084	Morning Harvest	6	25 12.05	12
AMC0690021	Morning Harvest	6	23 01. 06	12
AMC0690315	Morning Harvest	7	20 FEB	12
CPH0590590	Morning Harvest	7	14. OCT 05 010.6	6
CPH0590672	Morning Harvest	7	25.11.05	6
CPH0590735	Morning Harvest	7	09.12.05 C101	6
CPH0690042	Morning Harvest	7	03 03.06 C123	6
CPH0690060	Morning Harvest	7	03 MAR 06 c123	6
CPH0690081	Morning Harvest	7	MAR 06 c101	6

CPH0690135	Morning Harvest	7	14.04.06 C 0.3	6
CPH0690224	Morning Harvest	7	02.06.06	6
CPH0690295	Morning Harvest	7	30.06.06	6
CPH0690325	Morning Harvest	7	30 06 06 C11.8	6
CPH0590518	Morning Harvest	7	080905 C102	12
CPH0590775	Morning Harvest	6	30DEC05	30
AMC0592423	New Day	Mixed	08.08.08	6
CPH0690325	Pam's	6	25 JUN 2006	6
CPH0590590	Pam's	Mixed	14 SEP - B	12
CPH0590672	Pam's	Mixed	5 NOV - A	12
CPH0590703	Pam's	Mixed	19 NOV - A	12
CPH0590793	Pam's	Mixed	24 DEC - B	12
CPH0690042	Pam's	Mixed	- 1 FEB - A	12
CPH0690081	Pam's	Mixed	15. FEB - A	12
CPH0690224	Pam's	Mixed	6 MAY - A	12
CPH0690258	Pam's	Mixed	20 MAY - A	12
CPH0690295	Pam's	Mixed	10 JUN - B	12
AMC0592242	Pam's	7	30 07	6
AMC0592339	Pam's	7	11/08/05	6
AMC0593233	Pam's	7	20 OCT	6
AMC0593241	Pam's	6	13-10-5	6
AMC0690064	Pam's	7	06FEB-6	6
AMC0690466	Pam's	6	27/02/06 27FEB06	6
AMC0690697	Pam's	7	23/03/06 23MAR06	6
AMC0691947	Pam's	6	19/6/06 19-06-6	6
CPH0590662	Signature	6	5 NOV - A	6
CPH0590735	Signature	6	26 NOV - A	6
CPH0690003	Signature	6	2 8 JAN - A	6
CPH0690258	Signature	7	27 MAY - A	6
CPH0590466	Signature	7	-3 AUG - A	12
CPH0690081	Signature	7	-4. MAR - A	12
AMC0592338	Signature	7	13.08.05	6
AMC0592496	Signature	6	20.08 05	6
AMC0592594	Signature	6	29 Aug	6
AMC0592598	Signature	7	-2. -9. --	6
AMC0592599	Signature	6	-2. -9. --	6
AMC0593234	Signature	6	27 10. 05	6
AMC0593353	Signature	7	- 4. 1.1 -	6
AMC0594091	Signature	6	? 6. 1 ?	6
AMC0690206	Signature	7	06/02/06 06-02-6	6
AMC0690399	Signature	7	2 3 -0.6	6
AMC0690873	Signature	6	7 4. 06	6
AMC0690873	Signature	6	9- 4- 0.6	6
AMC0690944	Signature	7	13/04/06 13-04-6	6
AMC0691168	Signature	6	28.4	6
AMC0691369	Signature	6	26 -5. 06	6
AMC0691676	Signature	7	156 - 0. 6.	6
AMC0690759	Signature	7	31 MAR 2006	12
CPH0690198	Signature	6	3 - MAY - A	6
AMC0592425	Signature	7	18 Aug	6
AMC0592076	Sure as Eggs	7	18.07.05	6
AMC0593105	Sure as Eggs	Super Large	14. 1. 0	6

AMC0593408	Sure as Eggs	Super Large	n/a	6
AMC0690530	Sure as Eggs	Super Large	10 MAR 2006	6
AMC0690021	Sure as Eggs	Super Large	23JAN06	15
AMC0690316	Sure as Eggs	Super Large	6FEB06	15
CPH0590493	Weedon's	Mixed	15 AUG 2005	6
CPH0590518	Weedon's	6	29 AUG 2005	6
CPH0590560	Weedon's	Mixed	19 SEP 2005	6
CPH0590590	Weedon's	Mixed	19 SEP 2005	6
CPH0590602	Weedon's	Large	10OCT2005	6
CPH0590662	Weedon's	Large	07 NOV 2005	6
CPH0590703	Weedon's	Large	21 NOV 2005	6
CPH0590775	Weedon's	6	-2 JAN 2006	6
CPH0690003	Weedon's	Large	09 JAN 2006	6
CPH0690003	Weedon's	Mixed	2 3 JAN 2006	6
CPH0690060	Weedon's	Large	27 FEB 2006	6
CPH0690135	Weedon's	Large	3-APR 2006	6
CPH0690258	Weedon's	Large	29 MAY 06	6
CPH0690325	Weedon's	Large	26JUN 2006	6
CPH0590466	Weedon's	Mixed	08 AUG 2005	12
AMC0592076	Zeagold	5	n/a	30
AMC0592424	Unlabelled	n/a	1/9/05	6
AMC0592668	Unlabelled	n/a	n/a	6
AMC0593166	Unlabelled	6	n/a	6
AMC0593672	Unlabelled	n/a	n/a	6
AMC0594091	Unlabelled	n/a	n/a	6
AMC0594092	Unlabelled	n/a	n/a	6
AMC0690206	Unlabelled	n/a	n/a	6
AMC0690759	Unlabelled	n/a	n/a	6
AMC0690854	Unlabelled	n/a	n/a	6
AMC0691168	Unlabelled	n/a	n/a	6
AMC0691295	Unlabelled	n/a	n/a	6
AMC0691427	Unlabelled	n/a	n/a	6
AMC0691609	Unlabelled	n/a	n/a	6
AMC0592668	Unlabelled	n/a	n/a	12
AMC0592817	Unlabelled	n/a	24/9/05	12
AMC0592929	Unlabelled	n/a	n/a	12
AMC0593166	Unlabelled	6	n/a	12
AMC0593862	Unlabelled	n/a	n/a	12
AMC0690315	Unlabelled	n/a	n/a	12
AMC0691748	Unlabelled	n/a	n/a	6
AMC0593408	Unlabelled	6	n/a	30
AMC0593766	Unlabelled	n/a	n/a	6
AMC0593348	Unlabelled	n/a	10 NOV 05	6
AMC0594084	Unlabelled	n/a	22 DEC 2005	6
AMC0594084	Unlabelled	n/a	n/a	6
AMC0691676	Unlabelled	n/a	15 JUN 2006	6
AMC0690854	Unlabelled	n/a	13 APR 2006	12



**FREE-RANGE**

<b>Job Number</b>	<b>Brand</b>	<b>Size</b>	<b>Batch/BB date</b>	<b>Unit size</b>
AMC0690064	Animal Welfare Foods	Mixed	300106 3	12
AMC0691295	Animal Welfare Foods	Mixed	150506 4	12
CPH0690148	Benzie	Mixed	EB23MAR2006	6
CPH0690224	Benzie	Mixed	29 APR 2006	6
CPH0690295	Benzie	Mixed	3 JUN 2006	6
CPH0590493	Benzie	Mixed	BF 10 AUG 2005	6
CPH0590590	Benzie	Mixed	AA30 SEP 2005	6
CPH0590602	Benzie	Mixed	10 OCT 2005	6
CPH0590672	Benzie	Mixed	AA - NOV 2005	6
CPH0590735	Benzie	Mixed	AA - 6DEC 2005	6
CPH0590775	Benzie	Mixed	AA 26 DEC 2005	6
CPH0690003	Benzie	Mixed	AA . 1FEB 2006	6
CPH0690081	Benzie	Mixed	2MAR 2006	6
AMC0592425	Bio	Mixed	150805 02	6
AMC0593105	Bio	Mixed	141105 1	6
AMC0593974	Bio	Mixed	261205 5	6
AMC0690530	Bio	Mixed	130306 1	6
AMC0690854	Bio	Mixed	100406 02	6
AMC0691369	Bio	Mixed	150506 02	6
AMC0691748	Bio	Mixed	190606 ?01	6
CPH0690135	Bio	Mixed	030406 5	6
CPH0690224	Bio	Mixed	15050602	6
CPH0690295	Bio	Mixed	120606 5	6
CPH0690325	Bio	Mixed	030706 3	6
CPH0590466	Bio	Mixed	010805 5	6
CPH0590518	Bio	Mixed	290805 3	6
CPH0590560	Bio	Mixed	19090502	6
CPH0590662	Bio	Mixed	311005 05	6
CPH0590703	Bio	Mixed	281105 3	6
CPH0590793	Bio	Mixed	02010602	6
CPH0690042	Bio	Mixed	20020602	6
CPH0690060	Bio	Mixed	20020602	6
AMC0592075	Bio Land Organic	Mixed	08 Jul 2005	6
AMC0593233	Bio Land Organic	n/a	11 OCT 2005	6
AMC0690466	Bio Land Organic	n/a	10 FEB 2006	12
AMC0593575	Craddock	Mixed	6 11 05 0 1 3	6
AMC0593974	Craddock	n/a	18 12.05 0 1 3	6
AMC0690206	Craddock	Mixed	08 02 06 0 1 3	6
AMC0690530	Craddock	Mixed	9 MAR 2006	6
AMC0690697	Craddock	Mixed	22 MAR 2006	6
AMC0691427	Craddock	Mixed	10 MAY 2006	6
AMC0691676	Craddock	Mixed	- 6 JUN 2006	6
CPH0690135	Eco	Mixed	030406 5	6
CPH0690198	Eco	n/a	240406 1	6
CPH0690259	Eco	Mixed	220506 1	6
CPH0690325	Eco	Mixed	260606 5	6
CPH0590466	Eco	Mixed	250705 1	6
CPH0590518	Eco	Mixed	220805 1	6

CPH0590560	Eco	Mixed	120905 5	6
CPH0590662	Eco	Mixed	071105 5	6
CPH0590703	Eco	Mixed	281105 4	6
CPH0590775	Eco	Mixed	261205 5	6
CPH0690003	Eco	n/a	090106 2	6
CPH0690060	Eco	Mixed	200206 1	6
AMC0592816	Eco	Mixed	260905 8	6
AMC0593974	Eco	Mixed	191205 10	6
AMC0594091	Eco	Mixed	090106 6	6
AMC0690399	Eco	Mixed	270206 6	6
AMC0690530	Eco	Mixed	060306 7	6
AMC0690873	Eco	Mixed	130306 5	6
AMC0691676	Eco	Mixed	260606 7	6
AMC0691748	Eco	Mixed	050606 1	6
AMC0592075	Freckles Organic	Mixed	15 Jul 2005 Flock 17	6
AMC0593678	Freckles Organic	Mixed	9DEC2005 Flock 3	6
AMC0691534	Freckles Organic	Mixed	31MAY 2006 Flock 25	6
AMC0691369	Frenz	Extra Large	24MAY 2006 Flock 6	6
CPH0690148	Frenz	Large Grade A	31MAR 2006 Flock 6	6
CPH0690224	Frenz	Large	5MAY2006 Flock 40	6
CPH0690259	Frenz	Extra Lge Grade A	19MAY 2006 Flock 6	6
CPH0590493	Frenz	Extra Lge Grade A	12AUG2005 Flock 16	6
CPH0590672	Frenz	Extra Lge Grade A	11NOV 2005 Flock 12	6
CPH0590793	Frenz	Large	30DEC2005 Flock 19	6
CPH0690042	Frenz	Large	8 FEB 2006 Flock 16	6
CPH0690081	Frenz	Extra Lge Grade A	24FEB 2006 Flock 21	6
AMC0592337	Frenz	Large Grade A	10 Aug 2005 Flock 7	6
AMC0592598	Frenz	Mixed	19Aug 2005 Flock 31	6
AMC0592928	Frenz	Large Grade A	28SEP2005	6
AMC0593167	Frenz	Extra Lge Grade A	28OCT 2005 Flock 15	6
AMC0690466	Frenz	Large	8MAR 2006	6
AMC0593678	Frenz	Mixed Grade A	7DEC2005 Flock 15	6
CPH0590590	Frenz	Large Grade A	23SEPT 2005 Flock 16	6
CPH0590602	Frenz	Large Grade A	16SEPT05 Flock 10	6
AMC0593974	Frenz Organic	Mixed	28 DEC 2005 Flock 9	6
AMC0690854	Frenz Organic	Mixed	12APR 2006 Flock 28	6
AMC0691748	Frenz Organic	Mixed	28 JUN 2006 Flock 27	6
CPH0690135	Glenpark	Jumbo	25MAR--	6
CPH0690198	Glenpark	Jumbo	22-4.06	6
CPH0690258	Glenpark	Mixed	17MAY--	6
CPH0690325	Glenpark	Mixed	14JUN--	6
CPH0590466	Glenpark	Mixed	23JUL05	6
CPH0590518	Glenpark	Mixed	24Aug--	6
CPH0590560	Glenpark	Mixed	10SEP--	6
CPH0590662	Glenpark	Mixed	29OCT--	6
CPH0590703	Glenpark	Jumbo	26NOV--	6
CPH0590775	Glenpark	Mixed	24DEC--	6
CPH0690042	Glenpark	Mixed	15FEB--	6
CPH0690060	Glenpark	Jumbo	25FEB--	6
AMC0592076	Glenpark	Mixed	1807 05	6
AMC0592497	Glenpark	Mixed	10 08	6
AMC0592929	Glenpark	Mixed	24SEP--	6

*Salmonella:*

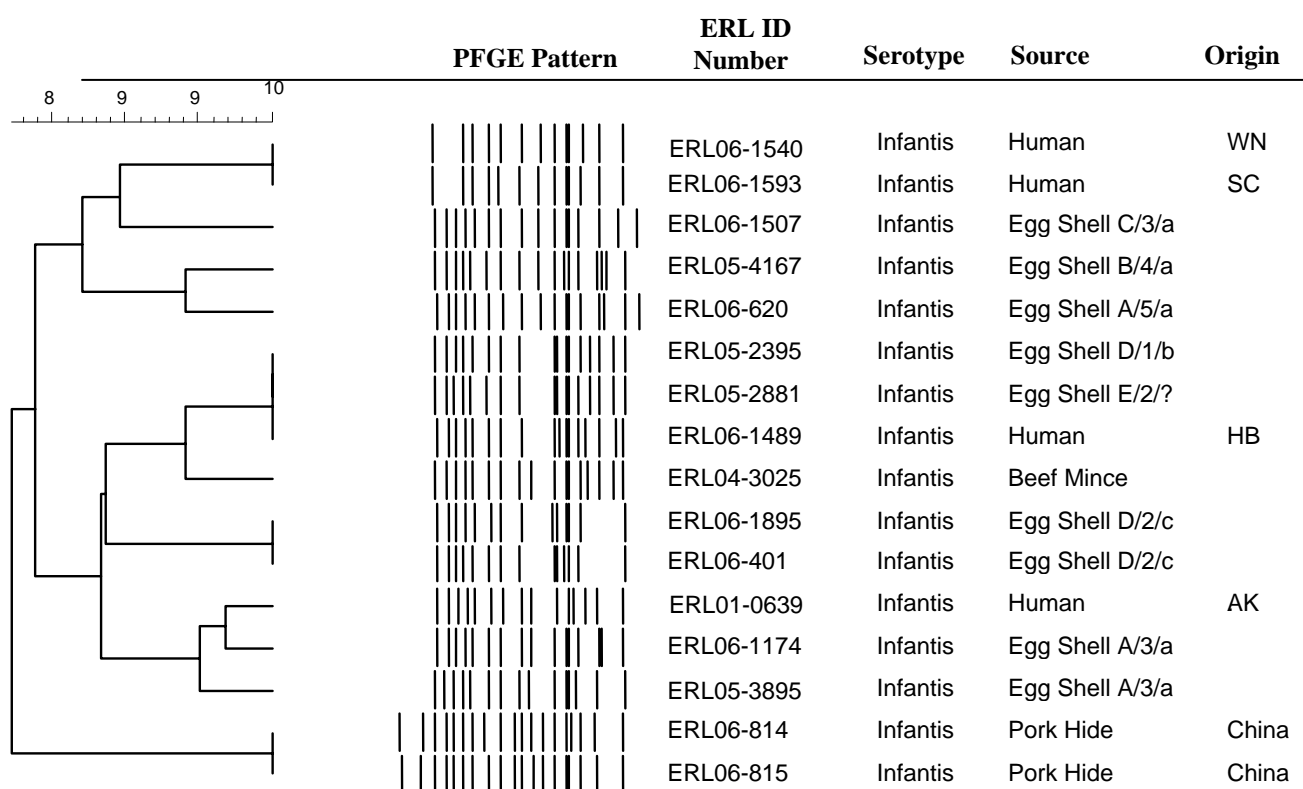
AMC0594091	Glenpark	Jumbo	19DEC05	6
AMC0690399	Glenpark	Mixed	11-2.06	6
AMC0690944	Glenpark	Jumbo	12-4.06	6
AMC0691056	Glenpark	Mixed	22-4.06	6
AMC0691168	Glenpark	Jumbo	29APR- -	6
AMC0691609	Glenpark	Mixed	03 JUN --	6
AMC0593407	Glenpark	Mixed	2310 05	10
AMC0593862	Golden Harvest	n/a	20DEC 2005	6
AMC0690399	Golden Harvest	n/a	25FEB 06	6
AMC0592669	Golden Harvest	Large	15 Sep 05	12
AMC0592075	K & M	Mixed	15 07 05	6
AMC0592242	K & M	Mixed	15 08 05	6
AMC0593167	K & M	Mixed	17 10 05	6
AMC0593766	K & M	Mixed	05 12 05	6
AMC0690064	K & M	Mixed	30/01/06	6
AMC0690466	K & M	Mixed	27 02 06	6
AMC0691295	K & M	Mixed	15 05 06	6
AMC0691534	K & M	Mixed	5 06 06	6
AMC0691834	K & M	Mixed	03 07 06	6
CPH0690148	Lake Side	Mixed	10 APR 2006	6
CPH0690198	Lake Side	Mixed	n/a	6
CPH0690295	Lake Side	Mixed	2 JUN 2006	12
CPH0590493	Lake Side	Mixed	15 AUG 2005	6
CPH0590672	Lake Side	Mixed	11 NOV 2005	6
CPH0590793	Lake Side	Mixed	-2 JAN 2006	6
CPH0690003	Lake Side	Mixed	n/a	6
CPH0590590	Lake Side	Mixed	03 OCT 2005	12
CPH0590602	Lake Side	Mixed	10 OCT 2005	12
CPH0590735	Lake Side	Mixed	12 DEC 2005	12
CPH0690081	Lake Side	Mixed	16 MAR 2006	12
AMC0593575	Nature's Corner	Mixed	10 NOV 2005	6
AMC0593672	Nature's Corner	Mixed	-5 DEC 2005	6
AMC0690022	Nature's Corner	Mixed	-6 FEB 2006	6
AMC0691056	Nature's Corner	Mixed	21 APR 2006	6
AMC0691609	Nature's Corner	Mixed	10 JUN 2006	6
AMC0593974	Nature's Corner	Mixed	19 DEC 2005	6
AMC0690697	Nature's Corner	Mixed	19 MAR 2006	6
AMC0691676	Nature's Corner	Large	20 JUN 2006	12
AMC0592075	New Day	Mixed	20 07 05 013	6
AMC0593105	New Day	Mixed	08.10.05 L33...	6
AMC0691168	New Day	Mixed	30 APR 2006	6
AMC0691427	New Day	Mixed	26 05 06	6
AMC0691534	New Day	Mixed	- 2 JUN 2006	6
AMC0690206	Palace Jumbo	Jumbo	-1 FEB 2006	6
AMC0690759	Palace Jumbo	Jumbo	05 APR 2006	6
AMC0690944	Palace Jumbo	Jumbo	12 APR 2006	6
AMC0691168	Palace Jumbo	Jumbo	02 MAY 2006	6
AMC0691676	Palace Jumbo	Jumbo	19 JUN 2006	6
AMC0592337	Palace Jumbo	Jumbo	11 Aug 2005	6
AMC0592599	Palace Jumbo	Jumbo	-4 Sep 2005	6
AMC0593974	Palace Jumbo	Jumbo	28 DEC 2005	6
AMC0592497	Free Range Farm Eggs	7	25 Aug 2005	12

AMC0592242	Pasture - Organic	Mixed	8 Aug 2005	12
AMC0593167	Pasture - Organic	Mixed	10 OCT 2005	12
AMC0593766	Pasture - Organic	Mixed	21 NOV 2005	12
CPH0590735	Signature	6	-3 DEC	12
AMC0592949	Signature	6	25 09 05 0 1 3	12
AMC0592425	Signature	7	25 Aug 2005	12
AMC0592668	Skratchy's	n/a	25.8.05	6
AMC0593672	Skratchy's	n/a	25 12 05	6
AMC0594092	Skratchy's	n/a	25 12 05	6
AMC0690315	Skratchy's	n/a	5 2 06	6
AMC0691168	Skratchy's	n/a	29 4 06	6
AMC0691609	Skratchy's	Mixed	5 6 06	6
AMC0592075	The Other Side	Large	14 Jul 05	6
AMC0593233	The Other Side	Large	17 OCT 2005	6
AMC0593106	Unlabelled	n/a	n/a	12

n/a - Not available

**APPENDIX 2: PULSED FIELD GEL ELECTROPHORESIS**

**Comparison of PFGE Patterns of *Salmonella* Infantis Egg Isolates with *S. Infantis* Isolates from other Origins.**



Dendrogram parameters: Dice (Opt. 0.50%) (Tol 1.5%-1.5%) (H>0.0% S>0.0%) [0.0% - 100%]

Restriction enzyme: *Xba*I

Egg shell source details are in the format - Brand / Retail Premises / Farm