Department of Agriculture and Rural Affairs

POULTRY NEWSLETTER

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SENATE REPORT-ALTERNATIVE SYSTEMS

Recommendation eight of the Senate Select Committee on Animal Welfare in their report on Intensive Livestock Production states that

> *"The committee* **recommends** *that the banning of laying cages be considered when it can be demonstrated that viable alternative systems can be developed suitable to Australian conditions and that these alternative systems have positive welfare advantages".*

However, how is a cage defined?

Certainly many laying cages currently available in Europe do not LOOK like cages as we know them. They have solid sides and backs, only 2 horizontal bars at the front and the birds inside are sitting on a perch rather than a wire floor.

Many European countries are conducting research into alternatives to conventional laying cages. These include:

Germany	-	Get-Away Cages, Perchery, Aviary
Great Britain	-	Litter Shelf System, Elson Tiered Terrace, Perchery, Aviary, Deep Litter, Strawyard
Switzerland	-	Aviary, Pyramid, Natura
Scandinavia	-	Hans Kier System (Pennsylvania System)
Netherlands	-	Tiered Wire Floor System.

Most of these systems work on the same basic principles;

- they attempt to utilise the vertical space of the house by means of perches, platforms or tiers. The object is to have the same stocking density as with 3 or 4 tiers of cages. This is essential in colder climates to keep house temperatures up and feed costs down;

- the birds are not confined in a small area as in conventional cages;

- the birds should be able to perform a larger range of behaviour patterns than in conventional cages. eg. All systems provide nest boxes for the birds to lay in, but not all have litter areas where the birds can scratch and dustbathe.

Main differences between the various systems involve the actual layout of feed, water, nests, perches and litter areas.

While production figures from small scale alternative systems can match conventional cages we are not ready to introduce alternatives on a large commercial scale with the same predictability of income as there is with conventional cages. 'Experiments on a commercial scale have thus become essential'. Some of the unpredictable factors that need further investigation are floor laying (you can give hens nest boxes but you can't make them lay in them), feather pecking, bumble foot, breast blisters, twisted keel bones, mites and coccidiosis. Producers may wonder if the wheel is being reinvented since it was these problems that were instrumental in the change from floor to cages 20 to 30 years ago. The prospect of turning full circle emphasises the fact that each and every system of keeping layers has good and bad aspects with respect to bird welfare.

It is agreed that higher standards of management are required for alternatives compared to conventional cages and working conditions are generally not as good, especially in systems with litter. As any chicken meat grower will tell you, litter means dust. On his recent visit from Sweden, Ragnar Tauson pre-empted an interesting scenario in which animal welfare legislation might require layers to have access to litter but human health and safety at work legislation could prohibit people working in litter sheds because of high dust levels!

One final note, the Senate Report reached the conclusion that free-range was not among likely acceptable alternatives on a large scale. They found free range to have too many welfare problems and also higher production costs.

So what does the future hold for laying hens. My bet's neither with a 'conventional cage' nor an 'alternative' but with an 'improved cage'.

Source: Linda Murphy - QDPI Brisbane 07-2246103

PROPOSAL TO BAN 'BATTERY' HEN HOUSING

The Tasmanian Government is to mount a case for a national phasing out of the battery hen system, instead of fulfilling an election promise to do so in its state.

The primary Industry Minister, My Llewellyn, said it would have to be done nationally or not at all.

If we stop it, then Victoria and New South Wales will just gear up for extra production and those eggs will come into Tasmania to be purchased by consumers here.

Animal rights activists nationally had hoped Tasmania would show the say with a ban. The vice-president of the Australian and New Zealand Federation of Animal Societies, Dr Peter Singer, said referring the proposal to such a council would only bog it down.

The Tasmanian report said the keeping of battery hens would be forbidden by law in Switzerland by 1992, and in Sweden from 1998 with an additional demand that no eggs can be imported, but it said although Tasmania could legally ban the sale of non-battery eggs, including those from interstate, there would be a disruption to supply and higher prices to pay.

Source: The Age 13/11/90

PROLAPSE AND VENT TRAUMA IN LAYING HENS

Vent trauma is a term covering prolapse, cloacal contusion and vent picking and remains one of the major sources of mortality in caged laying hens in Australia. Egg production is foregone and bird welfare is threatened.

Mortality Patterns

A study of flock mortality patterns undertaken at the Victorian random sample laying test over a number of years, indicates that vent trauma accounts for between 25-50% of the total adult mortality of eight percent, recorded in a twelve month production cycle.

The majority of the losses due to vent trauma occur between the onset of lay and peak production. More specifically, there is a marked upsurge in mortality during the onset of egg production, followed by a decline as the flock ages. Evidently the current management strategies used to control vent trauma, such as beak trimming and bodyweight regulation, are only partially effective in moderating mortality.

The application of these standards to the national flock indicates that production losses attributable to vent trauma, would be approximately six to ten eggs per hen housed, plus the loss of 300,000 hens on an annual basis.

FACTORS IMPLICATED IN PRECIPITATING VENT TRAUMA

Conventional Wisdom

It is generally held belief that vent trauma in the laying hen is a consequence of aggressive social behaviour, which is accentuated by high stocking densities and intense light. The conventional theory therefore implies that picking of the cloaca ('pica') is the primary mechanism responsible for vent trauma.

The picking behaviour has been hypothesised to be a behavioural aberration, the predisposition to which is determined primarily by genetics, but may also be influenced by management and stockmanship.

Another suggestion has been that the picking behaviour may be associated with inadequate nutrition. Supplementation of diets with additional sodium and/or animal protein sources has been an anecdotal approach to the control of vent picking outbreaks.

Alternative Hypothesis

As an alternative hypothesis, perhaps cloacal contusion and/or prolapse associated with haemorrhage may be the primary lesion which triggers the picking behaviour. Hence the incidence of cloacal haemorrhage may determine the incidence of vent picking or trauma.

The relationship between egg size and body size may influence the predisposition to cloacal contusion and prolapse.

A comparison of the average egg weight to mature body weight ratio of four major Australian laying strains provides evidence of a larger egg weight to bodyweight ratio in the smaller framed tinted egg lines.

Calculating a ratio of egg weight to body weight for one strain predisposed to vent trauma clearly indicates that the egg weight to body weight ratio peaks during the period of onset of egg production, and declines thereafter. The pattern described is likely to be consistent with almost all of the tinted lines, and in fact closely parallels the pattern of mortality due to vent trauma.

Obviously the superior laying strains are genetically programmed to produce the largest egg possible with the smallest body size, thereby optimising production efficiency. The relationship described may explain the development of prolapse in individual birds, where the ratio of egg weight to body weight becomes unbalanced.

Precocious Egg Production

Another important variable which may contribute to a high incidence of vent trauma, is excessive body weight development and precocious onset of egg production. Presumably these vent trauma lesions result from prolapse rather than picking per se. Unfortunately there has been little systematic research undertaken on this relationship despite the fact that this variable may be particularly important in some Australian strains.

Nutritional Factors

Nutritional factors may play a role in influencing the incidence of prolapse by altering egg size at a fixed bodyweight, exerting a direct effect on the physiology of the bird which influences uterine tone, or by influencing the development of pica behaviour. At this stage there is limited definitive research to implicate a nutritional factor(s) in the vent trauma phenomenon, but these possibilities seem worthy of thorough investigation.

Concluding Remarks

The high incidence of vent trauma confined to the onset of egg production introduces the questions of firstly, why is the aggressive picking behaviour triggered in the early phase of egg production and secondly why does the picking behaviour diminish with age rather than increase?

Obviously some other factor(s) play a role in triggering the picking behaviour which is manifested as vent trauma or vent picking.

The industry research groups should be endeavouring to understand the underlying mechanisms responsible for vent trauma, and develop management or genetic strategies designed to eliminate the need for beak trimming.

The intangible gains of this work are likely to be the enhanced welfare of the laying hen achieved by controlling vent trauma and eliminating routine beak trimming, whilst the economic gains are improved hen housed production and reduced production costs.

Source: Dr G Parkinson, Vic. Inst. Anim. Science, Attwood (03) 3331200

WILDLIFE POSSESSION AND TRADE IN VICTORIA - A REVIEW

The Department of Conservation and Environment has released a report entitled "Wildlife Possession and Trade In Victoria - A Review".

The Wildlife Act defines certain non-indigenous species of animals as wildlife. Specifically, these are all non-indigenous species of quail, pheasant and partridge and all species of deer. Many of the non-indigenous bird species listed above are farmed commercially under a Game Bird Farm Permit. It is recommended that the administration of game bird farms and deer farms be transferred to the Department of Agriculture and Rural Affairs, in accordance with other stock or poultry based operations. Both deer and non-indigenous game birds will continue to be classified as wildlife and given protection under the Wildlife Act. With deer, in particular, this is important due to the tradition of hunting and the size of the user group involved.

However, deer and non-indigenous game birds will be exempt from the licensing provisions with respect to possession and trade. This means that no authority is required from DCE to be in possession of these species but it will not absolve the persons holding these species from any requirements under other legislation (eg. Prevention of Cruelty to Animals Act or the Meat and Abattoir Inspections Act). However to hunt or take these animals will fall within the game licensing provisions of the Wildlife Act. Also, it will not allow the person to take wildlife from the wild or to release wildlife to the wild without the specific approval of the Director-General of DCE. It is important to maintain this control to prevent any action which may directly threaten wildlife conservation, and regional DCE staff have an important role to play in this area.

Any general comment on the proposals will be welcomed and should be directed to Mr Gary Davey at PO Box 137, Heidelberg, 3084.

Copies of the review document may be obtained from the Wildlife Licensing and Permits Unit by telephoning 03-450 8600 between 9.00am and midday Monday to Friday.

Field Day early April 1991, to be held at Alabama Ostrich Farm, Narrandera, NSW, starting at approximately 10.30 a.m. Mr Du Preez will speak. Further details from Mr Eric Male (069) 553233 or Dalgetys (069) 591311

Australasian Poultry

Ed. These field days are extremely popular with an attendance of 600-700 at the one in December at Narrandera.

Secretary of the Aust. Ostrich Association is Mr Michael Lahy 084 - 539212.

POULTRY MEAT - NON STOP GROWTH

While the growth in world meat production has slowed, poultry meat is maintaining its upward trend and will likely account for nearly 23.5% of meat output this year.

World Meat Production, 1990, million tons

	Forecast.
WORLD TOTAL	168.8
Bovine meat	50.6
Sheepmeat and goatmeat	9.2
Pigmeat	65.8
Poultrymeat	39.4*

* Australia's forecast is 0.43 million tons produced and 25.8 kg/capita consumed.

Source: Poultry International Oct.'90

FRESH POULTRY GETS NUTRITIONAL LABELLING

For the first time in Canada, nutritional labelling will appear on a new line of packaged fresh chicken.

The new brand, 'Lean Chicken' carries nutritional information concerning the amount of energy, fat, protein and carbohydrates per 100g serving.

Lean Chicken Product Range	Fat Content (%)
Breasts, skinless	1.0
Breasts, skinless boneless	1.0
Thighs, skinless	7.3
Stir-fry (50/50 mixture of skinless boneless breast and thigh meat)	4.0

"It's usually difficult to have nutritional labelling for chicken because the skin and fat levels vary considerably from bird to bird", said the Director, "however, by removing the skin which accounts for 90% of the fat in poultry - and the visible excess fat, we can guarantee our nutritional declaration."

All of Prime Poultry's new Lean Chicken products have less fat content than the 10% limit allowed by Consumer and Corporate Affairs Canada.

"By providing the consumer with detailed nutritional information we feel we're providing not only a definite benefit to the consumer but also a significant marketing advantage for retailers selling this product".

"Canadian consumers have in recent years become increasingly concerned about the nutritional value of the foods they buy and serve their families. This is a trend which will only accelerate and products like Prime's Lean Chicken meet the new demands of today's health conscious consumer.

"As more work is involved in producing the final product, lean foods are usually slightly more expensive, but most people don't mind paying for the convenience and the assurance of quality'.

Source: Poultry International Oct.'90.

DNA 'fingerprinting' research programme

Euribrid scientists have begun a genetic research programme aimed at new advances in poultry breeding.

At present breeders select birds on external characteristics, which are about 70% determined by environmental influences. Working directly with the genotype at the DNA level would enable tremendous progress to be made in breeding.

The Euribrid brief is to use DNA 'fingerprinting' to identify a number of RFLP's (restriction fragment length polymorphisms) and use them as markers for the DNA genes around them. By this procedure a complete genetic "portfolio" of the chicken is constructed. Correlating the markers to important economic traits, leads them to information by which specific traits can be selected on the basis of DNA analysis.

An additional advantage of DNA 'fingerprinting' is that birds can be selected without any influence from the environment and at a very early age before particular characteristics can be expressed. It can be used on both sexes, also on sex-linked traits such as egg production.

Source: Euribrid News

PROFITS FROM COMPUTERISED ENVIRONMENT CONTROL

These systems will help larger operations compensate for what some believe to be lower levels of animal husbandry compared to smaller operations utilising family labour. Computerised control should also aid large complexes with their integrated feed, egg production and processing units.

Economic returns: For this (American) study the installed costs of the complete Automated Environments PMS2000 system are used, about $25 000 for a 60 000 bird house (42c/bird) or 3% of the total investment in a poultry operation.

One commercial systems supplier claims improved feed efficiency, increased egg production (8 eggs or 3.5%) and size (totalling $1.00/bird/year in egg returns) lower mortality rates, more efficient use of power and a 10% increase in density.

Results:

Producers indicated feed consumption decreased. Three producers able to estimate changes indicated annual decreases of 0.55, 0.82 and 0.91 kg. of feed/100 birds/day, i.e. 5.1%, 7.8% and 8.3% respectively. Decreases and daily stability in feed consumption appear to be related to the stabilisation of temperature and humidity near the optimal levels. It appears that higher densities may be possible with computer controlled houses, levels of 350 sq cm/bird vs the standard 390 sq cm/bird. However, there is a trade-off between reduced shed costs, changes in feed consumption, decreased egg production/bird and better management.

Producers indicated the computerised system had advantages over their previous alarm systems.

Source: Poultry International Oct.'90

COMPUTERISED FEEDING SYSTEM

For economic egg production, attention has to be given to feed distribution to individual cages. The Farmtec 'Wircom' computer controlled feed cart works with any kind of feed, weighing the feed for each cage based on the number of birds in the cage, temperature inside the cage and ration programmed per bird. The feed cart is programmed to provide five feedings/day and, at the end of the day, communicate the information required on number of birds, feed consumed and temperature to the system's integrated main computer. The information may then be transferred to any compatible PC system. The system saves feed because it weighs and dispenses feed accurately for each cage, birds are not over-fed and bodyweight is more uniform throughout the flock. The data available on bird numbers, feed supplied and temperature, simplifies flock management by providing comparisons with the basic data which only has to be programmed once into the system. - *Farmtec*

Source: Poultry International Oct.'90.

EGG QUALITY - CONTRIBUTING FACTORS

(a) SHELL CONDITIONS

A. Odd shaped eggs

1. Primarily inherited
2. Respiratory disease (infectious bronchitis and laryngotracheitis
3. Length of lay - incidence is higher in older birds.

B. Thin porous or soft-shelled eggs

1. Inheritance influences porosity and ability to produce strong firm shells.
2. Lack of sufficient calcium, phosphorus, manganese and vitamin D.
3. Excess phosphorus.
4. Infectious bronchitis disease.
5. Temperature over 30°.
6. Age of birds, incidence is higher with older birds.
7. Disturbing birds during dark hours.

C. Rough or abnormal shell texture

1. Inherited
2. Infectious bronchitis disease
3. Excessive use of antibiotics.
4. Excess calcium.

D. Mottled shells

1. Primarily caused by extremes in humidity high or low.
2. Inherited.
3. Cage marks made on freshly laid eggs.

E. White strain layers producing tinted Eggs

1. Primarily inheritance.

F. Tremulous or loose air cells

1. Infectious bronchitis disease.
2. Rough handling.

(b) **YOLK CONDITIONS**

A. Blood spots

1. Primarily inherited.
2. High temperature changes.
3. Age of birds - incidence increases as birds get older.
4. Deficiencies of vitamin K (probably rare) or vitamin A.

B. Yolk colour variation

1. Pigment level in diet - feed recommended levels of xanthophyll carrying material for desired egg yolk colour.

   Allow about 10 days of feeding to achieve maximum colour.

2. Olive coloured yolks - caused by 5% or more cottonseed meal in the diet.

   Ingestion of certain weeds.

C. Mottled yolks

1. Ammonia fumes
2. Gossypol (cottonseed meal)
3. Piperazine citrate.

D. Thick, pasty, rubbery or cheese-like

1. Crude cotton seed oil in diet (malvalic acid and sterulic acid)
2. Freezing of intact egg.

E. Off odours

1. Chemicals for treating parasites - use only recommended chemicals. Avoid contact with BHC or Lindane, Hexaphene.
2. Fruits, vegetables and flowers - never store in egg cooler.
3. Household detergents - use only special egg washing detergent-sanitiser materials.

G. Flat yolks

1. Weak vitelline membrane old eggs and improper storage temperature.
   Store at cool temperature (5-12°C).

(c) **ALBUMEN PROBLEMS**

A. Increased thin white

1. Inheritance.
2. Diseases (infectious bronchitis, or laryngotracheitis).
3. High storage temperature
4. Length of lay - incidence of more thin white increases in eggs from older birds.
5. High level of ammonia from droppings.
6. Loss of CO_2 from shell egg.

B. Cloudy white

1. High carbon dioxide (CO_2) inside eggshell brought on by oiling egg too soon after lay.
2. Refrigeration of fresh egg at low temperature (0-4°C).

C. Blood and meat spots

1. Inheritance
2. Continuous light. Use daily light period of 14 to 17 hours.
3. Incidence of both tends to increase with age.
4. Increased blood spots occur with sudden climatic changes.

D. Spoilage by bacteria and moulds

1. Green whites caused by Pseudomonas bacteria.
2. Black rots caused by Proteus bacteria.

(d) **RESEARCH**

Bob Hughes (Parafield, SA) - I found that eggs laid early in the day are generally larger and have weaker shells than eggs laid later.

"Early and frequent collections will minimise damage in the roll-out tray from egg-to-egg impact when other hens in the same or adjoining cages lay their eggs, and when vibrations are transmitted through the cage floors to eggs on the roll-out shelf. Shell damage on the roll-out shelf is likely to increase with higher stocking densities and by delays between lay and pick up.

RECOMMENDATIONS

- Avoid heat stress on layers because dietary alterations will, at best, only partially relieve the problems of reduced feed intake and other physiological disturbances.

- Avoid high dietary levels of elements such as sodium, potassium, chloride and phosphorous in layer diets because certain combinations are likely to depress performance.

- On the other hand, ensure that the layer diet has an adequate level for each of these elements to avoid sub-optimal performance and predisposition to other disorders.

- Verify that any calcium supplement is of a consistently high standard. Shell grit and limestone are usually assumed to contain about 38 percent calcium. The soluble calcium content (in the form of calcium carbonate) of some shell grit and limestone samples can be as low as 25 percent depending on how badly the sample is contaminated with non-calcareous material and how damp it is when weighed. Contamination with salt can also be a problem.

- Ensure that cages and equipment for collection, grading and transport of eggs are well maintained. Adequately instruct and supervise staff involved in egg handling.

- In addition to laying performance, consider the egg shell quality characteristics when purchasing replacement stock. Large differences can occur between commercial strains at a given age and also in the rates of decline in shell quality with age.

Sources Egg Industry
"Pen Talk" and BARASTOC Poultry News

WHOLEFOODS: NOT SO HIP

The Australian Wheat Board has good contacts with organic growers in all states and can source big tonnages but what it needs now is people who want to use it. The board could probably "rustle up" 15,000-20,000 tonnes of certified, organically-grown wheat from the harvest now underway.

At this stage believed it probably would sell only 5,000 tonnes, including a hoped-for parcel into Europe.

There was demand for organic wheat from small, stone-ground milling operations, but major milling groups had not been interested because they did not believe there was a big enough market for the end products.

A complete mill would have to be dedicated to the organic grain, making it difficult for larger operations to justify involvement without significant outlets.

Earlier this year, a major report on the market for Australian organic products forecast that one in 20 farmers would be growing organic food by the end of this decade.

However, it also found that mainstream consumer shopping habits had not changed in favour of such foods, because of conflicting information, and emphasis on taste, looks and price, as well as on health.

The report put the current market for organic food in Australia at $35-45m, of which wholefoods, which includes grain, accounted for 25 per cent.

The AWB estimated a reasonable premium for organic wheat would be about 30 per cent above the equivalent regular grade.

Source: AFR 6.11.90

NO CEILING YET FOR HISEX WHITE LAYERS

Hisex White which already hold the world record for feed efficiency of white egg layers could soon set new standards for other traits such as peak production, persistency and total egg production.

Five years ago Euribrid who supply a large proportion of breeding stock for the global market of two billion laying birds (more than 230 million in the United States) restructured their breeding programme to find the optimum combination of three factors - purity of selection, generation interval and selection intensity - which hold the key to progress.

One early result has been to lower the cost of egg production through better feed conversion. In 1987 three Dutch flocks of Hisex White commercial layers became the first to break the barrier of 2.00 feed conversion.

Average peak production is improving by 1% per generation. Figures for the start of 1990 show test flocks peaking at up to 96% at 27 weeks of age, with the average figure 94% at 28 weeks.

In these tests leading flocks were laying at over 90 per cent for up to 24 weeks (average 16 due mainly to good rearing management. "Rearing is one of the most important periods for a bird, this is the investment time when it pays to do the job well. So many people forget that if you do a poor job in rearing, you can forget about peaks" one geneticist said.

We can forecast a rise in egg production at least until the year 2000 and probably beyond, with Hisex White adding three to four eggs/bird/year and achieving a total of 348 or more eggs at 78 weeks by the turn of the century".

"In time there might be a ceiling to egg production, but not yet, bearing in mind we are developing Hisex White lines that will lay eight eggs in seven days, which is over 100 per cent production, by applying daylengths shorter than 24 hours".

"Random sample tests indicate that we are correct in giving emphasis to improving peak production, persistency, total egg production, feed efficiency shell quality and other traits contributing to the advance of Hisex White as a layer of the highest quality round the world".

Source: Euribrid News Aug.'90

CHOLESTEROL-FREE EGG PRODUCTS

A deal between the CSIRO and a consortium of Australian egg farmers could lead to cholesterol free or low-cholesterol egg products in local and overseas supermarkets within 18 months.

A revolutionary, secret technique developed by CSIRO scientists would allow people to indulge in custard, mayonnaise and scrambled eggs with minimal guilt or health risks.

The technology, which could be the world's first cholesterol removing technique to be applied commercially, could net Australia millions of dollars in overseas sales and provide a big impetus for the local egg industry.

A spokesman for the National Egg Products consortium, Mr Frank Pace, said the new product containing 80 per cent less cholesterol than a normal egg, would be marketed as "Lochol-Eggs". The consortium paid more than $500,000 for the rights to the technology.

While several countries have been in the race to eliminate cholesterol, the CSIRO claims its process is cheaper and more efficient than other methods being investigated.

The process uses a naturally occurring compound used as a food additive in other countries. It is placed into milk or an egg yolk, where it combines with cholesterol, rendering it insoluble. The insoluble cholesterol then falls to the bottom and is centrifuged out.

The compound can also be bound to silica beads and the egg or milk poured through the beads. The beads can be rinsed free of extracted cholesterol and used again.

COURSES FOR THE POULTRY INDUSTRY

TITLE: Broiler production
DURATION: One day
DATE: May
CONTENT: Marketing, technical and legal issues.

TITLE: Incubation of Eggs
DURATION: A scool science project
DATE: February, May, August, October
CONTENT: A first hand view of the factors involved in hatching chickens.

TITLE: Poultry Managerment Seminar
DURATION: Two days
DATE: May
CONTENT: A national seminar addressing technical and marketing issues faced by layer and broiler producers.

TITLE: Poultry Husbandry Course
DURATION: Course may be completed over several months by home study, with optional seminars
DATE: February
CONTENT: Introduction to the industry; layer management housing; chicken meat production; health and nutrition; breeding replacement stock; turkeys, ducks etc, etc; and other topics.

Source: Andrew Almond, Longeronong College 053-847208

CRYSTAL BALLING THE EGG INDUSTRY

How I see the future of the Egg Industry.

During my 30 years with the egg industry various changes have taken place. The next few years will see even more.

It's already happening - Contract production, this will become a major arrangement for the industry, I can see contracts working in two ways - Marketers will demand contracts with suppliers, suppliers will have contracts with producers.

It is probable that hatcheries will continue to amalgamate with feed companies also egg packing stations to make a fully integrated unit.

If you want particular chicks, you will be required to deliver the egg to the Company egg floor and to get the best result from the birds, you will need to feed the Companies special feed.

Naturally all this organisation will have a price and the producer will really be squeezed.

Victoria once had over 40 hatcheries, now we are left with only a handful and the smaller ones are being by-passed as they can't supply credit and don't offer the back up service the large companies provide.

The egg industry will become diversified, there will be three main streams:

- The Commercial egg - eggs for the masses produced in the most economical manner

- The speciality class eggs for the more financial and selective market - organic, vegetarian, barn, free range, duck, quail

- Finally fancy eggs - brown, blue, low cholesterol, special eggs for those with certain allergies

The problem of shell quality must be solved as the industry will become far more mechanised, also as returns drop it may become economically impossible to employ labor for less than 50,000 birds per worker. We were told earlier this year that one English farm expects one man to supervise 90,000 birds.

Mortality should be standardised at 4% depending on the quality of stock supplied - No doubt the lower priority customer will not get the best chickens.

The service of the industry will be in the hands of the commercial hatchery or private individuals. No doubt the Company staff will espouse Company policy and have the farm operating for the benefit of the Company, not the farmer - this has been a complaint of the broiler industry.

As the farms become larger there will be a demand they be sited on larger areas as a barrier against the so called pollution - noise, odour, visual. Farmers will be forced to diversify to get a return on the investment in the land. Probably the alternatives will be crops that will utilise poultry manure - plants that are grass feeders such as pumpkin and rhubarb or may be lot-fed cattle will be fed supplements of manure and wastes. Manure disposal will be the most urgent problem the farmer will have in the immediate future.

I wish to receive your comments to publish in the next news letter.

IVAN SMITH
(03) - 8101736

CSIRO VACCINE SET TO BOOST CHICKEN INDUSTRY

The international broiler chicken business is about to be helped by Australian science.

The veterinary products company Arthur Webster Pty Ltd is preparing to market a unique genetically engineered vaccine, developed by CSIRO scientists in Melbourne, that protects young chickens against the Infectious bursal virus disease.

The virus poses no danger to humans, but Dr Kevin Fahey of the CSIRO, says that it is feared by the poultry industry because of its capacity of disrupt the tight schedules and small profit margins on which the industry operates.

Dr Fahey said new, more virulent strains of the disease had killed millions of chickens in Europe and Britain. In the United States, a strain had emerged that resisted all conventional vaccines based on weakened virus strains.

The fact that the new vaccine protects against all known strains of the virus, including the US strain could see it dominate an international market worth $50 million a year.

Dr Colin Ward, who headed the research project, says the vaccine is only the second genetically engineered vaccine in the world based on a purified protein from the virus it is designed to combat.

The CSIRO is already planning to add other antigens to the vaccine, so that a single vaccine would protect chickens against other important poultry viruses, profitably defying the old rule about never putting all your eggs in one basket.

Source: G. O'Neill 'The Age' 28 Nov. '90

OSTRICH AUTHORITY TO VISIT AUSTRALIA

Mr K Du Preez, from the University of Stellenbosch in South Africa will be visiting Australia in 1991. He will be addressing the Recent Advances in Animal Nutrition in Australia Conference at the University of New England, Armidale on ostrich nutrition.

The conference will be held from 7th to 10th April 1991. Details may be obtained from Professor D. Farrell, Department of Biochemistry, Microbiology and Nutrition, University of New England, Armidale, N.S.W. 2341. 067-733333 XT22.

OSTRICH FIELD DAYS

Open Day organised by Triple J Ostrich Producers to be held at No. 307 Coolart Road, Tyabb, Vic., tentatively on 23 February 1991. This will be a discussion day, with demonstrations on incubation, brooding, rearing and management techniques. For further information contact Mr John Durieux, (059) 774788 or Mr John Bast (03) 7893652.

COMING EVENTS

Australia

February 1991
12-13 Australian Poultry Science Symposium at the University of Sydney. Further information from Associate Professor D. Balnave at the Department of Animal Science, Sydney University, Camden (046) 550-267.

March 1991
Survival of an increasingly competitive market. A DPI seminar to be held at Queensland Agricultural College for egg producers. Contact: Graham Wilson, Poultry Section, QDPI, Toowoomba (076) 314-200.

April 1991
7-10 "Recent Advances in Animal Nutrition in Australia 1991". For further details: David Farrell, University of New England, Armidale, NSW 2351. Fax (067) 728-235.

June 1991
National Poultry Housing Seminars, Castle Hill 5-6th. Tocal College 10-11th, Tamworth 12-13th. Contact: I. Embury (02) 622-6322 or Tim Luckhurst (02) 605-6464.

International

March 1991
5-8 SIMAVIP, International Show of Intensive Animal Production Techniques and Equipment, Paris. Contact: SIMA, 24 rue du Pont, 92522 Neuilly-S/Seine, Paris, France. Tel: (1)46 40 31 20; Fax: (1)46 40 11 23; Telex: 630 842.

May 1991
12-17 Doorwerth (near Arnhem), The Netherlands 10th Symposium on the Quality of Poultry Meat and 4th Symposium on the Quality of Eggs and Egg Products. Contact: Symposium Secretariat, Spelderhold Centre for Poultry Research and Information Services, Spelderholt 9, 7361 DA Beekbergen, The Netherlands.

May 1991
22-25 Yutav '91, Egg and Chicken Producers International Trade FAir, Istanbul, Turkey. Contact: Cemal Baykara, Tel: 174 23 85; Fax: 173 27 24; Telex: 26869 ssqxtr.

June 1991
26-29 Hanover Germany, Huhn & Schwein '91, International Exhibition for pig and poultry production and processing. Contact: Deutsche Landwirtschafts-Gesellschaft, Zimmerweg 16, 6000 Frankfurt am Main 1, FRG Tel: 69 71680.

August 21, 1991 - February 21, 1992
International Course on Poultry Husbandry, Barneveld College, Netherlands. Contact: Barneveld College, PO Box 64, 3770 AB Barneveld, Netherlands.

September 5, 1991
Northern Ireland Poultry Conference, Greenmount College, Antrim, N. Ireland. Contact: Basil Bayne, Poultry Association N.I., Loughry College, Cookstown, Co. Tyrone, N. Ireland BT80 9AA.

September 1991
17-21 Tallin, Estonia, 1st International Quail Farming Conference, Contact: Mrs Nina Selina, Secretary, Room 602, USSR National Branch of the WPSA, Orlikov Pereulok 3 'B', 107139 Moscow, USSR.

September 1991
18-20 Edinburgh, UK, 23rd Poultry Symposium - Bone Biology and Skeletal Disorders in Poultry. Contact: Dr Colin Whitehead, Institute of Animal Physiology and Genetics Research, Roslin Research Station, Roslin, Midlothian EH25 9PS, UK.

October 1991
14-17 Mestre (Venice) Italy, 8th European Symposium on Poultry Nutrition.
The Scientific Programme will include five sessions: Exogenous toxic substances and endogenous antinutritional factors in poultry feeds; nutritional and disease interactions; feeding with special aims; nutritional aspects of fat deposition; mineral nutrition. There will also be a roundtable discussion on the influence of feed and water on the quantity and quality of poultry droppings. A poster sessionis planned.
Contact: Dr Silva Cerolini, WPSA Italian Branch Secretary, Instituto di Zoocolture, Via S. Giacomo, 9, 40126 Bologna, Italy.

October 1991
28-31 Jerusalem, Israel, 2nd European Symposium on EDP Application in Poultry Management. Contact: Mr B A Ron, Secretary, WPSA Israel Branch, P.O.B. 2055, Petach Tikva 49120, Israel.

September 1992
20-24 Amsterdam, The Netherlands XIX World's Poultry Congress. First Announcement. Contact: XIX World's Poultry Congress, RAI Organisatie Bureau Amsterdam bv, Europaplein 12, 1078 GZ Amsterdam, The Netherlands.

HARVEST PICNIC 1991

The Harvest Picnic is a showcase for the variety and quality of Victoria's agricultural produce. DARA is contributing $30,000 to ensure its success. Minister Rowe launched the event recently saying "The Harvest Picnic gives small growers a marketing opportunity to promote their specialised products to consumers and commercial intermediaries face to face.

"Products such as these will assist Victoria to capture and preserve markets at home and abroad."

This year's Harvest Picnic will be held on Sunday, February 24 at Werribee Park.

11TH ANNUAL AUSTRALIAN EGG INDUSTRY CONFERENCE - 8TH MAY 1991 - MELBOURNE - REGENT HOTEL

"Options In the 1990's - What are the Alternatives?"

A program is being arranged by the EFV with the following talks being proposed:

- Are alternative systems only a researcher's dream?
- Marketing in the 1990's The retailer's perspective.
- The Rural Guideline and the small producer.
- The role of Value added product - The way ahead!
- Maximising profits on declining margins.
- Alternative Life Style for the 1990's.
- The Egg Packaging "explosion" in the United Kingdom.

UK, USA and local speakers will participate.

CHICKEN IMPORTS

Australia's first poultry imports in more than 40 years were recently released from quarantine near Adelaide. About 1500 meat chickens, bred from Denmark stock, were imported four months ago and held in a new egg hatching facility.

Six more consignments will pass through the facility in the next three years, including meat chickens, laying chickens and turkeys from the UK and Canada.

The first stock, from ASA are grandparent stock in five lines. The ASA broiler chicken is a fast growing heavy bird with a high yield of breast meat, one of the leanest chickens in the world and a top performer in European Random Sample Tests.

A SPECIALITY PRODUCT

Man has always found birds and their eggs a culinary delight but most people would balk at eating their nests as well.

Yet for centuries the nests of swifts have formed the basis of a soup highly favoured by the Chinese.

The basic ingredient for the soup is saliva which the swifts use to bind the nests together and glue them to the walls of caves.

After minimal cleaning the nests sell for $100/100g in Malaysian markets and more in Hong Kong.

The Chinese take birds nests soup to boost their libido, to cure coughs, asthma, rheumatism and improve their complexion.

Research has shown, however, that the dried saliva has virtually no food value and little taste. In soup it is mixed with strong tasting seasoning and herbs.