Winter 1996 Edition No 5

NSW Association of Agriculture Teachers

Bulletin of the NSW Association of Agriculture Teachers

B·A·T·



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Bulletin of the NSW Assn. of Ag. Teachers

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A LINE FROM THE EDITOR

PROMOTING OURSELVES

In the second half of the year thousands of Junior students across the state begin selecting their elective subjects for the School certificate and HSC Courses. I often wonder what vision students unfamiliar with our subject, have of agriculture at their school. We need to focus on how we can promote Agriculture as a study worthy of their consideration. I am unaware of any definitive research on student motivation and subject selection, so have to rely on "the University of Life" to make the following points:

WELL, WHAT HAVE WE TO SELL?

HANDS ON LEARNING:

There are few subjects which develop student learning through as many real life, hands-on situations as Agriculture. Agriculture represents experiential learning at its best.

SUCCESS:

Agriculture provides many diverse activities. It gives scope for all learning styles. Confidence and success are found along many paths - taking the sheep to the show or producing a written report using the computer.

RELEVANCE:

Agriculture has relevance to the world around students. Our subject concerns communication and research relevant to ourselves and our surroundings.

ON COURSE SELECTION NIGHT:

Forget it! The decision has been made by the kids talking to other kids. ..Go Home ... and think about what the kids saw your class doing during the year.

TO GET YOU THINKING:

- Have you used a display in the Resource Centre?
- Agriculture in the playground/school oval.
- Good news from the Agriculture Department
- **HAVE something to hear**
- **something to do**
- **something to see**
- An open day for parents.
- Ag. Week - the school newsletter, the local show.
- Involve the community
- Make a Video.
- Past students return.
- Do you have a tour, camp or excursion that is ***different*** from those in the rest of the school?

THE EDITOR CONTINUES

McGAW REPORT on HSC

It is most important this Association provides feed back on the McGaw Report on HSC revisions. The responsibility ultimately falls on the class room teacher and I urge you, either as an individual or network, to put your thoughts to Jenni Wilkins (see page 33).

FINALLY

I know we are all busy ..**BUT** ... would you consider an item for BAAT's final 1996 edition? ***Closing date will be***

8th November 1996.

- A report on your 3 Unit experiences would be appreciated (see Peter Giblin page 42 for example).
- Get your year 10's to write/photograph "Agriculture at Our School" (which is missing this edition - because of lack of 'takers'!)
- Could someone report on the **Ag.-Fest** held in June at **Coonabarabran** please?

John Musgrave
Editor

BOOK REVIEW "OFFSIDER"

Help for Teachers of Agricultural Subjects in Times of Need

Compiled by Kevin Dahtler

Kev is well qualified to compile such a useful handbook. He has been a classroom teacher of a diverse range of Agricultural Science subjects. The book is spiral bound, runs to 250 pages, costs $28.50 (including packaging and postage) **and YOU CAN COPY ANY OF IT!**

SUGGESTED USES MIGHT BE:

- Extension work for better students.
- Supplementary work for less able students.
- Brief assignments.
- Handouts when teachers are absent.
- As process questions in examinations.

CLASSIFICATIONS are:

ANIMALS: Behaviour, Breeding, Breeds, Digestion, External Anatomy, Genetics, Growth and Development, Hormones, Industries, Nutrition, Pest and Diseases, Production Factors, Reproduction, Shape
ECONOMICS: Laws, Marketing
SCIENTIFIC METHOD
WEATHER:
SOILS:
PLANTS: Anatomy, Breeding, Fruit & Veg marketing, Genetics, Internal Structure, Irrigation, Nutrition, Pastures, Physiology, Production Factors, Propagation, Weeds & Weed Control. Order direct from K.P. & D. Dahtler, 29 Valley View St, **NAMBOUR QLD** 4560

Well worth the cost. Ed.



THE PRESIDENT WRITES

Winter 1996 Edition No. 5

SECOND REPORT FOR 1996

G'day. Welcome to the second edition of BAAT for 1996.

No doubt John Musgrave will have created another excellent edition of BAAT and proven that a professional approach has certainly lifted readers comments in using it as a resource.

Halfway through the year we seem to make ourselves busier and busier. I apologise for not getting in touch with more teachers throughout the state. Perhaps the second half of the year may be different. If you have a comment/problem or just need a chat please get in contact.

NETWORKING

As we read everyday material, it concerns me that we need to be involved in the changes that are occurring in our local community making sure that we gain maximum input/output from our subject. Perhaps we can organise release time like that in Qld. and Vic. where teachers are able to work in industries/Agriculture communities.

To help reduce our endless supply of jobs, why not organise a Network Group? There is a need particularly for communicating the subjects dynamic nature in education. There is also a concern that not everyone is gaining access to information. In the last BAAT James White mentioned the use of networking - the sharing of ideas being critical in successful Agricultural Teaching.

Those teachers who have experienced the development of networking, speak highly of the respect, advice and sharing of knowledge that it offers teachers who are usually out on a limb.

The article by Pip Courtney 1996 ABC Landline *Some Perception of Agricultural Education*

This article put the images of Agriculture in the 90's in a nut shell. I recommend this article because it will allow us to consider our own Agricultural teaching direction. It is from this that I challenge you to go into your communities. Don't change the name of Agriculture - just be a champion.

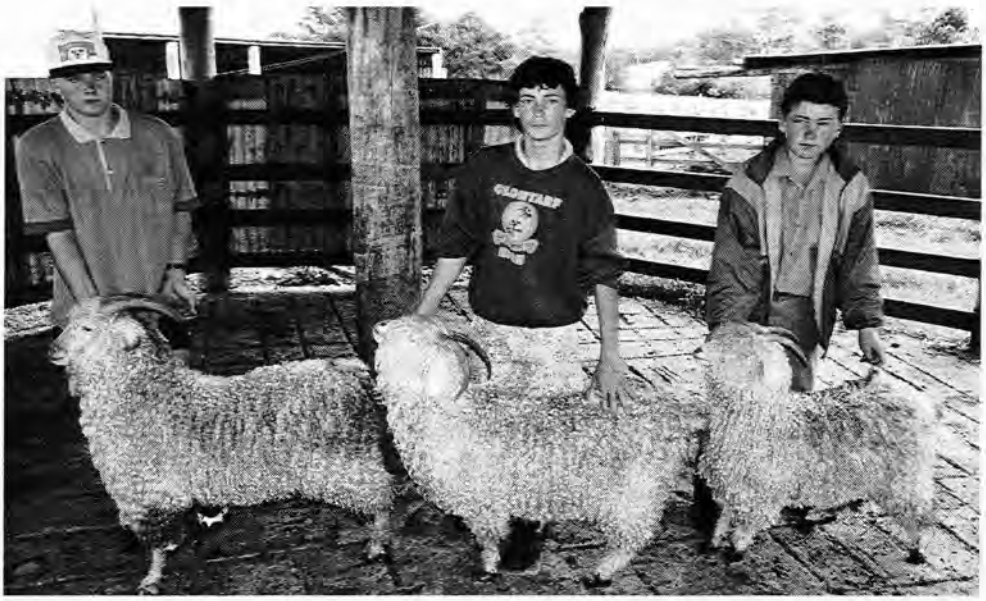
Lets take on the challenges that changes in Agriculture offer. Get your students out into Agricultural Industries, whether it be on the school farm or in industry. Make sure your school farm is a focal point for future Agriculture. Community support is there and they are just as willing to team up with you and your students.

FARM SAFE

By the time you receive this BAAT, FARM SAFE will be over. (First week, Term III). Woodenbong school will again host a rural safety day involving all aspects of safety, even into your own back yard. Primary and Secondary classes will be involved in a number of stations maned by teachers, students and community members/businesses.

Best of Luck
Stewart

Woodenbong Central prepares for the "SHOWS"



PARADING GOATS: Preparation of goats for Toowoomba Royal Show 1996. Left to Right Tyler Pethers, Daniel McCauley, Michael Smith



PARADING CATTLE: Preparation for Tenterfield Show: Left to Right John Maloney with 4 year old "Leanne" (French Pure) Female, Luke Beck with Belgium blue Friesian X steer, and Justin Martin with 12 month old Border Range "Lindsay"

1997 AGRICULTURE TEACHERS BIENNIAL CONFERENCE

27th to 30th January 1997

AT BERRY SPORT and RECREATION CENTRE on the picturesque South Coast



FACILITIES INCLUDE:

- **Heated Pool and Indoor Spa**
- **Netball, Tennis and Basketball Courts**
- **Volley Ball**
- **B.B.Q. areas**

ACTIVITIES INCLUDE

- **Archery, bike riding, canoeing, abseiling, climbing**
- **The beach is about 10 km away**
- **Nowra for shopping is about 20 km south.**

ACCOMMODATION:

- **Rooms for 2-3-4 or larger.**
- **Four cabins for families.**

Present costing is about $130 for four nights with meals.

\+ **Special Conference Dinner extra**

\+ **Course Fee around the $150 mark.**

We expect to have transport available for families IF needed.

FORWORD YOUR BOOKINGS TO:

Phil Armour

C/- Yass High School YASS 2582

Phone: (062) 261 711 Fax: (062) 263 174

BOOK NOW!.

Please send responses and conference suggestions to:

Trevor Sewell	Craig O'Brien
Moruya High School	Moss Vale High Hight
School Albert St	Narellan Road
MORUYA NSW 2537	MOSS VALE NSW 2577
Phone (044) 742 155	Phone ((048) 681 717
Fax (044) 743 782	Fax (048) 682 787

Biotechnology Ethics Committee

Report from Anne Milvain, Macintyre High School

INTRODUCTION:

The PVR registration was passed in 1987 and was the Plant Diversity Protection Committee prior to that. A copy of the Bill (1994) is in my possession. The PDPC Committee no longer exists and is now the Biotechnology Ethics Committee at the Total Environment Centre Inc., Shop 1, Gloucester Walk, 88 Cumberland Street, Sydney NSW 2000. Phone 02 247 4714. Fax 02 247 7118.

QUESTIONS TO ASK:

- Who are the backers and promoters of PVR in Australia?
- What evidence is there that Australia's access to food crops has been restricted due to the lack of PVR legislation?
- As PVR is not a measure of plant quality, how will the public and farmers in particular be able to judge the relative quality of different seed varieties?
- What limitations will PVR place on the free exchange of seed material between farmers?
- What protection would there be from market manipulation by large seed companies?
- What proof is there that patent legislation has not restricted the free exchange of genetic material?
- To gain the full benefits of PVR, must Australia join the UPOV system?
- Under the UPOV system how will it be possible to avoid including all its commercial food crops under PVR control?
- What proof is there that agrichemical companies are not linking their plant breeding programs with their chemical products?
- Why do we require both public and private breeding programs?
- In what way are our present breeding programs deficient?
- What protection will there be for our native flora?
- What independent research has been undertaken to establish the need for PVR legislation in Australia? Are the findings available?

HIGH COSTS VERSUS LOW RETURNS

The NSW Department of Agriculture has estimated that it would cost $100,000 per year to maintain one plant breeder. New varieties take 5-10 years to develop. Such costs suggest that it would be unlikely that the independent plant breeder could compete with corporate breeders. As Australian agriculture provides a small market for agricultural inputs (chemicals, seeds, etc.,) there would appear to be little scope for recovering such costs. Can Australia support a major plant breeding industry or will it become a dumping ground for imported varieties?

FUNDING THE PVR BUREAUCRACY

The 1979 draft of the Bill allows for a Plant Variety Rights Office with a Secretary, Registrar and staff. It also provides for an Advisory Committee. The cost of administering the office is to be met jointly by levies on those applying for the plant patent and by the *State and Federal Governments* - a permanent public subsidy for a private profit.

BIAS IN CORPORATE BREEDING

Corporate breeding tends to favour the development of high *yield*, high *response* varieties, dependent upon high energy-based agricultural practices (requiring the extensive use of fertilisers, pesticides and herbicides). The uniformity, processability and yield for which they are bred is too frequently at the expense of natural hardiness, crop stability, nutritional value and flavour.

PUBLIC RESEARCH IN AUSTRALIA

This is a particularly important issue as, up until now, the public breeding and research programs in Australia have placed a primary emphasis on producing varieties especially suited to the highly diverse and specific agricultural needs arising from the unique and varied conditions of our continent. PVR poses a threat to the integrity and viability of public research institutions as a result of increased corporate, technological and chemical dominance of agriculture in Australia. The likely increase in research funds to public institutions from agrichemical companies must influence the direction of the research undertaken, just as it influences the freedom of researchers to publicise their work and funding.

NATIONAL LISTS AND THE COMMON CATALOGUE

Many years of difficulties in administering the European legislation have necessitated the introduction of the Common Catalogue and National Lists, limiting the numbers of legally marketable varieties. Varieties excluded from these lists are consequently 'illegal' and cannot be sold, given away and in some instances, not even grown. This development has significantly contributed to the loss of traditional varieties in Europe. In

July 1980, at one stroke 500 vegetable varieties were deleted from the National List in the UK - a process that will continue. The Henry Doubleday Research Association estimates that 400 varieties are lost annually, prompting them to establish a vegetable seed lending library in an attempt to limit the loss.

The Department of Primary Industry gives assurances in their information paper that there is no intention to establish lists here. However concern still remains that PVR will, in time, lead to the need for some form of restrictive lists. It took Britain 10 years, why should we expect to be any different?

LOSS OF VARIETY AND GENETIC DIVERSITY

There is concern that PVR legislation will accelerate the loss of the genetic diversity of the world's plants, the very basis of life on earth. Through the further encouragement of corporate control of agriculture provided by PVR, increasing pressures are placed on the world's few remaining regions of high natural genetic diversity - the so called Vavilov centres - and on vast tracts of marginal farm land, for development by mass scale monocultural farming practices.

AUSTRALIAN NATIVE PLANTS

Australia is estimated to have over 20,000 different native plants. Of known species 10% are already actually or potentially at risk. The introduction of PVR legislation, through such provisions as rights for 'findings', is likely to encourage the hoarding of rare species, denying the Australian public free access to naturally occurring varieties.

The economic and social significance of most varieties has yet to be established, their detailed botanical characteristics being largely unknown and unclassified. While a few varieties have been commercially developed, mostly outside Australia, PVR will facilitate the commercial monopolisation and over-exploitation of potentially valuable species.

PLANT VARIETY - RIGHTS OR WRONGS? 1

UPOV

UPOV (the International Union for the Protection of New Plant Varieties) is an international convention established in 1962. It is an inter-governmental organisation whose aim is to standardise and promote plant patent laws (PVC). Worldwide acceptance and membership of UPOV means that what was a *national* patent monopoly on a plant variety becomes an *international* monopoly.

UPOV AND AUSTRALIA'S PARTICIPATION

The NSW Minister for Agriculture has stated that our PVR legislation will be 'unique' and that it will not cover such internationally important crops as wheat. How can this view be reconciled with UPOV's stated intention to work for standardised controls on the operation of the international plant breeding industry or with its call for member nations 'to adopt all measures necessary' to include 'the largest possible number of botanical genera and species.' ? Or unlike the USA which has worked to join UPOV for years does Australia intend foregoing the reciprocal rights and protection offered?

GOVERNMENT BIAS

It is government practice not to make draft legislation available for comment. However, in the case of PVR, early in 1979, the draft legislation was disclosed through the Department of Primary Industry to particular groups such as the Seed Industry Association, the Australian Seed Producers Federation, and the Australian Nurserymen's Association. At the same time, the Government consistently refused to supply copies of the legislation to individuals and public interest groups, including the major farming organisations.

THE SIGNIFICANCE OF THE LEGISLATION

SEEDS AS A PUBLIC RESOURCE

Traditionally seeds have been a public, natural resource, but increasingly, they have moved into private hands for private profit. In past times public breeding has ensured the development of varieties based on the needs of the growers with the free exchange of genetic material taking place. The increasing trends towards private control of seeds and plants could lead to adverse economic, biological and social effects. Some particular observations arising out of overseas experience and studies are as follows:

PROFIT POTENTIAL OF THE SEED INDUSTRY

There is no doubt that the world seed industry is a huge and profitable international market. As the Bulletin of Sept 25, 1979 stated "A group of powerful chemical companies is cornering the international market in crop seeds, at present worth $10 billion a year - and breeding chemically dependent seed strains". The market attraction and importance of the global seed industry is obvious from the extensive list of well known trans-national companies already heavily involved - Ciba-Geigy, Sandoz, Phizer, Monsanto, Union Carbide, Dekalb and Shell the largest seed company in the world. All are familiar names in Australia.

TRANSNATIONALS AND TAKE-OVERS

PVR, through the particular protection it provides the private sector, simplifies control of the overall food production industry, further enhancing its potential profitability. It is, therefore, only reasonable to expect that investment in seed and food production by major transnationals will increase if Australia introduces PVR. Should this occur the Australian primary producer and consumer will inevitably have their control over the varieties of crops grown and marketed further eroded.

Today in Australia, Zaadunie B.V. (Netherlands), which owns 16 seed companies, owns Walter Blom. Shell Oil is represented by Nickerson Seeds.

Recently, Continental Grain (a subsidiary of the giant USA Continental Grain Corp.) and owner of Pacific Seeds, applied for and was granted by the Foreign Investment Review Board, permission to buy all the shares in Gwydir Valley Oil Seeds.

At the expense of national business autonomy and consumer choice, should we allow our governments to encourage this trend through the introduction of PVR legislation?

THREATS TO SMALL BUSINESS

The further reduction in numbers of small businesses, and the employment they provide, appears inevitable. As the Minister for Agriculture in NSW has written 'both take-overs and new companies must be expected in the seed industry'.

PLANT VARIETY - RIGHTS OR WRONGS? 2

AN ISSUE OF CONCERN!

We are all directly influenced by the growth of plants. They are essential to the continued survival of all animals man included. As such we must do everything possible to encourage and support the better understanding and more effective protection, use and production of plant material. We must ensure that research and development to this end, is adequately funded and that the genetic diversity of the world's plants is properly protected and preserved.

We do not believe that the intended Plant Variety Rights legislation is an appropriate method of achieving these aims.

THE BILL

The proposed Plant Variety Rights Bill (PVR), introduced by the Federal Minister for Primary Industry, in May 1981, is probably the most important piece of agricultural legislation ever likely to come before Parliament. Late in 1979 the public became aware that a form of plant patent legislation was to be introduced by the Australian Government in 1980. Following widespread concern and opposition, introduction of the Bill was deferred until 1981. Now tabled, copies of the Bill are available for examination and comment until it's final debate in the Budget session of Parliament this year. As presented, the Bill, modified since the 1979 draft by the Australian Agricultural Council, has pleased nobody. The content is ill defined, loosely worded and open to a disturbing range of interpretations.

It is important that we all make use of the time available to express our concern to Parliament before the Bill is debated.

INTENT OF PVR

Briefly, PVR, allows breeders to obtain sole proprietary rights over any new plant they may develop, natural mutations or certain natural 'findings' of native plants. These rights allow a breeder to control the use of a variety, to levy and collect royalties and to prosecute infringers. Such a proprietary right is similar to a patent, but sufficiently different to require special legislation. Plant Variety Rights are in reality plant variety *restrictions* for everybody but the patent holder who gets the monopoly.

LOBBIES IN AUSTRALIA

In Australia, the main lobbyists have been the Industry Committee for Plant Breeder's rights, representing such groups as the Australian Nurserymen's Association and the Seed Industry Association. The Committee is funded by the principal Australian and foreign seed companies, the most notable being Shell, Continental Grain, Yates and New World Seeds.

OVERSEAS LEGISLATION

Overseas PVR legislation varies. In the USA, a breeder only has to *certify* that the variety meets the required criteria of being 'distinct', 'uniform' and 'stable'. In the UK and other Common Market countries, a variety must undergo *field tests* to *prove* these criteria before being accepted for registration and the granting of a patent. Even the proponents of PVR have not been in agreement about which form of legislation Australia should adopt. It should be noted that neither system is a measure of *quality*.

REACTIONS OVERSEAS TO PVR

Many European countries, the USA, New Zealand and Japan have had similar legislation for a number of years. Although the legislation appeared reasonable, there has recently been serious questioning of its value by a number of nations. The recent attempt to introduce similar legislation in Canada has met with strong opposition (particularly from farmers). As a result the legislation was twice deferred and is still to be debated. Similar questioning in the USA, has delayed the passage of amendments proposed to their Plant Variety Protection Act (1970). In addition, no country has yet ratified the 1987 UPOV Convention amendments.

PLANT VARIETY RIGHTS

FIVE YEAR EVALUATION OF PLANT VARIETY RIGHTS (PVR)

Ken Cheatle. chairman, Biotechnology Ethics Committee

In 1980 a sub-committee of TEC (the Plant Diversity Protection Committee) was formed to fight the introduction of PVR legislation into Australia. That fight was unsuccessful. The committee can, however, rightly claim some small measure of success for the strength of public debate that ensured. PVR legislation was passed in 1987. One of the measures adopted was that the PVR Scheme's (PVRS) Operation be reviewed after 5 years. The 49 page report of that evaluation has just become available.

COMMENTS

As expected, the PVRS received the seal of approval by the consultant - a freelance economist, A.S. Watson. Given the long lead time needed for the biodiversity erosion we predicted would occur and the calling of the consultant, it was not surprising that the majority of our original concerns were unmentioned.

In fairness, the consultant could not be expected, nor was he asked, to determine whether or not one or more species of Plant A have become extinct, or had lost flavour, colour or nutritional value, or needed more pest control input, or had increased its market share at the expense of other traditional species, or whether trans-national companies have more influence over our food choices now than before PVR was introduced. However, whilst claiming that the original environmental/conservation viewpoints were somewhat exaggerated, Watson indicates that this criticism also applies to the beneficial effects for Australian agriculture that protagonists claimed could be expected.

The evaluation deals at length with the finding that the PVRS, whilst fulfilling its objective, has been far more beneficial to the horticultural industry than for field crops, in which little comparative interest has been generated. Perhaps Watson's strongest criticism appears in his quote: *Hopes that were held out for PVR to stimulate private plant breeding and to fund public plant breeding have not been fulfilled.*

Apart from recommending its maintenance, other points raised by the evaluation of the PVRS are:

1. That though the PVR office works efficiently, it was not yet able to stand on its feet financially, but could be expected to recover 80% of its costs within 3 years. (Cost recovery 91/92 was 62% - total expenditure $473,000).
2. That a series of measures should be considered to improve the scheme's financial viability and effectiveness. These include:

- a system of levies to support crop improvement programs:
- charging different fees for different plants;
- increasing application and renewal fees;
- offering discounts to major users of PVR services;
- raising funds through sales of labels and rights to use PVR logo;
- the costs of field examinations which since January 1993 will be carried out by approved accredited persons to be borne by the applicant. (A possible further cost saving measure is the DNA proving for plant identification. Australia is taking the initiative in promoting this technology): and
- Those industries benefiting from UPOV membership and able readily to recover PVR costs, should help subsidise Australia's UPOV membership expenses which account for 20% of total PVR expenditure.

Other recommendations are:

- enforcement of PVR rights to be the responsibility of the owners of the right;
- that the name *Plant Variety Rights* be changed to the more apt *Plant Breeders' Rights;*
- there should be more coordination between Australia and New Zealand in matters PVR;
- that the PVR and the Patent Office retain their separate identities;
- that composition of the PVR Advisory Committee should provide for more members with special qualifications and greater representation of broadacre farmers;
- that in its dealing with UPOV, Australia should protect its tradition, and current exemption from PVR legislation, of farm-saved-seed in the broadacre industries; and
- that the PVRS should be revalued after another 5 years.

ACF CAMPAIGNS

PLANT OWNERSHIP LAWS UNDER PUBLIC REVIEW

HAVE YOUR SAY ON WHOSE INTEREST PBR WILL SERVE

The Plant Breeders Rights (PBR) Bill 1994 is now open for public review. Whatever your views, it is important that you write to Commonwealth Primary Industries Minister, Bob Collins, Parliament House, Canberra. Public participation and debate are keys to a satisfactory outcome for everyone. Please tell others about the review and ask them to contact the Minister too.

The PBR Bill would replace the Plant Variety Rights (PVR) Act 1987. The name change, from Plant Variety to Plant Breeder's Rights, signals a federal shift in focus and intent. Protections for other affected groups, written into the PVR Act after much public debate, would be removed. It is claimed that all the changes are needed to satisfy the 1991 UPOv Convention (international treaty on the industrial property ownership of plant varieties, to replace UPOV 1978) but this is not true. The Bill goes much further in sweeping away protections for the public interest. Moreover, the 1991 Convention was heavily influenced by transnational seed and agribusiness companies.

We suggest you ask the Minister to:

a) have the Senate Standing Committee on the Environment, Recreation and Arts (not the PBR Office) review the Bill, at public hearings in major cities,
b) link the PBR review with the current government review of "Access to Australia's Genetic Resources", which covers plants, animals and microbes;
c) exclude transgenic (genetically engineered) varieties from the scope of the new Bill;
d) limit the Bill's scope to commercial varieties only, and only for the purposes of sale;
e) require that 'essential characteristics' be specified and claimed by applicants, not defined at administrative discretion;
f) not extend PBR to harvested materials and products;
g) retain the present time limits on PBR grants, and not allow extensions at the Advisory Committee's discretion;
h) not extend PBR to harvested materials and products;
i) retain the present time limits on PBR grants, and not allow

extensions at the Advisory Committee's discretion;

j) retain the present powers to revoke grants of PBR;

k) retain the present public interest provisions in full, and extend them in relation to non-commercial varieties;

l) stop the PBR Office or Advisory Committee from being able to restrict farm-saved-seed;

m) consult widely on the appropriate scope of powers for the PBR advisory Committee, and is membership (the 'consumer' rep. is now an executive of Goodman Fielder Wattie);

n) leave policing of PBR to the registrants, so the PBR Office is not both an administering and policing body.

A detailed commentary on the Bill is available. For advice and support, contact: Bob Phelps, Co-ordinator, Australian Gen-Ethics Network, C/- ACF 340 Gore Street, Fitzroy. 3065. Tel. (03) 416.2222 Fax (03) 4160767

AGRICULTURAL BIKE SAFETY VIDEO



Covers all skills required to ride on an Agricultural bike. Video lasts about 45 minutes.

Costs $30 + postage



CONTACT:
MR TIM ROBERTSON
TEONGI ENTERPRISES
ARMIDALE NSW 2350
PH (067) 758 538



YEAR 8 AGRICULTURE

By Peter Giblin
Byron Bay High School

POULTRY UNIT

An Idea for Ag. Teachers of Year 8, from Peter Giblin, Byron Bay

"This is my contract Learning Unit for Year 8 Agriculture. The Unit allows for easy book marking if you have a large number of non-elective Ag. Students. I have a box on the front desk with Suspension files 1-20 with sheets etc for each Unit of work. Students help themselves and work at their own rate. This is good for mixed ability classes. It is loosely based on some of the "Growing Poultry" Units that came out some years ago. It may be of interest with modification to suit local needs. Articles were also used from the School Project Section of "Australasian Poultry Magazine

INSTRUCTIONS FOR COMPLETING THIS UNIT

- Paste this sheet into your book now.
- You may work through these units at your own rate.
- Your teacher must sign off each unit before you start the next unit.
- Please glue each worksheet into your book.
- Please return workbook etc. to their correct folders.
- Completion of 15 units will give you a book mark of 10 out of 10.

☐ 1. Paste in a sheet on external features of poultry. Label the diagram using the Pure Breed Poultry Raising text.

☐ 2. Paste in a sheet on Breeds of Poultry. Use the text to find the colour of each breed and colour them in.

☐ 3. Complete the unit on Chicken Hatching:
   (i) Paste the worksheet into your book.
   (ii) Return the Pupil Notes to the correct folder when you have finished.

☐ 4. Read the article "History of Artificial Incubation" and answer the questions from the sheet into your book.

☐ 5. Collect the following feather types and paste them into your book:
   (a) Flight feather
   (b) Counter or body feather
   (c) Down feather

Read the information about feathers and feather types on page 21 and 22 of your Pure Breed Poultry Raising Text.
Write four or five lines on each of the feather types listed above.

6. Write a 10 line summary after watching the National Geographic video on Chicken Embryology.

7. Complete the Poultry Unit on Feeding Poultry.

8. Complete the Poultry Unit on Housing Poultry.

9. Complete X word Number 1. Use the text as a reference. *These words are your spelling words for this unit.*

10. **Sketch** how we breed chickens at Byron Day High School.
Read the notes on brooding on pages 55 - 57 of your text and write a 10 line summary in your own words.

11. Measure the growth rate of a group of chickens over a period of ten days.
    (I) **Draw** a table in your book to record the average bird weight each day for the ten days.
    (Ii) **Graph** (using graph paper) the average weight over the ten days.

12. Demonstrate that you can hold an adult bird correctly. Show the teacher where you would clip the bird's wing feather.

13. Read the short story "The Rooster". Now write a short poem about roosters or a rooster.

14. Paste in the stencil of the Reproductive Tract of a Hen. Use your text to label the drawing showing the time it takes for an egg to develop.

15. Complete the unit on Poultry Health.

16. Write down in your book 10 lines on what you understand by the term moulting. A reference to moulting can be found on page 22 of your text.

17. Complete x word number 2. Use your text as a reference.

18. Complete the Poultry unit on Poultry Economics.

19. Read the article "Formation of the Egg". Write a short summary.

20. Use the library to research the free range/battery hen egg debate. Present your findings as a one page essay.

By the end of a three-year period, an average hen has eaten 77.2kg (170 pounds) of feed, laid 42 dozen eggs, and provided 2.5kg (4½ pounds) of meat and 3 1.1 grams (½ an ounce) of feathers.

Will girls' needs be quietly shelved with the change in focus of the gender equity debate? Does it matter so long as equity is achieved? This excerpt discusses these issues.

The use of the terminology "gender equity" and "social justice" heralded an approach to the issues following, in ways which would embrace concerns about boys and girls, and would seek to understand how race, poverty and ethnicity complicate the picture of gendered outcomes.

BOYS HAVE:-
75% of expulsions
9 times as many boys in "special" classes
2 times the death rate of girls at school
5 times the suicide rate of girls
For any 1000 boys in custody there are 200 girls
75% of those in the Legal Profession are males
13% of the Police Force are females

November 1994 REDRESS

boys work whose work?

by Lyn Martinez

"Boyswork" is a new word making its way into the discourse about gender equity. The pressure to re-focus gender equity programs to take greater account of issues for boys has multiple sources, including: academics with an interest in masculinity studies; educators concerned about the apparent decline in boys' academic results; a broad range of people concerned about the very high rates of suicide among young men (among the highest in the world, and four times those of young women), sexual assault of young males, men's poor capacity to sustain successful relationships, and gender equity practitioners concerned that unless boys' knowledge, skills and attitudes towards equality improve, progress towards sexual equality will continue to be stymied.

"What about the boys?"

Getting the media hype into perspective is a challenge. As pointed out in a recent edition of *xy: men sex and politics* (Fisher, 1994), the question, can be asked in a number of ways, the emphasis signalling the perspective of the inquirer.

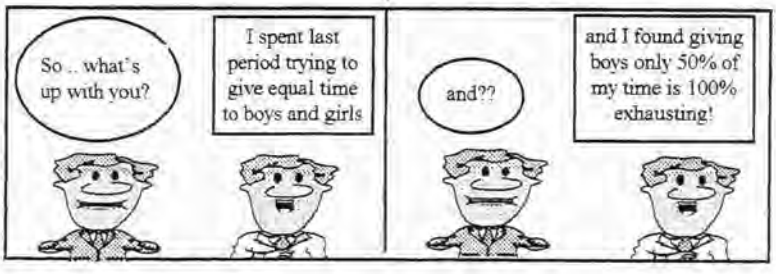
The question, "What about the **boys**?" was given new life at the beginning of 1994, when the data from the Equity in Senior School Assessment project came to light. This Project of national Significance indicated that, on average, girls out-perform boys across a number of matricultatio-level subject areas, prompting much public conjecture that gender equity programs had led to a flowering of girls' intellects, something like a renaissance among young women, and had left boys behind.

This emphasis was enthusiastically fuelled by reports that girls not only do better, on average, academically, but are also more likely to take up leadership roles in the school and the community as boys spurn opportunities to be prefects and school captains, let alone organise committees. In contrast, commentators refer to the disproportionately high numbers of boys in the lowest achievement brackets in the senior school, noting poorer literacy and communication skills among boys, and boys' lower retention rates to completion of Year 12. Some reports hint at a lack of balance, compassion and objectivity among those leading gender equity programs.

The question is put differently by those more used to interpreting attainment and retention data, those who are painfully aware of how partial is the story told by such data. "What **about** the boys?" they retort, cognisant of the fact that girls' better academic averages and practice of citizenship in the school community have not delivered them into a promised land of equality in the paid workplace, political decision-making or in their personal relations, and of the knowledge that girls' better retention rates may be more an indication of the level of education required to obtain base-level clerical positions, whereas boys are still more able to take up apprenticeships without a Year 12 certificate (Yates, 1993). In any case, they point out, averages tell little about the ways girls and boys may experience schooling differently, in ways which lead girls and boys to construct their destinies in quite different ways. Significantly, they also tell us nothing about how the combined influences of gender, race, poverty and disability impact on "average" outcomes.

Fisher suggests another inflection to the question: "**What** about the boys?" He invites us to look at the ways schools respond to, foster, and inhibit particular versions of masculinity, and how these practices are implicated in the production of gender regimes which limit the lives of both boys and girls. This focus allows for an examination of the educational practices which construct "appropriate" ways of being male as well as of being female. It provides for an examination of the ways all social institutions, including schools, attribute greater value to "masculine" characteristics, such as technical competence and aggression, and the impact of such value systems on the lives of girls and boys. It also invites educators and administrators to reflect on the social and financial costs of dysfunctional masculinity.

Lyn Martinez has been the principal policy officer of the Gender Equity Unit of the Education Department Qld for 3 years. She has a background as a secondary teacher.



Fletcher Roberts

IS

- The brother of Pastor Frank Roberts - noted Aboriginal activist - member of the former National Aboriginal Congress
- Joint founder of Bunjalung Tribal Society
- Respected Elder of Bunjalung language group
- Founder member of Board of Directors of Koori Mail.

The Process of Reconciliation

A Perspective for ALL Australians to Contemplate

A speech delivered at Kadina High School by Mr Fletcher Roberts on Wednesday, 26th June 1996.



Ladies and gentlemen, teachers and students, it gives me great pleasure to talk to you today at this time of celebration for Aboriginal people. I want you to allow me to become your teacher for a little while we talk about lessons in life.

In Aboriginal culture this is a very important part of learning when you are told important things. This is when the elders tell their people the things they think their people should know after a lot of thinking and consideration of all the things to do with the decision that has to be made.

Before I came to talk to you today I had to do a lot of thinking, because I am responsible to you. I have a responsibility to give you

good advice. This is the responsibility of an elder, and this is a very big responsibility. Although I am Aboriginal and I have a very important responsibility to the Bundjalung people who live in this area, and in particular the Widjabul people - a clan of the Bundjalung tribe - I also have an important responsibility to non-Aboriginal people in helping them understand about Aboriginal responsibilities to one another and to help build the bridges between Aboriginal and non-Aboriginal cultures.

Today as an Aboriginal elder who has come to speak to you here at Kadina High School, I have some important things to tell you and I want you to listen carefully - this is the Aboriginal way of doing things. As Aboriginal people we are proud of our culture and we want to share it with you. There are some good things in Aboriginal culture and when you come to know us you can share those things, and we want you to be proud of our culture, too. But it is not as easy as saying those words. We have a lot of work to do first.

People in the generations before you have made some mistakes, and it has been very hard for Aboriginal people to live as equals in today's world, but a lot of non-Aboriginal people haven't been given the opportunity to understand properly what it has been like to be an Aboriginal person in today's world.

There is a history that until recently non-Aboriginal children have not been taught, about how our people were killed and how they lost the land where they lived and hunted.

I want you to think about the Aboriginal history. While you hear the proud stories of how your ancestors came and made farms and earned a lot of money and built cities, there is another history you are often not asked to think about.

The Aboriginal children were put on missions and given rations. I was put on a mission. If I wanted to leave or my relatives wanted to leave we had to get permission. Many of us were taken away by the authorities and made to live in children's homes. I was lucky because when the people said they were going to take me away with my brother, we ran away from home and my father went to get help from a lawyer in Grafton.

While my friends were taken away we stayed home, but we were always frightened. Now I am 74 years old, but I remember how frightened I felt. There are many things I could tell you about my life, which was so different to yours, and another time I can do that, but there is something else very important that I must tell you now.

The things that the people before you did is *not* your fault. Do not allow people to make you feel guilty for what the others before you did, but you should know about them.

To day as there are many changes in attitudes, some people, including Aboriginal people, try to make all the white people feel guilty for what happened to Aboriginal people, but remember it is not your fault.

There is no better teacher than a mistake. But if you make the same mistakes as people before you then you have not learned the lessons of the past and you *will* be responsible. You must listen and hear about Australia's sad Aboriginal history, and learn from that history. I want you to remember something about history - that the truth of history depends on who is telling it and that there is a different history for the same events depending on whose eyes you look through to see the event.

The history of European settlement in the Lismore area is a very different one to the one we as Aboriginal people know. Our history goes back thousands of years when our ancestors arrived at Goanna Headland at Evans Head. A very important place for our people has always been at a place you call Boundary Creek, where we had corroborees and Aboriginal people walked a long way, even from Tabulam, and our grandmothers taught us history there. When we go to visit we still hear the voices from the past, our grandmothers talking to us, telling us the things we had to know.

The students here are the people of the future, and it is you who must understand these things. Today many children have an opportunity to understand more about Aboriginal history than your parents did. Many white people before you did not know about the massacres. Many people believed that Aboriginal people were all the same and spoke the same language. But that's not true. We are all different people with different languages. If I left Lismore and went to see the Aboriginal people in the Kimberleys and I spoke to them in Bundjalung they wouldn't be able to understand me - I might sound like I came from Swaziland.

By understanding these things better than the people before you, you can make a difference. Instead of a world of distrust and unhappiness we can all make it a better place where we are all one people, living together, and respecting one another.

To the Koori kids I say, don't blame the white children for what some of their grandparents did. Be a friend to the white children so we can build healthy hearts with good thoughts and live happily together. And to non-Aboriginal kids I say, walk with us, play with us, and be our friends, so that we can be good friends for all our lives, and teach our kids to respect and love one another. If we are different in the way we do things sometimes, don't think that it is wrong, but just realise that it is only a different way to do something or think about something. It might be different to the way you are used to doing things, but respecting and allowing people to follow their own beliefs and ways of doing things is tolerance.

Aboriginal people are looking forward to a happier and more tolerant future. We can forgive what has happened in the past but I want you to understand why we can't forget. For me, one thing I can't forget is how frightened I was when the welfare officers said they were going to take me away, although that was about 70 years ago.

I want you to think about it this way. IF a a bully belts you up every time he sees you and frightens you with the things he says to you, you can't forget. You try to avoid him, and you expect him to say bad things to you. It takes a long time to start to trust someone who has been a bully, even if they try to be nice all the time. This is the way a lot of Aboriginal people have learned to feel about white people. If the bully has a change of heart and he starts being nice to you, it takes a little while to start to trust him. He has to be nice to you a lot of times before you can start to feel comfortable. This is the way it is for Aboriginal people. While I talk about the bad aspects, I want you to know that we also had a lot of white friends we remember in a nice way. It was just that there were a lot of powerful white people who were not always nice and the government in earlier days treated us very badly.

I want you to understand that so that you can work on building a better world for everyone when you are adults and it is your turn to run the community, whatever job you have in you adult lives, and especially when it is your turn to teach your children - the next generation - how to think. You, too, will then have a big responsibility , just like I do today, to try to teach a better way of thinking about things. This is part of understanding one another, and if we don't quite understand one another we have to give each other some space to be

different. NAIDOC is like that - a national Aboriginal Day of Celebration - it gives Aboriginal people a space to be different while being part of a bigger world. This is a way of respecting another culture. Easy isn't it? When you think about it like that.

I want you to think about understanding. Before you can understand what a sentence says you have to understand all the words. We still have gaps in Aboriginal and non-Aboriginal language where the words don't quite match, but if you work on it to find out meanings for the missing words - you will understand. We should not judge one another until we understand each other properly.

Before me I see our future, everyone of you is part of that future. We the Aboriginal people, are depending on all of you no matter what race you or your parents are to have learnt the lessons of the past and bring us a better future and world - not just for Aboriginal people but all people, so we can all stand as Australians - you and I, brown and white, hand in hand - all Australian, everyone of us.

So remember, don't forget the past, remember it with all its suffering and learn from it so that you can make better decisions when you go out to work and are involved in setting down the foundation stones for a new future.

I want you to remember and think about something that great West Indian batsman and great thinker, Gary Sobers, said. "Legislation cannot change what is in people's hearts but actions can." So all the things the government says we can and cannot do will do nothing to improve things unless we have the right feelings in our hearts and do the right things to one another.

THE FUTURE BELONGS TO US ... ALL OF US ...
AND IT WILL BE AS GOOD AS WE MAKE IT ...
YOU AND I TOGETHER.

Making peace is harder than making war!" Adlai Stevenson 1900-1965.

SOME STATISTICS FROM AVCARE

(National Association for Crop Protection and Animal Health)

AUSTRALIAN AGRICULTURE 1994-95

Number of Livestock:	*Million*
Beef	23.40
Sheep	119.70
Dairy Cattle	2.79
Pigs	2.75
Total Area Grains and Oilseeds (ha)	15.0

Value of Australian Rural Exports 1994-95	*Million*
Wool and sheepmeats	4,215
Meat and meat preparations	3,632
Cereals, grains and products	2,520
Sugar, products and honey	1,730
Total Value of Rural Exports	**19,531**

As a percentage of total merchandise exports	29%
Number employed in agriculture	358,000
As a percentage of total workforce	4.4%



PENSTREP UPDATE ...

The National Registration Authority in Australia is currently considering the removal of penicillin/streptomycin combination drugs from the market. This has come about due to the problems associated with streptomycin residues in meat, offal and milk. Streptomycin levels exceeded recommended levels well after withholding periods stated on bottles of the pen/strep combination.

Added to the fact that it has been shown that most of the bacteria which cause disease in cattle have developed resistance to streptomycin, it will be the policy of Veteinary practices to limit sales of penstep only to those diseases which are treatable with penstrep. These diseases are Leptospirosis, wooden tongue, lumpy jaw and vibriosos. The alternative antibiotics available will be the short acting procaine penicillin, amoxicillin, oxytetracyclines, and the new drug, Excenel.

ANITBIOTIC NEWS ...

EXCENEL is a newly registered antibiotic available in Australia. It is a 3rd generation cephalosporin compound which cattle and their bacteria population have not been exposed to before. It is a powerful, fast-acting (ie. Gets to the infection site quickly), once daily injection. It is a low dose drug which doesn't cause irritation. However the main advantage to the cattle industry is its short withholding periods - only 24 hours for meat and nil for milk. It is registered for use in Australia for cattle with Bovine Respiratory Disease (pheumonid) and therefore directed mostly at the beef feedlot industry. However, it is also extremely effective against calf pneumonia. In footrot and in the dairy industry of USA it is used for a multitude of infections, basically everything except mastitis. It has proven to be an extremely effective antibiotic. For more information please call your nearest Veterinary clinic. Pamphlets are also available.

They walked the lane together,
the sky was covered with stars;
they reached the gate in silence
He lifted down the bars;
She neither smiled nor thanked him,
because she knew not how;
for he was just a farmer's boy,
and she a Jersey cow.



OVERVIEW OF TAS PLANS

The following information includes the findings of a review by the Specialist Learning Unit for the TAS KLA. All new school buildings and upgrades within NSW are built according to well defined Facilities Standards. A draft copy of TAS facilities has been released for a series of consultations. I have included the design for the proposed agriculture shed as well as the outdoor workshop for your consideration. (Equipment has not been included in the diagrams at this stage). You are invited to comment on the Draft Plans and forward your comments by 16th July 1996 to:

James White, Armidale District Office, 175 Rusden Street, ARMIDALE 2350
Fax 067 713001

⇒ All subjects in the Technology and Applied Studies KLA are practically based and require a range of facilities to enable activities related to computing, food, plastics, wood, textiles, metal, agriculture, electronics etc.

⇒ Appropriate spaces are required for activities which:

- are dust free (eg, computing, textiles, electronics, drawing, graphics)
- have specific hygiene requirements (food)
- generate dust, fumes (eg. Wood, metal, plastics)
- involve outdoor requirements (agriculture

⇒ TAS facilities have been designed to meet the above needs.

⇒ TAS Learning Spaces have been designed to allow for a full range of activities including designing, evaluating, computing and drawing.

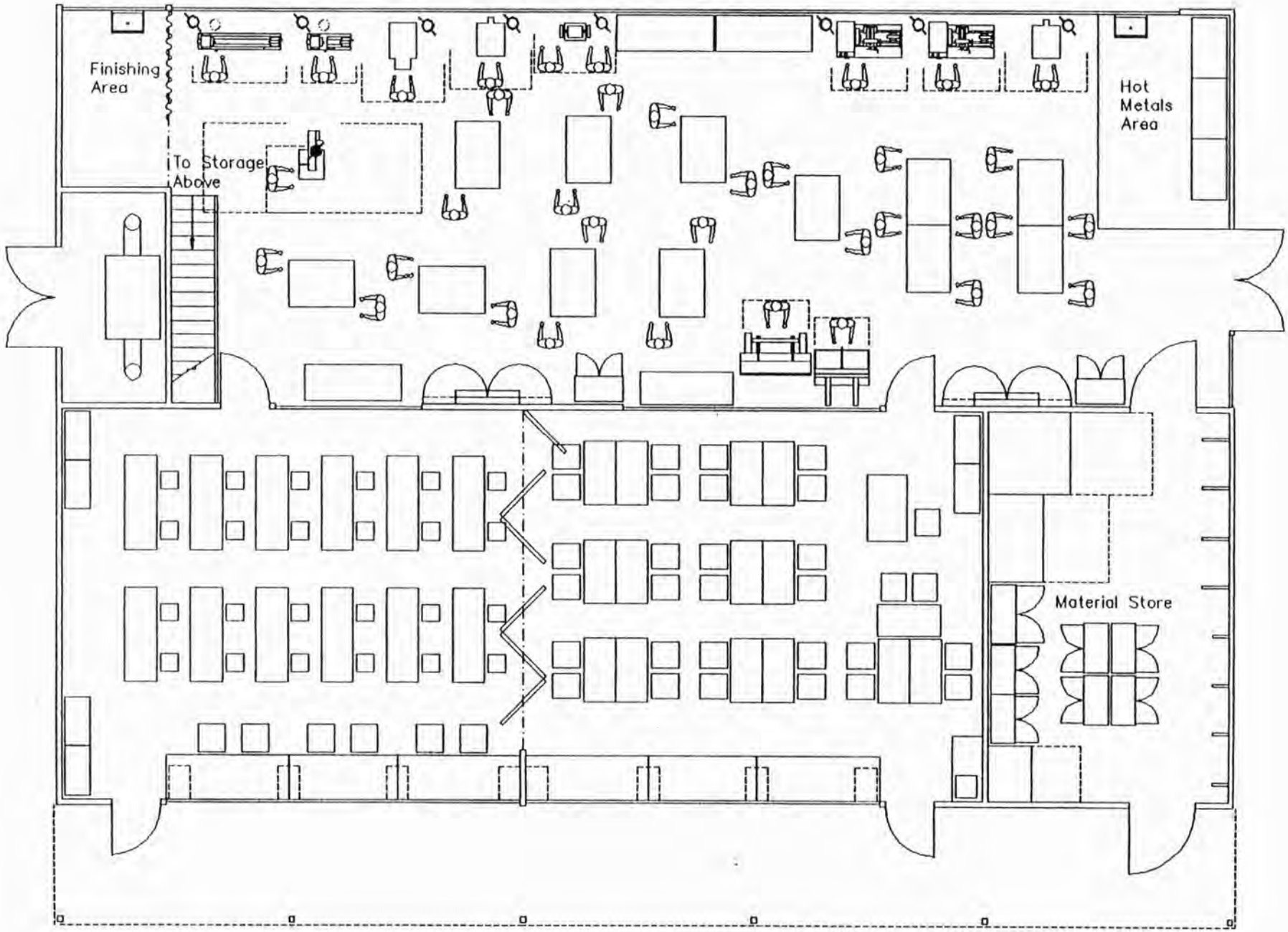
⇒ Classes which focus on dust free activities can also use this Learning Space for making/producing and experimenting.

⇒ Classes which involve specific hygiene requirements, outdoor activities or dust/fume generating activities have additional workshop areas.

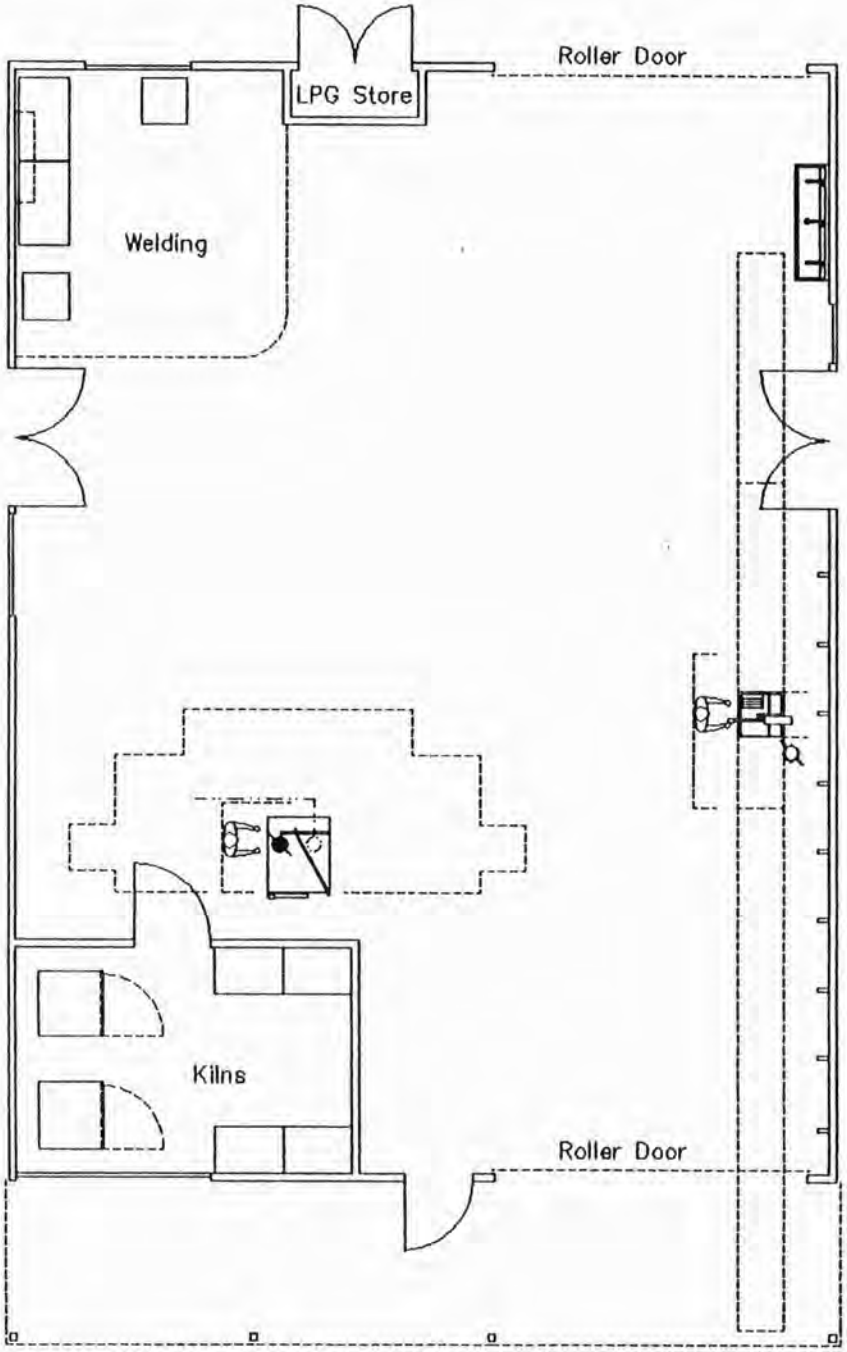
⇒ Plans are **modular** in design and allow for a variety of fitouts.

⇒ The following plans of some possible fitouts are included (see over) for your review.

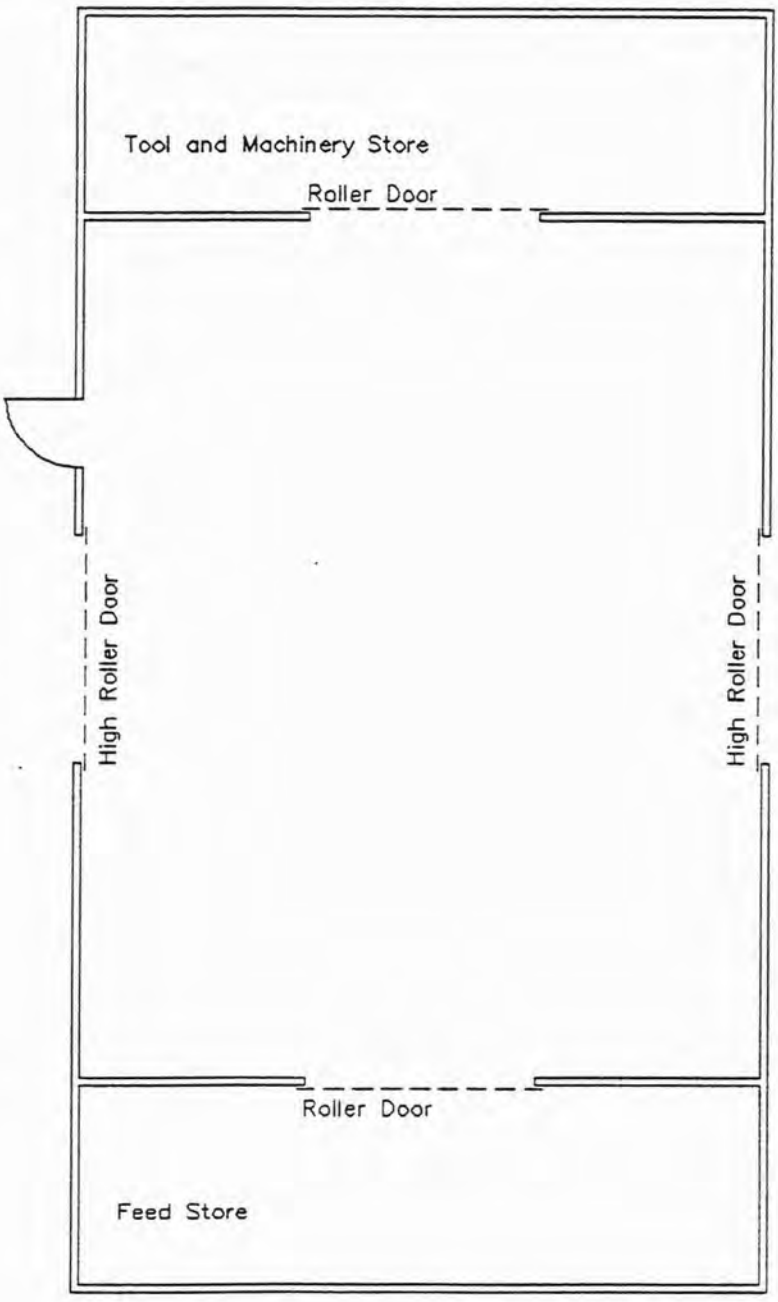
1. TAS classrooms with Materials fitout (schematic/notional representation of equipment only)
2. Utility Workshop
3. TAS classrooms with Food Workshop
4. Agricultural Shed
5. Library floor plan (to indicate location and set out of the Information Technology facility


Finishing Area
To Storage Above
Hot Metals Area
Material Store

MATERIALS



OUTDOOR WORKSHOP



Metal Walls

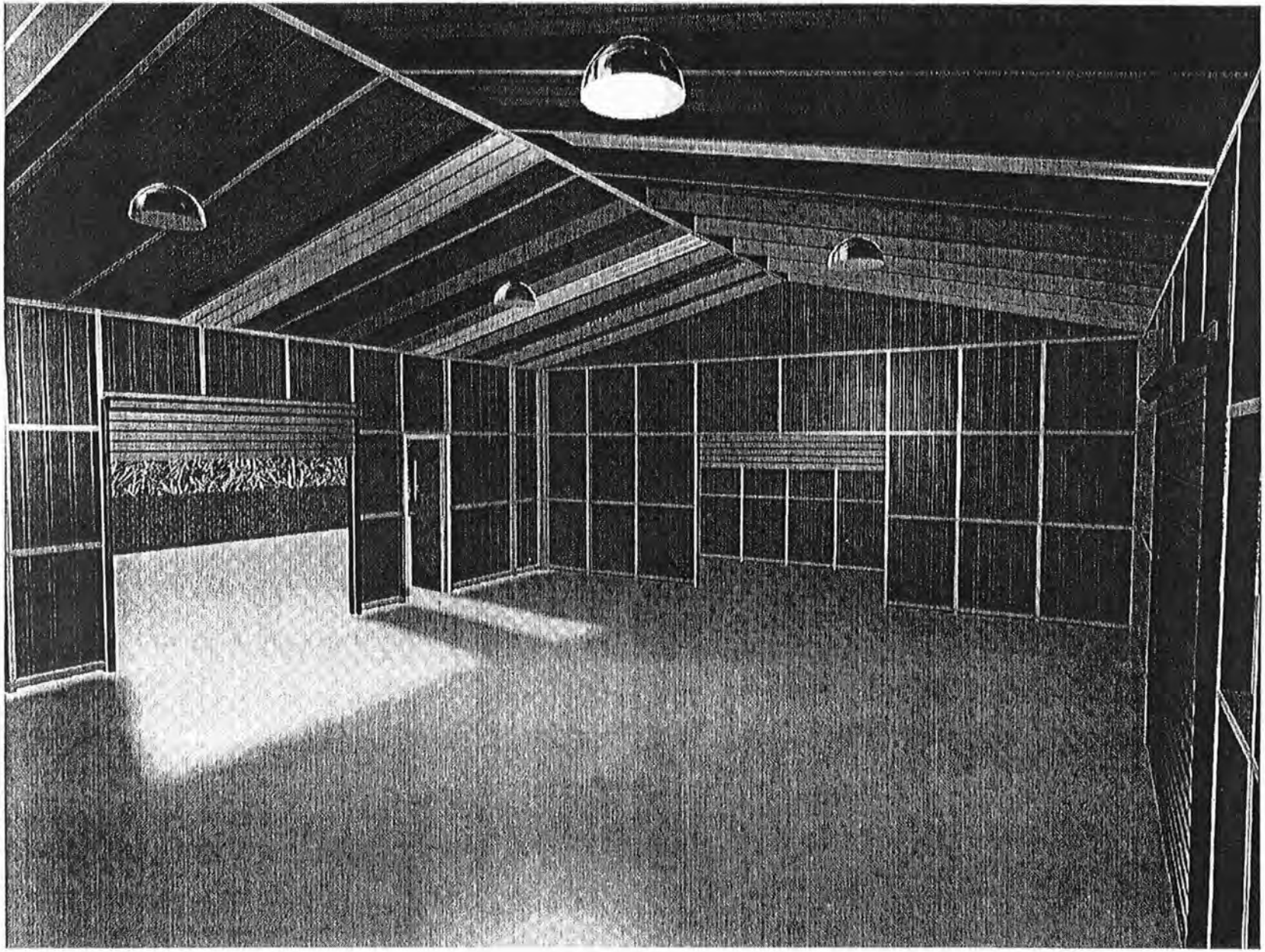
Metal Roof

Natural Light Roof Strips

Electric Lights

SHED

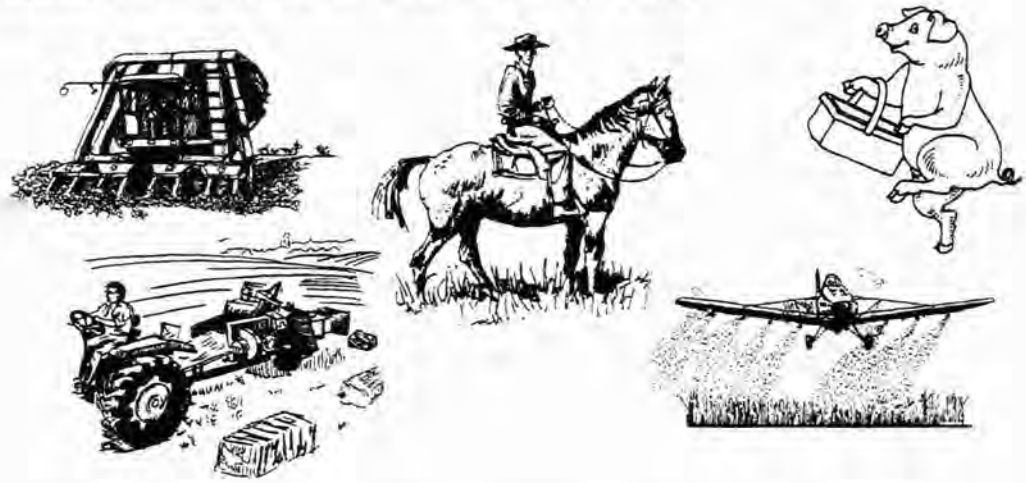
VIEW 14 – AGRICULTURAL SHED



MATERIALS

Targeting Young People

Contact: Felicity Forsyth, Australian Agricultural Health Unit, PO Box 256, MOREE NSW 2400 Ph 067 592200. Fax: 067 526639



Safety for Young People on Farms is a project investigating farm injury in young people.

The question may be asked: Why target young people? **There are many reasons, such as:**

- they are the most at-risk age group for injury, especially transport-related;
- they lack work experience and training;
- they are prone to risk-taking behaviour;
- they are easier to influence or change behaviours and attitudes;
- it makes sense to have an education system in place; and
- it has a beneficial influence on the wider community.

The project aims are to reduce on-farm injury in Australian adolescents and young adults by:

- investigating and reviewing the major causes of injury in young people, particularly young men, aged 15 to 24 years of age;
- surveying young people, farm families and people involved in agricultural training to understand the attitudes, knowledge and problems related to farm safety in young people; and
- working with young people and the wider community to assess ways to prevent farm injury.

METHOD:
the research involves three steps:

1. A literature review of previous studies and projects.
2. A farm injury profile of available data - work-related fatalities, hospital admissions, accident and emergency cases, and farm surveys.

3. Focus group meetings - agricultural trainers and educators, farm parents, young people aged 15-20 years, young farmers and farm workers aged 20-30 years.

SUMMARY:

Specific farm injury problems for Australian adolescents and young adults are:

- horse safety, particularly in adolescent girls; motorcycle safety;
- tractor and machinery safety;
- farm vehicle safety;
- livestock handling; and
- farm maintenance activities.

Factors associated with farm injury risk, particularly in young men, are:

- the nature of work is often risky and physically demanding;
- inexperience;
- impatience, speeding and
- "mucking about" especially on motorbikes and with friends or visitors.

Other important findings include:

- farm motorcycle injury appears to be a priority issue for young people;
- young people on farms are assuming enormous responsibilities in the work that they do;
- the most important influences for young people on farms are farm parents, particularly **fathers,** the **school environment,** and to a lesser extent, the media;
- the farming community is becoming more aware of farm safety, but attitudes toward the cost of safety equipment influence adoption of safe practices.
- Young people on farms are more likely to adopt safe practice, but availability of equipment, parental example and attitude, and the practicality of equipment design are reasons why they may not follow safe practice.

Potential resources and contacts:

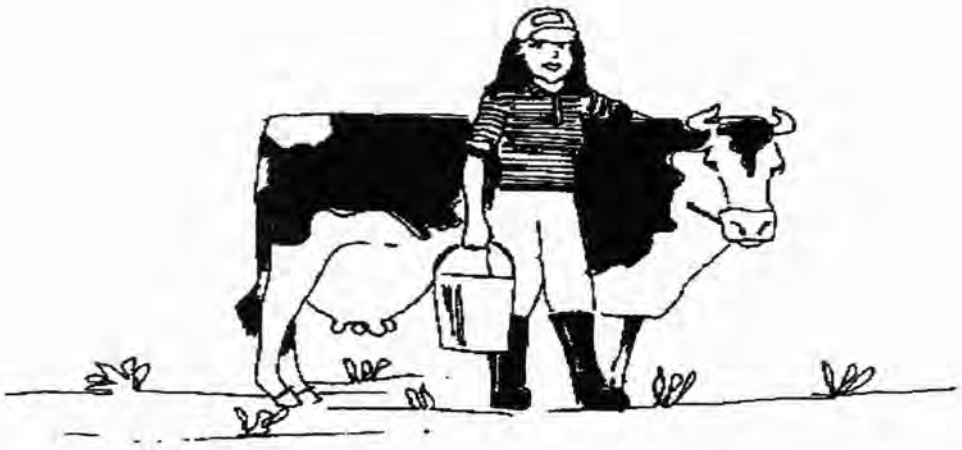
1. Local community groups and contacts:-

- farm safety action groups;
- CWA;
- TAFE;
- local primary schools;
- agricultural schools and colleges
- community groups such as Apex, Rotary and Rotaract; and

2. Available resources:-

- Horse safety kit;
- Ag health unit videos;
- "Youth Farm Safety Workshop - Discussion and Activity Guide"; and
- others available from the Australian Ag Health Unit.

Cheerful people, the doctors say, resist disease better than glum ones. In other words, the surly bird catches the germ.



ROYDEN DAIRY TOURS

THE GENUINE ARTICLE

- A real dairy (not a tourist resort) viewed in operation.
- student notes & informative lectures provided; Q & A.
- ideal *case study* -Geography & Ag.
- courses may be tailored to suit.
- a friendly environment, free refreshments.
- 3 price ranges. all ages. 5 years in tourism.
- only 3 hours from Sydney by coach.

Plenty of other features in the BATHURST AREA to compliment your visit.

Come and get your feet dirty.

Contact - David McKay for a booking and further information on ...
(063) 32 4385 (office) or 019 455 470 (direct).
I'd love to hear from you.

TAS Curriculum Matters at the Office of the Board of Studies June 1996

This document provides information relating to the Technological and Applied Studies Key Learning Area and is available for use in the journals and newsletters of the Professional Teacher Associations linked to the TAS KLA. For further details contact Robert Curtis at the Board of Studies on (02) 9927 8313.

BOARD BULLETIN

All Technology teachers should be aware of the Board's main communication publication - the *Board of Studies.* Multiple copies of this publication are sent to all Government and non-Government schools and TAFE colleges in NSW. It contains information relating to curriculum development, credentialling and articles of special interest. It is particularly important that teachers are aware of the Official Notices (many of which relate to the School Certificate and Higher School Certificate) which form part of the *Board Bulletin.* The Official Notices are blue in colour. Extra copies of the *Board Bulletin* are available by calling the Board of Studies on (02) 9927 8178.

REQUESTS FOR SYLLABUSES, SUPPORT DOCUMENTS, TEACHING KITS, etc. Extra copies of Board syllabuses and support documents are available to teachers and can be obtained by phoning (02) 9927 8178. As well, the Board markets many commercial products. These are listed in the Board of Studies *Education Resource Catalogue.* For further details phone (02) 9927 8178.

REVIEW OF INDUSTRIAL TECHNOLOGY AND ENGINEERING SCIENCE

Expressions of Interest have been called for the review of both Stage 6 Industrial Technology and Engineering Science syllabuses. Advertisements have appeared in the *Board Bulletin, Sydney Morning Herald* and *TAFE Gazette.* For further details, contact Louise Cordery at the Board of Studies on (02) 9927 8291.

McGAW REVIEW OF THE HSC

The first stage of the government's review of the HSC (the McGaw Review) was marked by the release in April 1996 of a Green Paper titled *Their Future: Options for Reform of the Higher School Certificate.* Copies of the Green Paper have been sent to schools, TAFE colleges and universities. You can also obtain your own copy of the Green Paper by contacting:

The HSC Review Secretariat
Locked Bag 55
PO Darlinghurst 2010
Phone 1300 36 88 77
Fax (02) 561 8968
E-mail: bmowbray@ozemail.com.au

Alternatively you can view the Green Paper on the Secretariat's Internet home page on http://www.dtec.nsw.gov.au

DUAL ACCREDITED VOCATIONAL COURSES

The number of students enrolling in dual accredited vocational courses since 1993 is increasing at a rapid rate. The table below shows increases in candidature since the introduction of vocational courses.

Year	Courses Available	Year 11	Year 12
1993	Industry Studies piloted by 40 high schools	526	
1994	Industry Studies	951	401
1994	CECs in Hospitality, Retail and Office Skills	930	202
1995	Industry Studies	2187	1043
1995	CECs in Hospitality, Retail, Office Skills and new CECs in Furnishing, Building & Construction and Rural Industries.	4632	1061
1996	Industry Studies	2848	1533
1996	CECs in Hospitality, Retail and Office Skillls, Furnishing, Building & Construction, Rural Industries and new CEC in Electronics.	6947	3292

THE DESIGNTECH PROGRAM

DesignTech 96 - An exhibition of outstanding Major Design Projects from HSC Design and Technology Students. The planning for DesignTech 96 is well underway, with a strong push to gain new sponsors with the departure of Pacific Power. At this time the exhibition program includes:

Woollongong Crown Central 22 to 29 October 1996	**Tamworth** Tamworth Shopping World 1 to 8 November 1996	**Dubbo** Orana Mall 12 to 19 November 1996
Powerhouse Museum 27 Nov to 27 Feb 97	**Newcastle** Carlestown Square 4 to 14 March 97	**Lismore** 18 to 25 March 97

Negotiations are being held to establish a new venue in western Sydney for DesignTech which may begin in April 1997. The inclusion of an extra venue is dependant upon gaining new sponsors. Watch out for the DesignTech poster in schools around September 1996.

SNAPSHOTS OF DESIGNTECH 1994/95 - A video is being developed of the snapshots taken by HSC Design and Technology marking teams for the DesignTech exhibition program. The video will be available from the Board in Term 3 at a cost of around $25. Information regarding the video will be sent to all schools soon. It is anticipated that further product development will occur focusing on outstanding Major Design Projects from the 1996 HSC.

JENNI WILKINS needs YOUR INPUT on
The McGaw Review of the HSC

It is appropriate that this Association's Members provide a response to McGaw Review. Please make an effort, individual, school, local network etc. to discuss the report and send your suggestions to Ms Jenni Wilkins Board of Studies NSW, 35-51 Mitchell Street, NORTH SYDNEY. 2060

How else can Jenni know what we think? Ed.

APPROPRIATE TECHNOLOGY PROJECT

Article by Barry Gordon, publications editor, Board of Studies NSW 14/6/96.

It was in a badly designed meeting room late last year that the future of Technology teaching became a little clearer to 40-odd NSW teachers. Drawn from scattered primary and secondary schools, they'd just trialled a range of strategies that had allowed their students to explore the 'appropriateness' of technology. Now they were together to share the good word.

And good it was, "Issues got clarified in the classroom," said one enthusiast. "After all, the students are often asked to give an opinion in an exam."

Another drew from a woodworking vocabulary to describe the effect of the strategies: "By introducing values here and there all the time, I could dovetail so much more of my lesson content."

So what's appropriateness, and what's it got to do with values? That can't be answered within the design constraints of this page, which is why a complete set of professional development materials will be available in Term 4 this year. These materials - a reference text, video cassette and extensive practical teacher modules - arise from the national *Educating for Appropriate Technology* project, administered by the Board of Studies NSW. In short, the materials will lead teachers and students to the recognition that Technology projects are social and environmental projects as well. Together, teachers and students will place their work firmly in the real world. They will ask new questions, and develop new solutions.

What if a small modification means that a necklace clasp is friendlier to arthritic hands? What if the wheelbarrow is assembled so that it can be pulled apart in 20 years' time, and each of its components recycled? What if we don't build a room partition at all, but redesign the space to meet the same needs?

A big part of teaching for appropriateness is to build 'What if?' into the whole design and production process. By generating a range of solutions and considering the consequences of each, students are required to make decisions about what they think is best.

The professional development materials take this further, by helping teachers to lead students into an exploration of the values that lie behind these 'best' solutions. Who, or what, are the students designing for? Who, or what, did they leave out?

In that exploration, students must sit other concepts alongside the familiar criteria of cost, efficiency, aesthetics and function - things like culture, gender, ethics, environment and energy. Although these are words dotted liberally through syllabus outcomes, they have yet to find a comfortable home in the Technology classroom. The professional development materials are intended to meet that need. More than anything, they will encourage thoughtful and creative students whose projects are more than 'jobs' - students able to produce technologies that address the quality of human societies and natural environments.

Technologies that emerge from this broad focus will inevitably 'fit in' better than those that have only one narrow purpose. In other words, they will be more appropriate.

The *Educating for Appropriate Technology* professional development materials are also intended, through coursework, to lead interested teachers towards formal accreditation.
Inquiries: Rosemary King - (02) 9927 8267.

The Lost and Found Department is where people bring things they've found and can't use!

WHO TO CONTACT at the OFFICE of the BOARD OF STUDIES

Listed below are the details of Board officers to contact in relation to particular subjects, courses and projects

AS OF JUNE 1996

	AREA	CONTACT
K-6 Board Developed Course	Science & Technology K-6	Bob Staples (02) 9927 8246
Years 7-12 Board Developed Courses	Agriculture Applied Studies Rural Technology Sheep Husbandry & Wool Science	Jenni Wilkins (02) 9927 8165
	Computing Studies Design & Technology Textiles and Design	Rosemary King (02) 9927 8267
	Engineering Science Technical Drawing Technics	Bob Staples (02) 9927 8246
Dual Accredited Content Endorsed Courses	Horticulture Marine Studies	Jenni Wilkins (02) 9927 8165
Dual Accredited Content Endorsed Courses	Building & Construction Electronics Furnishing Hospitality Office Skills Rural Industries	Judith Page (02) 9927 8310 or Lyn Alagich (02) 9927 8141
JSSTAFE Board Developed Courses	Electronics Technology Tourism Sector Services (Travel 1996 HSC)	Margot Alaba (02) 9927 8206
Content Endorsed Courses	See NSW TAFE document	*Ideas for Courses*
Other Board Contacts	Main Switch BOS Fax TAS Fax Ministers Young Designers Award DesignTech	(02) 9927 8111 (02) 9955 3557 (02) 9954 9218 Geoff George (02) 9927 8277 Robert Curtis (02) 9927 8313 mobile 018 271 190

CASINO BEEF WEEK 1996 LOOK

Report by Mick Melino, St John's College,Woodlawn.

Eleven schools were involved in exhibiting a total of 35 steers at the Casino Beef Week Led Steer Competition on the 1st June 1996. School steers made up approximately one third of the total exhibits in the Competition. Schools from outside the local area included Chinchilla High School, Qld; Quirindi High School, Inverell High School, Melville High School, Wingham High School and Kempsey High School. It was great to see such involvement and was much appreciated by the organising committee particularly as the quality of the steers was so high. The following photo was in the Land Newspaper on the 13th June.



A strong contingent of schools was represented in led steer judging at Casino Beef Week. Back row: Matt Bryce (Alstonville), Cassandra Stephen (Kyogle), Gavin O'Neill (Inverell), Owen Osborne (Bonalbo), Luke Beck and Dallas Martin (Woodenbong), Kirsten Girett (Wingham), and Clint Gillespie (Woodlawn). Front row: Kristie Zoccoli (Quirindi), Rachael Maycock (Melville) and Tennille Sharp (Kempsey).

RESULTS:

Junior Section: Junior Lightweight under 380 kg (23 steers)

Inverell High School	1st Hoof; 1st Hoof
Chinchilla High School	2nd Hoof; 4th Hook
Alstonville High School	Highly Commended (Hoof); 2nd Hook
Woodlawn College	Highly Commended (Hoof); 3rd Hook

Junior Middle Weight Under 500kg (26 Steers)

Quirindi High School	1st Hoof; 2nd Hook
Wingham High School	2nd Hoof; 4th Hook
Kyogle High School	3rd Hook
Inverell High School	Highly Commended (Hoof)

Open Section - Heavy Weight Over 500kg (20 steers)

Quirindi High School	3rd Hoof

Quirindi High School won a trophy donated by the North Coast Agriculture Teachers Association for the highest placed steer on the hook with a Limousin steer which scored 90.0 points. The Champion carcase scored 93.5 points. Clint Gillespie from Woodlawn College won a $500 prize from the Australian Hereford Society for the highest placed Hereford Steer with a score of 83.1 points. There was an outstanding performance by all schools and congratulations must go to all the staff and students who no doubt spent many hours preparing their steers.



Clint Gillespie with the highest placed Hereford steer.

HOW FAST CAN YOU RUN?

Suppose all the different animals in the world would line up for a short foot race, which one do you think would cover the distance first? Doubtless you would not pick the tortoise even though, according to a fairy tale, it did beat the hare.

In speeds among animals, the cheetah, or hunting leopard, a member of the cat family found throughout Africa and South Asia, comes first, with a speed up to 112km (70 miles) an hour, certain types of deer come second, with a speed around 100km (60 miles) an hour. lions, racehorses, rabbits, kangaroos, and foxes follow with records from 64km (40 miles) to 80km (50 miles) an hour.

Size has little to do with the speed with which animals can travel. The large elephant, buffalo, and rhinoceros, and tiny chipmunk are all faster than man. Keep on friendly relations with those cheetahs, bears, and elephants if you don't want to be chased up a tree.

Training for the Rural Industries CEC. Another Program will commence in Third Term 1996

Teacher Name	School	Town	Phone	Fax
Richard White	Balranald Central School	Balranald	(050) 201103	(050) 201769
Craig O'Brien	Mossvale High School	Mossvale	(048) 681717	(048) 682787
Dave McCarron	Bourke High School	Bourke	(068) 722560	(068) 723267
Mark Dann	Gilgandra High School	Gilgandra	(068) 472276	(068) 471288
Cliff George	Peak Hill Central School	Peak Hill	(068) 691304	(068) 691776
Peter Hood	Narrabri High School	Narrabri	(067) 921633	(067) 923934
Travers Powell	Tenterfield High School	Tenterfield	(067) 361138	(067) 362899
Kieran O'Keefe	Griffith High School	Griffith	(069) 621711	(069) 641465
Dale Chadwick	Gundagai High School	Gundagai	(069) 441233	(069) 442180
John Surtees	Wingham High School	Wingham	(065) 535488	(065) 570372
Greg Matthews	Cessnock High School	Cessnock	(049) 901439	(049) 911815
Wayne Whale	St Paul's College	Walla Walla	(060) 293323	(060) 292410
Scott Callaghan	Junee High School	Junee	(069) 241666	(069) 241798
Graham Harris	Farrer Memorial	Tamworth	(067) 679211	(067) 679451
Robert Lynch	Trinity Catholic College	Lismore	(066) 218155	(066) 221914

HANDS-ON OUTDOORS SKILL-ROOM



While their classmates worked on algebra, adjectives and astronomy, Rural Industries Studies students were weighing cattle and repairing farm vehicles in Uralla. The event was the first Rural Industries training day for students studying the new Higher School Certificate (HSC) course across the region.

Rural Industries Studies is a dual-accredited two unit HSC course offered for the first time this year at Uralla Central School. The course is competency-based which means the students keep a log book throughout the year and tick off each of the required skills as they master them rather than sitting an examination.

The required skills include cattle and sheep handling, farm chemical use, farm vehicle handling, wages and conditions, occupational health and safety, compensation and third party, as well as personal skills such as communication and presentation.



THE BULL RING ... Rural Industries student Rowan Pollard after he mastered the skill of inserting a nose ring.

The training day allowed 45 students undertaking the course in Uralla, Warialda, Glen Innes, Tamworth and Walcha to network ideas and resources.

"Basically the idea of today is sharing resources and learning off one another," Uralla Central School agriculture teacher Rowan Chandler said. The best part of the course was its practical base. "The theory work is very minimal - it's very hands on," he said.

"The course is not written by academics, but by people in the industry."

And the students agree. "It's more hands on, you learn how to administer things to livestock and you only get assessed on the practical stuff - I'm better at the practical stuff," Year 11 Uralla Central School student Rowan Pollard said.

Mr Chandler said the introduction of competency-based courses signals a change in education direction.



Tractor driving

A GREAT DISCOVERY

For a long time Charles Goodyear spent every hour seeking a method of preparing rubber to withstand all weather conditions. After many failures, his wife prevailed on him to quit his experiments. However, one day when alone, he could not resist the tempation to try one more rubber mixture. In the midst of kneading the solution, he heard his wife return. Hurriedly he shoved the material into the oven. Some hours later, removing the pan, he was astonished to find the mixture had changed into a tough substance that was affected by neither heat or cold. Thus Charles Goodyear bumped into the method of vulcanizing rubber.

SOME THOUGHTS ON 3 UNIT AGRICULTURE

by Peter Giblin, Byron Bay High School

I had not taught 3 Unit Agriculture for a few years and must have been getting soft when four students approached me and asked if they could take 3 Unit Agriculture. You may already gather that I have mixed feeling about 3 Unit Ag. I explained what was involved and what sort of commitment was required to the prospective students. Three were good students (not top) and one was average, but Agriculture was her only real interest at school so why not! They convinced me they had the commitment so in term 4 1994 we embarked on the new (so new we wondered if we would get it in time) syllabus.

WHAT I LIKED ABOUT 3 UNIT

- the rapport you build up by working with a group of students for 9 periods a week
- A new syllabus with new ideas that stimulate and challenge both students and teacher.

- The finished projects, which give the students a sense of pride and achievement.

WHAT I DISLIKED ABOUT 3 UNIT

- Starting the syllabus in Term 4 on top of your 28 periods at a time of year when everyone is getting a little tired. We aimed to have our projects selected and the practical component of the research completed by the end of the Christmas holidays.

- The project dominates the course. My estimate was that each student put in 60 hours plus on their projects. **The project represents 18 marks out of a possible 50.** The three common elective outcomes are worth 8 marks in a 32 mark paper set for 1 hour and 12 minutes. **This means that students are given 18 minutes to gain 8 marks.** This makes a mockery of the time spent on the project. The students could not see the logic of "60 hours for a project worth 18 marks and 17 minutes to earn 8 marks".

- I believe the board of Studies is no longer releasing syllabi without supporting documents. Just a little support for the 3 Unit syllabus would not have gone astray. The recent publication produced by the Board on specimen examples from a past syllabus is really of little use, and as for the projects, the alleleopathic example was total intimidation. It looked more like a distinction in a course Masters Degree. What does the average project look like?

- The period allocation to teach 3 Unit subjects varies from school to school at the discretion of the Principal. I was lucky this time and received 2 periods per week for three out of four terms to teach a subject that was fast consuming 6 periods per week. Other colleges I know who taught the same syllabus received a full allocation and another received no allocation even though they had six students in the class.

- The electives are interesting, but again long and require considerable research. There is no textbook to look up and it takes numerous phone calls, library research, and interlibrary journal loans, to search out the electives.

The feedback is abysmal to say the least. Students and teacher are putting

massive efforts into projects and the **only feedback is "two ticks on each page".** I do not have any idea where my students are going well or going wrong. eg. "Are the biometric analyses correct"? The examination report tells me nothing. It is mostly generalisations. The tone of the examination report is also condescending, "Teachers, you haven't done this well enough or that well enough." Ask why they haven't done this well enough and comments like "students should be given numerous opportunities to work through such a process". When do you do this? That's what I'm asking. I had to resort to giving my students detailed summaries of the electives just to complete the course. Some of you are thinking that this is being written by a disorganised whinger, but I know too many of my local colleagues who faced the same dilemma.

When my group of 3 Unit students finished the course they said that 3 Unit is like doing a 2 Unit subject in 1 Unit time. The present structure of 3 Unit Agriculture **is not good enough.**

I would like to see some debate in BAAT about 3 Unit and other topics perhaps a letter to the Editor column. I hope this article may spark some letters as I believe that all is not well as some would believe. (Have a look at the number of students electing Agriculture.)

PS. My students received much the same grade for 3 Unit as they received for 2 Unit so it did not disadvantage them.

TRACTORS CAN BE VERY DANGEROUS!



Here are some statistics worth considering:

- There were 30 rural work fatalities in 1991-92 and more than 50 % involved tractors.
- In recent years more people have been killed on farms by tractors than any other piece of rural machinery.
- Nearly nine out or 10 people killed on farms die as the result of accidents involving tractors.
- One in every four people killed in tractor accidents are children under the age of 16.
- People are usually run over by tractors because of unsafe work practices, such as:
    1. Getting on or off a moving tractor.
    2. Falling off a tractor while riding as a passenger without proper passenger seats, handholds and footholds.
    3. Failing to set the parking brake before getting off the tractor.
    4. Operating a tractor with defective brakes.
    5. Starting the tractor in gear while standing beside it.
- Between 1985 and 1990, 13 people died in NSW as a result of a tractor roll over, 11 (85%) had no ROPS.

A REMINDER

Human vanity can best be served by a reminder that, whatever his accomplishments, his sophistication, his artistic pretension, man owes his very existence to a six-inch layer of topsoil - and the fact that it rains *(sometimes)!*

NATIONAL FARM CHEMICAL USERS COURSE

Graham R. Matthews
Rural Training Council - Accredited Trainer
2 South Boambee Road, BOAMBEE NSW 2450
Phone: (066) 581 894 (After Hours)
(066) 551 027 (Work)
Fax (066) 593 013

NATIONAL FARM CHEMICAL USERS COURSE

Community concern over the use of chemicals in agriculture and horticulture has grown steadily over the last few years. Despite extensive controls at both Federal and State level, environmental and health issues are often perceived as problem areas.

Registration and clear labelling minimise problems, but these safeguards rely on the user handling and applying farm chemicals safely and accurately. To help ensure farm chemicals are used correctly, the National Farmers Federation (NFF) and the Rural Training Council of Australia (RTCA) have introduced a voluntary, self-regulatory National Farm Chemical User Training Program for primary producers and personnel who are involved in the handling of chemicals.

The farm chemical users course is a workshop on using farm chemicals safely and is run over two days with participants completing a skills test on the second day. If participants pass satisfactorily, they are accredited under a national scheme and awarded a certificate.

Presenter:
The workshops are run by Graham Matthews, a professional accredited trainer who has over 18 years experience in the industry. Graham has a Diploma in Agricultural Protection from Charles Sturt University and has attended many seminars and conferences presenting papers within both NSW and Qld, and, at an International level, at Massey University New Zealand after being awarded the NSW Noxious Plants Officers Award in 1989. Graham is also the author of a training manual titled *Safe Use and Storage of Pesticides* which is used as a training course for new employees who handle Pesticides.

Course Profile:

- To provide farmers and employees with the knowledge

and skills to achieve established industry competencies for the use of farm chemicals;
- To allay community concerns regarding the personal and environmental safety aspects of the use of farm chemicals.

Course Outlines:
Topic areas to be covered are:
- Integrated Pest Management Strategies
- Legislation
- The Product Label
- Formulations
- Personal Safety
- Environmental Safety
- Equipment Selection
- Calibration of Equipment
- Equipment Maintenance
- Record Keeping

Assessment:
Participants will be assessed during the course. Assessments will be on a Pass/Fail basis only.

Duration - 2 days

Cost: $165 [The cost of this program includes Training Course Notes].

Please note: To book a course a minimum of 12 participants is required.

Task Funding:
Farmers wishing to undertake this course may be eligible for TASK funding. TASK (Training and Skills) is part of the Federal Government's Drought Relief Package which is designed to help rural employees gain access to more training at little or no cost. The package also includes a wage subsidy to be paid to the employer to offset the cost of the employee's absence whilst training. To be eligible for assistance under the TASK program farm employees must be actively working on a farm that is in a Rural Lands Protection Board area that has been drought declared under the Exceptional Circumstances Provision at some stage during the last year. This can include employees of companies or family members if they are paid employees.

To find out more about TASK funding please contact the Area Manager of the NSW Farmers Association in your region or the NSW Farmers Association Head Office in Sydney.

The philosopher who said that work well done never needs doing over, never weeded a garden.

TIPS FOR 2 UNIT AG. STUDENTS

Where do candidates (students) go wrong when sitting for their 2 Unit agricultural HSC exam?

The following is part of a handout used at the Western "Region" and North West "Region" HSC Enrichment Seminars. It was thought by the Sydney Branch of the NSW Ag. Teachers Association that all students could gain from it. If you don't understand what it is about please contact the author, Peter Jones, Colo High School.

There are at least 7 ways where YOU can do yourself "damage" when sitting for your 2 Unit Agriculture exam. This damage will reduce the mark that you obtain in this exam. The following lists the areas of potential damage as well as steps that you can take to prevent them from happening.

1. **Leaving blank lines when you are supposed to do something.** No answers - no marks allocated by the examiners.

What should you do to overcome this problem?

a) **Have a go and write something.**
Even if you are not sure of it being exactly correct you may be able to get a few marks because "you are heading in the right dirrection". It is possible to answer the questions using knowledge that you have gained from outside the classroom. The markers don't know what you studied. Don't be restricted to just your classroom work.

b) **Pace your time.** Three hours will fly during the exam. Calculate how much time you should spend on each section and try to stick to it. The suggested time is at the start of each section. You just need to figure out the time when you should be completing that section.

c) **Write in point form.** You don't need to write long full sentences and don't rewrite the question. Restrict yourself to the lines allocated for the question.

2. **Failing to comply with what the question has asked you to do.** If you are asked to "compare two ways of doing something" and you only list two ways of doing something you will not be given full marks. Some students fail to read the question fully and not carry out simple instructions such as "mark the graph shown in figure 3 above where .....

What should you do to overcome this problem?

a) **Break the question into bits.** Underline the important parts ie. The bits that you must include if you are to receive full marks.

b) **Know the meanings of the key verbs** used to give you direction eg list, state, compare, contrast, explain. (See the separate sheet).

3. **Answering too many questions when you are supposed to make a selection.** All questions will be marked and the best marks will be used to calculate your total agricultural exam mark BUT by answering too many questions in a section you are robbing yourself of valuable time to fully answer other sections.

What should you do to overcome this problem?

Read the instruction at the start of each section.
Choose carefully in those areas of the exam where you need to make a choice. Section 2 (3 out of 4) , Section 3 (1 out of 3) and Section 4 (1 out of 4).

4. **Choosing the wrong question when there is choice**. In sections when there is choice you will find some questions harder to answer than others. Poorly answered questions will lead to lower marks (see 1 above).

What should you do to over come this problem?

Choose carefully. In sections where there is choice read all the questions first. You are given 5 minutes reading time. Note down in your brain which questions you feel best able to answer. After reading time is completed mark the paper indicating you choice.

5. **Using poor examples to answer questions.** Often you will be asked to "write the name of a farm product", "a plant pest" or "animal product" etc. in a rectangular box at the start of a sub question. You then need to answer a series of questions using the listed example. Some students write down examples in the box that are difficult, if not impossible to follow through and answer all of the questions, linked to that box.

What should you do to over come this problem?

Stop! Don't write the first thing that comes into your head. **Read <u>all</u> of the questions linked to the sub-question first.** Figure out if there is more than one piece of information that you can record in the box ...eg. You may know three animal diseases. If there is more than one "animal disease", work out the best possible answer to be placed in the box realising the sub-question answers MUST BE LINKED to what you have written in the box.

6. **Writing incorrect answers.** This is where you fail to write the correct information down in the box because you didn't know the correct answer.

What should you do to overcome this problem?

a) **Know your work.** Refer to the handout "Suggested Material To Learn".
b) At the start of the exam turn to the essays and **record possible <u>brief points</u>** that you could/should mention. This will make life a little easier when it comes to writing the essays. Often stress will block your thoughts.

7. **Loosing concentration during the exam.** For some of you this may be the last exam. all your mates have gone pig shooting, to the beach, letting their hair down at the river or some other place other than where **<u>you</u>** are right now ..... Not only that but they may have finished 2 weeks ago. .... and you're stuck here. It just doesn't seem fair. Your concentration will continue to drift from the paper to your peer's present activities. You will be continually fighting the feeling "I'll leave now. I've done enough". Some of you will be feeling stressed out because of "brain strain".
You really need to **train your mind to concentrate on the task** in front of you. Most of you will only get one crack at this series of exams. You need to give it your best shot NOW !!!!. You've got the rest of your life to party on.

If you are loosing concentration because of stress you need to do some relaxation exercises. See your year adviser, school counsellor, family GP, local youth health worker or local stress management consultant for assistance with these exercises. They take a little while to learn but they will help you greatly.

SHAPING THE FUTURE

K–12 Technology Education Symposium

What developments in technology will there be in the future?
How is technology changing our future?
What implications does this have for society?
For my students?
For my teaching practice?

COLES THEATRE, POWERHOUSE MUSEUM, SYDNEY
SATURDAY AUGUST 31, 1996, 9.00 am – 4.00 pm

The goals of the Symposium are:

- to present current and futures thinking about technological developments for the future and implications for society;
- to foster ongoing relationships between professional associations which represent teachers of technology;
- to encourage the further development of initiatives and resource materials that support Technology Education;
- to demonstrate the breadth of technology;
- to launch National Technology Education Month.

Sessions at the Symposium will address these goals.

This Symposium is an exciting joint venture supported and coordinated by Professional Associations of Technology Educators.

Symposium coordinated by:

Australian Teachers of Media NSW ATOM ■ Computing Studies Teachers Association CSTA ■ Design Education Council of Australia NSW DECA
Early Childhood Education Council ECEC ■ Institute of Technology Education ITE ■ NSW Association of Agriculture Teachers NSWAAT
NSW Computer Education Group NSWCEG ■ NSW Educators of Technology NETA ■ Primary Executive Council of NSW PEC
Technology Educators Association Inc TEA ■ Home Economics Institute of Australia Inc NSW Division HEIA

For further information contact Louise Cordery at the Board of Studies NSW
on tel **9927 8291** or fax **9954 9218**

SHAPING THE FUTURE

K–12 Technology Education Symposium

Future directions in Technology education in Primary and Secondary schools will be discussed by presenters at the cutting edge including:

- Professor Ian Lowe, Griffith University Division of Science and Technology, former Director of the Commission for the Future. Professor Lowe will describe the role of technology in the future and the implications for teachers.
- Professor Ron Newman, University of New South Wales, School of Design Studies. As co-ordinator of Design 99 Professor Newman will announce the plan for an exciting international event in Sydney in 1999 to include Technology educators.
- Philip Brady Education Manager of Optus will discuss the educational implications of broadband technology.
- Joy Middledorp Education Officer from the Independent Commission against Corruption will present new resources "Valuing our Work" for Kindergarten to Year 12 teachers and students of Technology.

Collect a team of teachers of Technology from your school and win!

Symposium Registration: **$20.00** (tax deductible)

Photocopy this form and fax **or** post to:

K–12 Technology Education Symposium
c/-Louise Cordery
Fax: (02) 9954 9218 Phone: (02) 9927 8291
PO Box 460
North Sydney NSW 2059

Credit card details/cheque (make payable to: K–12 Technology Symposium)

Please debit my (✓) Visa ☐ Bankcard ☐ Mastercard ☐ Expiry date / /

Credit card number: ☐☐☐☐ ☐☐☐☐ ☐☐☐☐ ☐☐☐☐

Amount: ..... Cardholder's name:..... Cardholder's signature: .....

THE T.E.F.A. CLIPBOARD

June 1996

Environment Issues Paper writer wanted

As a result of a grant from the Department for the Environment, Sport and Territories, expressions of interest are sought by TEFA for the preparation of an issues paper on "Technology Education: an Environmental Perspective". The aim of this paper is to raise Australian Technology teachers' awareness of the issues posed by an environmental perspective. The final paper should be about 2000 - 3000 words in length with renumeration for the successful applicant being $400. The closing date is June 21st 1996. For more information contact - Barry Hardy, TEFA Project Officer; Phone: (004) 371750, Fax: (004) 371566 or Email: CS_BARRY@ecc.tased.edu.au

The 1996 National Technology Education Month Calendar

Following the generous support of BP Australia, TEFA will again produce and distribute to all schools a national calendar of events for National Technology Education Month. The month, with its focus on the Technology Learning Area, is an excellent vehicle to highlight the work of teachers, students and schools to the wider community. Having your activity publicised nationally at no cost is an opportunity not to be missed! You can participate in the Month by organising an event or if an activity has already been planned, consider its timing to coincide with September. Calendar listings can be class, school, sector, community or state/territory events of any type. Details must be received **no later than Wednesday 31st July** and should be faxed to Barry Hardy on (004) 371566.

On the Track of a Technology Education Curriculum Mapper

Prior to the development of the Technology Statement and Profile, a report to the Australian Education Council in 1990 documented the status of Technology K - 12. TEFA is seeking expressions of interest from persons who will prepare a document which compares the current status of curriculum within the Technology Learning Area with that reported in 1990. Costings for this activity should not exceed $4000 and proposals should be sent by October 31st to Barry Hardy, TEFA Project Officer; Phone: (004) 371750, Fax: (004) 371566 or Email: CS_BARRY@ecc.tased.edu.au

National Technology Education Month 1996 Launch

September has again been designated as National Technology Education Month. The Minister for Employment, Education, Training & Youth Affairs, the Hon. Dr. David Kemp MP, will launch the month at 10.15am on Saturday 31st August at the Powerhouse Museum, Sydney. This event is a part of a major symposium of Technology educators organised by the Technology state professional teachers' associations of NSW as a joint activity. A wide range of activities will take place across Australia during September including the judging and presentation of the TEFA Teacher Awards. Details of these events will be listed in the BP sponsored calendar that will be distributed to all Australian schools in mid August.

TEFA Winter Bargains

Would you believe -
"A Statement on Technology for Australian Schools" + "Technology - a Curriculum Profile for Australian Schools" + "Using the Technology Profile" -
at a never-to-be-repeated price of just $40.00 for the set of three? This is $40.00 less than the retail price - an incredible 100% saving! Single copies of these titles are also reduced and can be purchased for $15.00 each. This offer will not be repeated and concludes once all stock has been sold.

"The Designing Process" is available now. This book has been published by the Technology Teachers Association of South Australia with the assistance of TEFA through a Technology Education Development Grant. While the book is aimed more for the secondary sector it is a reference suitable for all teachers. It contains a wide range of useful material which outlines aspects of the design process, design skills and teaching methodology. This publication is available from TEFA for $9.95 including p&p.

"Design & Technology - the Game" was developed for TEFA. This popular design based game provides an excellent means of encouraging children to express themselves graphically. Containing a set of 150 design challenges, a timer and clearly written rules, the game is particularly suitable for children up to Year 8 level. Students can play either in pairs or form teams. The current price is $19.95 including p&p.
Place orders for the above resources with - Barry Hardy, TEFA Project Officer,
c/- Educational Programs, King Edward Street, Penguin, TAS, 7316
Phone: (004) 371750, Fax: (004) 371566 or Email: CS_BARRY@ecc.tased.edu.au

Indonesian International Symposium

The Asia Education Foundation has confirmed that an international symposium and fieldwork program targeting educators from Australia and other nations will be held in Bali, Indonesia from June 30th to July 7th, 1997. The three day symposium at the Hyatt Sanur will be followed by a series of special interest fieldwork options. The program will cater for all levels of education with many of the sessions being of particular interest to Technology educators. The fieldwork options will enable them to visit local schools and industries. TEFA is working with the AEF to promote the symposium and to develop aspects of the program. Further information and a registration of interest form can be obtained from Kim Huynh at the AEF, 107 Barry St., Carlton, VIC. 3053: PH: 903) 93491899, FAX: (03) 9347 1768. Barry Hardy, TEFA Project Officer can also provide information on Ph: (004) 371750, Fax: (004) 371566.

National Technology Education Month 1996 - TEFA Teacher Awards

Teachers and teachers in training are encouraged to submit details of a program of work that they have developed and used with students to the TEFA Teacher Awards for 1996. TEFA established these awards with the aims of recognising and promoting existing good teaching practice that is consistent with the direction of the Technology Statement & Profile. The entry could be in the form of a program, units of work, syllabuses or courses of study aimed at any level of education from K - 12 and must be submitted by Friday 9th August to Barry Hardy - Ph: (004) 371750, Fax: (004) 371566.
All entries meeting the selection criteria will receive an award certificate and the national judging panel will present special awards to outstanding entries in a variety of categories. These include - the use of computers in a Technology education program (APPLE), a development ed. program focussing on appropriate technology (AusAID), an environmental technology teaching program (DEST), a teaching program meeting Technology profile outcomes (MERCATOR), a Technology education program from a Secondary teacher (BP) plus awards for technology education programs sponsored by the Curriculum Corporation, Film Australia, Intellecta Technologies, the Learning Journey, Lego dacta, NetComm, Questacon and Samsung Electronics.
The TEFA Teacher Awards will be presented to the winners by the sponsors at MEDIAWORLD '96, the National Media Education Conference, at the Queensland University of Technology, Brisbane from October 3rd to 6th.

Technology Education Federation of Australia
National Technology Education Month
September 1996
Information for Participants

National Technology Education Month 1996 will be the month of September. The month will be launched by the Hon Dr David Kemp MP, Minister for Employment, Education, Training & Youth Affairs. The launch will take place at 10.15am on Saturday 31st August at a major conference of technology educators being held at the Power House Museum, Sydney. This conference is being administered by the technology education professional associations of NSW as a joint activity.

During the month a wide range of activities will take place across the country and entries in the TEFA Teacher Award will be received. A calendar of Events will be distributed to all schools in mid August and details of how you can list your activity are provided separately.

A statement on technology for Australian schools and Technology - a curriculum profile for Australian schools give direction for future curriculum development and teaching practice. TEFA recognises that there currently exists many teaching programmes and much teaching practice that is consistent with the direction of the documents. In establishing the TEFA Teacher Awards TEFA aims to provide the opportunity to recognise and promote this existing good practice. Teachers are encouraged to submit details of a programme of work that they have developed and used with children to our national judging panel for consideration in the TEFA Teacher Awards.

All entries which meet the selection criteria, on the following page, will receive an award certificate. The judging panel will also make a number of special awards to be given to particularly outstanding entries. These awards target particular aspects of technology education and are sponsored by a number of organisations. The award categories and their sponsors are included separately.

Please do not hesitate in entering. Excellent programmes, units of work, syllabuses or courses of study will come in all shapes and sizes, from all levels of education K - 12 and from people with varying amounts of teaching experience.

The TEFA Teacher Special Awards for 1996 will be presented by their sponsor at the National Media Education Conference, MEDIAWORLD '96. The conference is being held at the Queensland University of Technology, Brisbane, from 3rd to 6th October.

Recipients of the Special Awards will be contacted prior to the conference to make arrangements for the timing of a telephone link between themselves and the award presenter. The Teacher Award certificates will be mailed to their recipients following the conference.

Barry Hardy
Project Officer

Technology Education Federation of Australia
National Technology Education Month
September 1996
Calendar of Events

National Technology Education Month provides an excellent opportunity to highlight the work of teachers, students and schools in the wider community. It also provides the opportunity to focus on the Technology learning area and the technology statement and profile.

TEFA will produce and distribute to all schools a national calendar of events which will promote the Month and the activities we hope you will initiate. TEFA are most grateful for the support of BP Australia which will enable us to bring this calendar to you. We are already aware of many events across all states/territories that will be listed but how comprehensive the calendar becomes depends on your support. This is an excellent no cost opportunity to publicise your activity. There is the possibility that you have already planned an activity for a different time and consideration might be given to moving it to September. Once you have read this information and decide to participate by setting up an activity of any type or duration in your class, school, community or state/territory we would be pleased if you could copy this page, complete the details asked for and fax **no later than Wednesday 31st July** to Barry Hardy on (004) 371566.

Name of event/activity: .....

Brief description: .....

.....

.....

Where & when will it take place?: .....

.....

Contact person: .....

Phone: ..... Fax: .....



Proudly supported by BP Australia



DO YOU KNOW A GOOD TECHNOLOGY TEACHER?

one who realises the value of Technology Education by:

- demonstrating a vision
- promoting active learning
- engaging students
- implementing exemplary teaching programs

Yes?

nominate them for a

TEFA TEACHER AWARD

or nominate yourself.

Awards totalling $12 500

Sponsors include Apple Computer Australia, AusAID, BP Australia, Curriculum Corporation, Department of Environment, Sport and Territories, Film Australia, Intellecta Technologies, The Learning Journey, LEGO DACTA, Mercator Software, NetComm, Questacon, Samsung Electronics

Entry details: Barry Hardy, TEFA Project Officer, c/- Educational Programs, King Edward Street, Penguin TAS 7316, Ph (004) 371 750 or 371 560, Fax (004) 371 566, Email cs.barry@ecc.tased.edu.au

Closing date Friday 9 August 1996

TEFA – the Technology Education Federation of Australia represents

ACET Australian Council for Education through Technology ■ ACCE Australian Council for Computers in Education
CAMEO Council of Australasian Media Education Organisations ■ DECA Design in Education Council Australia
HEIA Home Economics Institute of Australia ■ NAAE National Association of Agricultural Educators

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National Technology Education Month 1996
TEFA Teacher Awards

Entry Guidelines
Please read carefully the following points:
- the entry must be consistent with the direction and development promoted in *A statement on technology for Australian schools* and *Technology - a curriculum profile for Australian schools*;
- the entry must have been implemented in the classroom or in the case of teachers in training, developed ready for implementation;
- you may submit a joint entry with your teaching partner or development group;
- the entry must be endorsed by the school Principal, or equivalent, that it is substantially the work of the entrant/s;
- the entrant must be a member of a teacher professional association. Professional associations for the purposes of these awards are those whose major purpose is the professional development of their members.
- Special Award recipients will be asked to provide a journal article for later publication in TEFA affiliate association publications.
- the decision of the judging panel is final and no correspondence will be entered into.
- the entry must reflect the Design, Make and Appraise process.

Judging Criteria
Judges will appraise all entries against the following criteria.
Your entry should:
- be consistent with the technology statement and profile or State & Territory variations;
- be engaging for students;
- promote active learning;
- be clear in defining learning outcomes;
- support equity/equal opportunity;
- demonstrate a vision for technology education;
- support appropriate technology;
- extend the field of learning of technology education.

Please note the following points:
- complete the double sided entry form and attach it to your entry. Your entry may also include up to ten (10) additional A4 pages of specific detail. This should be typed, single sided, no smaller than 12 point and could include photographs;
- entrants are to include a postcard size colour photograph of themselves. For Special Award recipients, unable to attend the presentation session, an OHT will be made from the photograph. This will be projected to an audience during a telephone link between yourself and the award presenter. Recipients will be contacted to make arrangements for the timing of the telephone link;
- once entries have closed the judges will determine if additional support information is required;
- all entries which meet the entry criteria will receive a certificate of participation;
- entries remain the property of TEFA;
- A receipt of entry confirmation will be sent by return mail.
- please send completed entries to: Barry Hardy
  TEFA Project Officer
  c/- Educational Programs
  King Edward Street
  Penguin, TAS, 7316

to arrive by close of business on Friday 9th August.

National Technology Education Month 1996
TEFA Teacher Awards Entry Form

Name/s of entrant/s: _____

Place of employment: _____

Address: _____

_____

Phone: work: _____

home: _____

Fax: work: _____

home: _____

Email: _____

Professional association (full name): _____

Entry title: _____

Entry summary: _____

_____

_____

_____

_____

_____

_____

_____

All entries received, that meet the indicated guidelines, will be considered for all general awards. However you may wish to nominate your entry as well for one or more of the following specific categories. Please tick.

Development Education ( ) Environmental Education ( ) Computing ( )

Profile Outcomes ( ) Secondary ( )

I/we declare this entry is substantially my/our own work and I/we accept the judges decision with regard to awards as final.

Signed: _____ Date: _____

I endorse this entry that to the best of my knowledge it is substantially the original work of the entrant/s.

Signed: _____ Date: _____ Position: _____

Using *Technology - a curriculum profile for Australian schools*, or your state or territory equivalent, what outcomes do you expect the work described in your entry to give students the opportunity to achieve? Please indicate Strand/s and Level/s.

What vision for technology education does the work described in your entry support?

How does the work described in your entry reflect the Design, Make and Appraise process?

National Technology Education Month 1996
TEFA Teacher Special Awards

- The APPLE COMPUTER AUSTRALIA TEFA Teacher Special Award for excellence in the use of computers in a technology education teaching programme;
  - a Macintosh computer, colour monitor and printer.
  "Apple. Dedicated to learning"

- The AusAID TEFA Teacher Special Award for excellence in a development education teaching programme which focuses on appropriate technology as an educational and social issue;
  - a selection of development education resource materials to the value of $500.00.

- The BP AUSTRALIA TEFA Teacher Special Award for excellence in a technology education teaching programme from a Secondary teacher;
  - Technology and Design materials, RP15, parts 1-9.

- The CURRICULUM CORPORATION TEFA Teacher Special Award for excellence in a technology education teaching programme;
  - a selection of technology education publications.

- The DEPARTMENT OF ENVIRONMENT, SPORT & TERRITORIES TEFA Teacher Special Award for excellence in an environmental technology education teaching programme;
  - funding to attend a national conference of the awardees choice to the value of $1000.00.

- The FILM AUSTRALIA TEFA Teacher Special Award for excellence in a technology education teaching programme;
  - a selection of appropriate programmes of the awardees choice to the value of $500.00.

- The INTELLECTA TECHNOLOGIES TEFA Teacher Special Award for excellence in a technology education teaching programme;
  - a micromite computer control interface.

- The LEARNING JOURNEY TEFA Teacher Special Award for excellence in a technology education teaching programme;
  - two copies of the World Book Encyclopaedia on CD.

- The LEGO dacta TEFA Teacher Special Award for excellence in a technology education teaching programme;
  - a credit of $500.00 off your next LEGO dacta order.

- The MERCATOR TEFA Teacher Special Award for demonstrated excellence in the use of teaching programmes to meet technology profile outcomes;
  - a copy of CLASSMAP for Windows or Macintosh, with Australian curriculum profiles loaded.

- The NetComm TEFA Teacher Special Award for excellence in a technology education teaching programme;
  - a NetComm Roadster 288 fax modem.

- The QUESTACON TEFA Teacher Special Award for excellence in a technology education teaching programme;
  - a mutually negotiable fellowship to undertake a project in conjunction with Questacon.

- The SAMSUNG ELECTRONICS TEFA Teacher Special Award for excellence in a technology education teaching programme;
  - a model SV30B video cassette recorder.

TECHNOLOGY EDUCATION FEDERATION OF AUSTRALIA LTD ACN 067 093 065

C/- Educational Programs
King Edward St.
PENGUIN Tasmania 7316

Expression of interest for the mapping of Technology Education curriculum design and delivery in Australia

to assist the Technology Education Federation of Australia in the evaluation of aspects of its NPDP activities.

Contact: Barry Hardy
TEFA Project Officer
Phone Number 004 371750 or 004 371560
Fax 004 371566
email CS_BARRY@ecc.tased.edu.au

—The Technology Education Federation of Australia (TEFA) brings together six professional teacher associations. TEFA aims to support the development of Technology Education teacher associations nationally and to disseminate information regarding the development of Technology Education curriculum across Australia.

—As part of its NPDP project TEFA is conducting an evaluation of the current status of Technology curriculum design and delivery in each State and Territory of the Commonwealth, in Primary and Secondary schools.

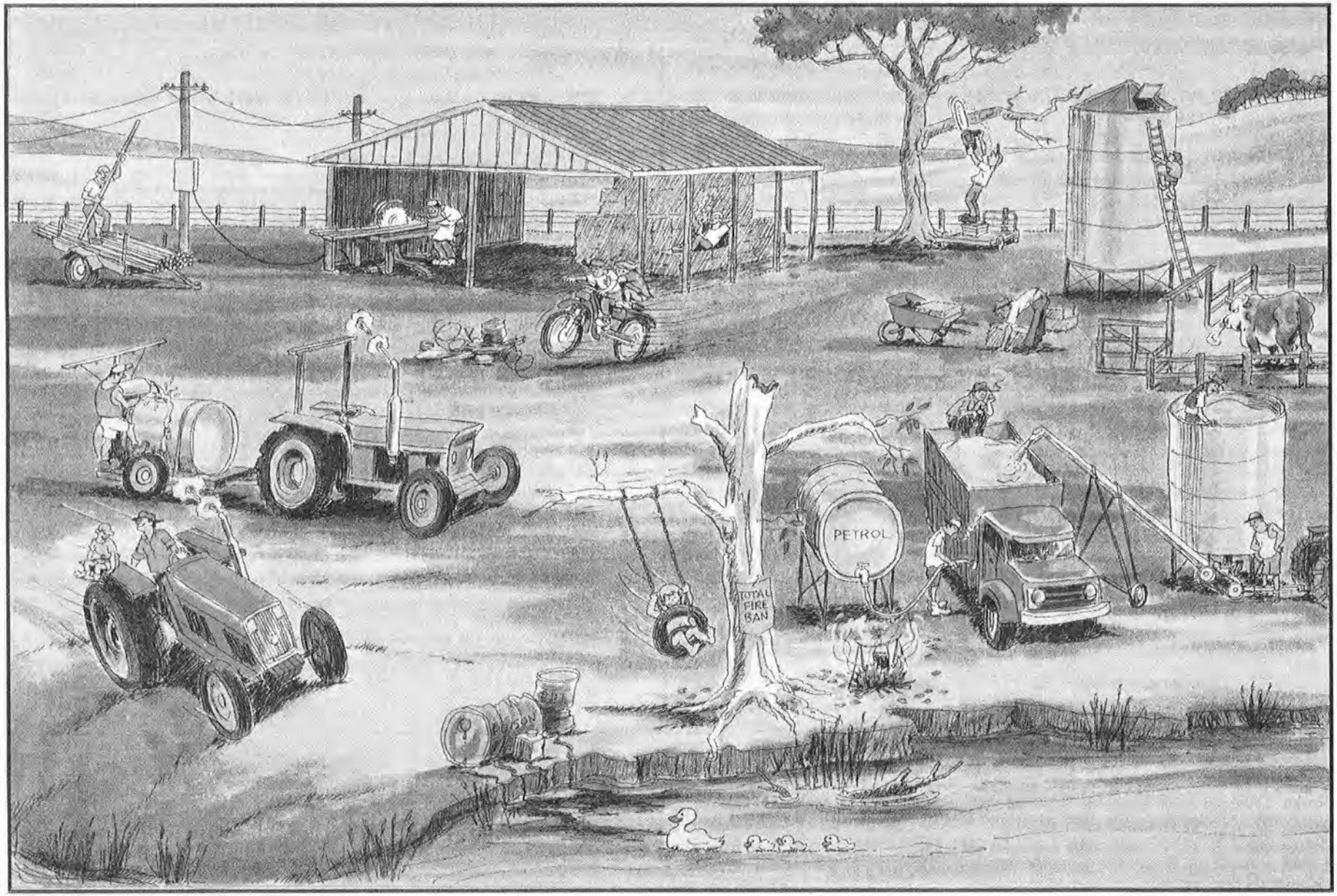
The Board of TEFA seeks expressions of interest from persons for the preparation of a document which compares the current status of curriculum within the Technology Learning Area and that defined in the document, *K-12 Technology Curriculum Map - a report to the Australian Education Council*, published in 1990, prior to the development of the nationally developed Technology Statement and Profile. A copy of this document is available from the above address.

Tenders should indicate a proposed methodology for conducting the exercise and broad costings not exceeding $4000. Proposals should not exceed four pages in length and be marked to the attention of Barry Hardy at the address shown above.

Closing Date: Friday July 26th **Final Report to be submitted by October 31st 1996**

WorkCover Authority

HOW MANY HAZARDS CAN YOU FIND?



SEE BACK FOR ANSWERS

HOW MANY HAZARDS CAN YOU FIND?

The answers are divided into the left side and the right side of the page.

LEFT SIDE

1. Man standing on pile of unsteady irrigation pipes; overhead power lines too close; man holding pipe too close to power lines – he could be electrocuted.
2. Man in barn with bench saw: extension cord should not be on ground but in air above head; extension cord should not be wound round bench legs; bench power saw is unguarded; man has no hearing protection; no overhead guard on power saw.
3. Man is smoking in stacked bales.
4. Rubbish on ground.
5. Two kids on ag bike in hazardous work area.
6. Tractor running without driver in seat; man spilling chemicals and not wearing appropriate personal protection clothes, that is, rubber boots, gloves, overalls with sleeves rolled down and buttoned, and a terry towelling hat that is easily washable if chemicals spill on it; man balanced badly beside chemical tank.
7. Tractor speeding; child on guard (no seat); driver has only one hand on wheel and not looking where he is going; no roll over protective structures (r.o.p.s) on tractor; no hearing protection on driver.
8. Poison and DDT leaking into pond and poisoning eco-system; improper and dangerous storage of chemicals and toxins; DDT is banned anyway.

RIGHT SIDE

9. Swing set up on dead tree; swing near water where kid could drown; swing itself not safe.
10. Open fire beside fire ban notice; unattended fire.
11. Petrol beside open fire; petrol used beside open fire; man smoking while filling petrol; man smoking on top of vehicle being filled.
12. Work in progress on same vehicle – whole lot could be set alight by one spark; smoker on top of vehicle during grain unloading process – could cause fire or explosion; man could also suffocate if falls into grain.
13. Grain silo beside vehicle – man in silo could suffocate if falls into grain; power take-off unguarded; pulleys for auger unguarded; man standing over power take-off shaft; man has no protection from sun's ultra-violet rays – should wear long trousers, long-sleeved shirt, wide-brim hat and correct sunglasses.
14. Bull in open pen.
15. Man about to be charged by bull is not bending or lifting correctly.
16. Man with chainsaw on unstable platform – trolley could move and box on trolley is dangerous; man with chainsaw cutting tree limb directly above himself – may be crushed; man should not use a chainsaw above shoulder height; man not wearing ear protection.
17. Top silo – hatch is open; child climbing ladder to open hatch; ladder not fixed to ground; ladder not a child-proof ladder.

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February 1994

WorkCover Authority



Next BAAT dead line!!

8th November 1996

(I WOULD WELCOME YOUR ITEMS BEFORE THIS DATE.)

"We must bring the child back to the center of our care and concern. This is the only way that our world can survive because our children are the only hope for the future. As older people are called to God, only their children can take their places."

Mother Teresa