

FACTORY TO FARM - THE NEXT GENERATION

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Abstract

Some 2½ years ago I presented to this forum a paper called "Factory to Farm" outlining what AFSA hoped to achieve with its Code's of Practice, which had been drawn up over the previous 5 years. Today I hope that the "Next Generation" will explain what has been achieved during the past 30 months. The AFSA is implementing self-regulation through our Codes.

The first step was to implement the spreader testing protocol as drawn up jointly between AFSA and the Melbourne University. This practice became an embarrassment for some machine manufacturers, as many spreaders produced inaccurate spread patterns in the field.

Following the spreader testing, we assessed the suitability of drivers and owners to operate the machines, and again witnessed some interesting results. Transport operators have willingly taken the assessment course to improve the handling and delivery of product. Today we have depot operators accredited towards the Codes and we are currently working towards basic accreditation in product knowledge and agronomic advice.

As an association, we now ask ourselves, "Where to from here". We believe that the fertilizer industry should take a holistic approach towards improving each sector. Environmental issues today will not allow the service industry to continue a haphazard approach towards fertilizer application, therefore if our members are curtailed in applying product, members of FIFA will not be able to sell product.

Who We Are

The Australian Fertilizer Services Association was formed nearly 30 years ago by spreading contractors in Victoria and South Australia. The inaugural members of the Australian Fertilizer Services Association (AFSA) worked hard to achieve results in the early days. The association was very active in canvassing the Federal Government to maintain the Fertilizer Bounty during the 70's. The association now covers all states of Australia with approximately 250 members. Today our members not only spread fertilizer but are actively involved in marketing, agronomic advice, transport and up country storage and handling (blending etc.)

As our name depicts, we are the service sector of the fertilizer industry in this country, without our members involvement, a large percentage of the fertilizer manufactured in Australia would not reach the farm gate.

Accreditation

Seven years ago, a progressive group of members agreed that to sustain business into the future, they would need to improve their business practice of handling fertilizer. Environmental issues have become an important part of intensive farming activities, and the consumer questions the "kitchen table" food suppliers, "what has been applied to my corn flakes", "what is in my porridge" and so on. Our Association took the bit between the teeth and developed a set of guidelines for a Code of Practice to suit the service sector of the fertilizer industry. With government help, a consultant was employed to draft the guidelines and develop the Codes of Practice that we have in place today.

At the last FIFA conference in Perth we launched the Codes to our members. As we all hold voluntary positions, it became apparent that to progress, we needed more help; hence we went back to Agriculture Fishery Forestry Australia (AFFA) and asked for assistance to progress our Codes.

Through the Natural Heritage Trust, we received a substantial Grant, based on equal contributions from both parties. This allowed the Association to employ a National Liaison Officer, Emelia Sudholz. Emelia then took on the task of assessing members for their accreditation certificates in various modules. This involved assessing members prior learning and conducting workshops with open book exam sessions.

"Fert Care" Codes of Practice

Today our Codes of Practice cover the major activities of our members. Product knowledge has 2 tiers to the section. The base product knowledge Part A, covers fundamental and basic knowledge of different products. This section is aimed at the spreader driver, transport operator and depot employees. It is essential for a spreader driver to have basic product knowledge. Spreading the wrong product on a high value crop may involve the contractor in costly litigation. Likewise a transport operator should know the difference between MAP and Urea, alleviating the possibility of delivering the wrong product, very basic but crucial.

Part B, is the more advanced section, and aimed at the distribution or marketing outlet that offers clients advisory information on cropping and pasture recommendations. This section is based on the Australian Soil Fertility manual.

Part A of Product Knowledge involves a course assessing spreader drivers and transport operators. Our liaison officer conducts this course internally. We intend to outsource Accreditation in Part B.

Transport

We believe the transport segment is extremely important towards the delivery of uncontaminated fertiliser product. Why should AQIS take all necessary steps to guarantee our product reaches Australian shores in clean vessels, only to have unclean bulk carriers contaminate the product from factory to farm? Many carriers who try to operate below the standard freight rates usually employ below standard drivers and consequently, are always in a hurry to complete the job and get to the next task. Our transport operator members and a percentage of transport contractors servicing our members have been willing to participate in the transport operators' assessment course.

The transport assessment course involves drivers and operators being engaged in a four-hour workshop including an open book exam. The exam covers all the basic requirements to transport fertilizer, dry and uncontaminated. Transport operators who dump superphosphate onto bare earth dumpsites are required to ensure the site is environmentally safe. (i.e. don't dump fertilizer on a slope that will cause runoff into a waterway or stream) This practice is used extensively in the pasture areas of Australia.

Today we have 89 transport operators who have received their assessment certificates. This is a small percentage of the number involved in the industry, but it is a start.

Storage & Handling

This sector involves operators who have up-country depots and storage sheds. Today several large operators have installed blending facilities to enable a more balanced service to their client base. Many areas are being serviced by facilities erected more than 40 years ago. These older type storage sheds take a more stringent approach towards their management than the modern facility that usually consists of a bank of silos or a large complex built with concrete tilt slab construction. Recently, a local municipality in Western Victoria dealt with an application to build a depot in a small country town amongst residential properties. The municipality consulted our Codes of Practice and drew up a list of requirements from the Code. With today's competitive market and large establishment costs of modern facilities, depots will become a costly inclusion to the end price of the product to be marketed; hence the trend will move to direct on-farm delivery, on an as required basis. Currently 16 members are accredited storage operators.

"Accu Spread"

For many years most operators of spreaders accepted the manufacturers advice that the machines they purchased would spread an even pattern at about 20metres bout width. (The bout width is the distance

between runs back and forth or round and round the paddock) The association employed the Agricultural Engineering Department of Melbourne University to develop a simple test method to accurately test machine bout widths. A common agricultural coefficient of variation of 15% was selected to test machines. Various test methods had been established internationally with varying results. Some tests investigated were conducted indoors in ideal conditions. AFSA decided to test outdoors in realistic conditions.

AFSA in conjunction with Melbourne University combined the best equipment available and developed some new techniques towards the testing protocol. To complete the testing procedure, an everyday computer program was required, again the best information was imported and a very simple program was developed allowing test results to be printed out in graph format. The test procedure involves placing on flat ground, 45 500mm x 500mm x 150mm deep trays 500mm apart. Specially designed plastic inserts are clipped into the tray; this prevents the fertilizer granules bouncing out of the plastic trays on impact. A track in the middle of the tray line allows the spreading vehicle to pass over the trays spreading fertilizer. The vehicle must complete at least 4 runs over these trays before the product is collected, weighing each tray individually. The weight of the product is recorded in the computer and a graph is drawn to show the efficiency of the spread pattern.

Many machines tested could not cover the bout width they were being operated at. It became clear to the majority of members that to keep spreading costs to a minimum, a machine could be modified to achieve the desired result. In some instances, machines have been modified to such an extent that a 30metre bout width is not out of the question. Improving a machine from 24metres to 30metres increases the operators' capacity by 20%. This increase will help reduce costs to the farmer client. The AFSA registered the test procedure and registered a trademark called "Accu Spread".

Today an operator can have his machines professionally tested by an accredited tester and a certificate issued by the Melbourne University stating the machines' spreading capabilities over a range of products. Normally a machine is accredited to spread at least 3 products, as many products vary in density, varying bout widths are achieved. When a machine is accredited an appropriate window sticker is supplied to the operator giving details of the results. An operator wishing to advertise his machine's accreditation must list the registration number of the vehicle concerned. False advertising will not be allowed. Once a machine is accredited, the certificate is valid for 5 years on the condition the machine is not altered or adjusted. A mid-term check test is recommended to ensure the machine is still functioning in the approved manner. Today the association has 90 spreaders with "Accu Spread" accreditation.

Accu Spread Accreditation is only as good as the quality of the product being spread. Recently large variations in product quality in Southern Australia necessitated many machines to be retested and recalibrated, thus reduced bout widths are common, adding extra cost to the end user.

Spreading

The previous section tells all about an Accu Spread accredited machine. The machine can be very accurate but without a properly trained operator the finished job still may not be up to standard. AFSA's Codes for spreader operators covers all the aspects required allowing the operator to become professional in their operations. Dot point 4.6 of the codes is titled Sound Practice which is "the right product will always be spread in the right place at the right rate (Where "right" is agreed to by the supplier, the customer and the operator) and with minimum adverse environmental impact".

Another major issue today is farm hygiene. It is important that an operator ensures the machine is clean on, clean off, all spreading jobs. The transfer of disease in vegetable crops and the transfer of weed seeds in broad-acre areas is a major concern to farmers. To gain a certificate as an accredited operator requires the person to complete a four-hour workshop including an open book assessment. Major topics covered in the assessment are weather conditions, farm hygiene, occupational health and safety, and consideration of the environmental impact where the fertilizer is spread (don't spread too close to ends of irrigation bays or too close to free standing water). These assessments have been the most successful to date with in excess of 170 operators gaining their certificates.

The Future

As can be seen from our endeavors, the AFSA is starting to achieve results. The association believes that to become influential in the future and enforce our Codes of Practice on industry participants then the fertilizer industry in total needs a more unified and professional approach towards the service sector of the industry. It is obvious that we still have super heroes importing product, operating depots, transports and spreading machines. To eliminate the unprofessional operator, we all need to work together. AFSA is of the belief, if we don't regulate ourselves and keep control of our industry, we will have regulations forced upon us that may not be straightforward and comfortable to work with.

Today, environmental issues seem to dominate rural areas, and farms will come under increasing pressure to record every activity that takes place. The environmental issues just don't relate to water quality but also include soil management, dust and noise control. Just recently residents in a rural area complained of the incessant noise of trucks reversing into a waste dump and grape harvesters in the Sunraysia district of Victoria were stopped by police at 3:00am in the morning due to noise.

In conclusion ladies and Gentlemen, I believe if the Fertilizer Industry is to stay ahead of the environmental issues effecting the application of many products, then as an industry we need to work jointly to clean up the sections of our service chain, the transport operators that don't care, the old and unserviceable depots and the inefficient spreading machines should be removed from the industry.

The AFSA has been accrediting machines and members, but now needs support from other stakeholders in the industry to continue its work. An awareness program outlining the benefits to the end user is necessary to complete the circle. With total industry support, this would be achievable.

If a job is worth doing, it costs no more to do the job well.

Thankyou.