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REFORMING FARM JOURNALISM: THE EXPERIENCE OF *ADIKE PATHRIKE* IN INDIA

Shree Padre, Sudarshana and Robert Tripp

Abstract

Adike Pathrike is a monthly farm magazine catering to cash-crop growers in parts of Karnataka and Kerala. The magazine covers a wide range of crops (commercial and subsistence) and farm and household management themes. It is 15 years old, is self-supporting, and has established a unique niche for itself, based on a philosophy of farmer participation in the generation of information. This approach is expressed through an insistence on farmer verification of technologies described in the magazine, an adaptive and iterative approach to technology, an encouragement of farmer-to-farmer communication, and a counterbalance to government and industry promotional campaigns.

Research findings

- *Most agricultural journalism is top-down and often based on the description of techniques untested on farmers' fields.*
- *Farmers react very positively to news about new technologies seen through the eyes of their counterparts. Such reports may simply involve experience with a new technology; include significant modification and adaptation; or even recommend rejection.*
- *It is possible to move farm journalism towards involving farmers' experience, but a significant investment is required to support editorial capacity and develop farmer-journalists and collaborators.*
- *The commercial success of this example in India owes much to its readership's involvement in cash crop markets, the farmers' use of various inputs and machinery which provides an advertising base for the magazine, and the well-developed state of India's print media.*

Policy implications

- *Public research institutes and agricultural universities need to seek opportunities to put their technologies in the hands of farmers for testing, adaptation, and eventual reporting. There is much scope for the production of more imaginative farm journals and newsletters, and a more interactive approach to agricultural reporting in newspapers.*
- *Agricultural journalism should not be seen as reporting finished products but rather as fostering extended communication among farmers about their adaptation of technology.*
- *Farmers appreciate reading about the experiences of their counterparts, not only related to important production technologies but also 'minor' ideas and innovations in farm and household management that improve the quality of rural life and provide additional incentives for pursuing technological change.*

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1 INTRODUCTION

Agriculture is becoming increasingly information-intensive. At the same time, information and communication technology provides a range of sophisticated methods for enhancing communication with farmers. But much work remains to assess the effectiveness and feasibility of various communication strategies. Although electronic media are playing an ever more important role in agricultural communication, print media will surely remain an important source of agricultural information in many parts of the world for some years to come. It is important to assess the degree to which media such as newspapers and magazines can play an important role in fostering the diffusion of useful information to farmers.

This paper examines the experience of an innovative farm magazine published in India. The magazine has pioneered the idea of encouraging farmers to regard themselves as sources of material and as authors of articles, and operates with the philosophy that farmers are most interested in hearing about the experiences of their counterparts rather than the formulaic recommendations of 'experts'. This strategy reflects an assessment of the inadequacies of conventional farm journalism and the limited usefulness of many publications aimed at farm households.

The magazine is called *Adike Pathrike* (Areca Magazine). Its primary audience is those farmers who grow the areca palm (*Areca catechu L.*), the source of the areca nut (or betel nut), an important cash crop grown by smallholders in some parts of southern India. The magazine's unremarkable title and seemingly narrow subject matter conceal an imaginative approach to farm journalism and a wide scope of interest. This paper introduces the background and origins of the magazine, discusses the characteristics that distinguish it from most other farm publications (in particular its insistence on farmer reporting and verification), and examines some of the implications of the magazine's experience for farmer communication and the provision of information.

2 BACKGROUND

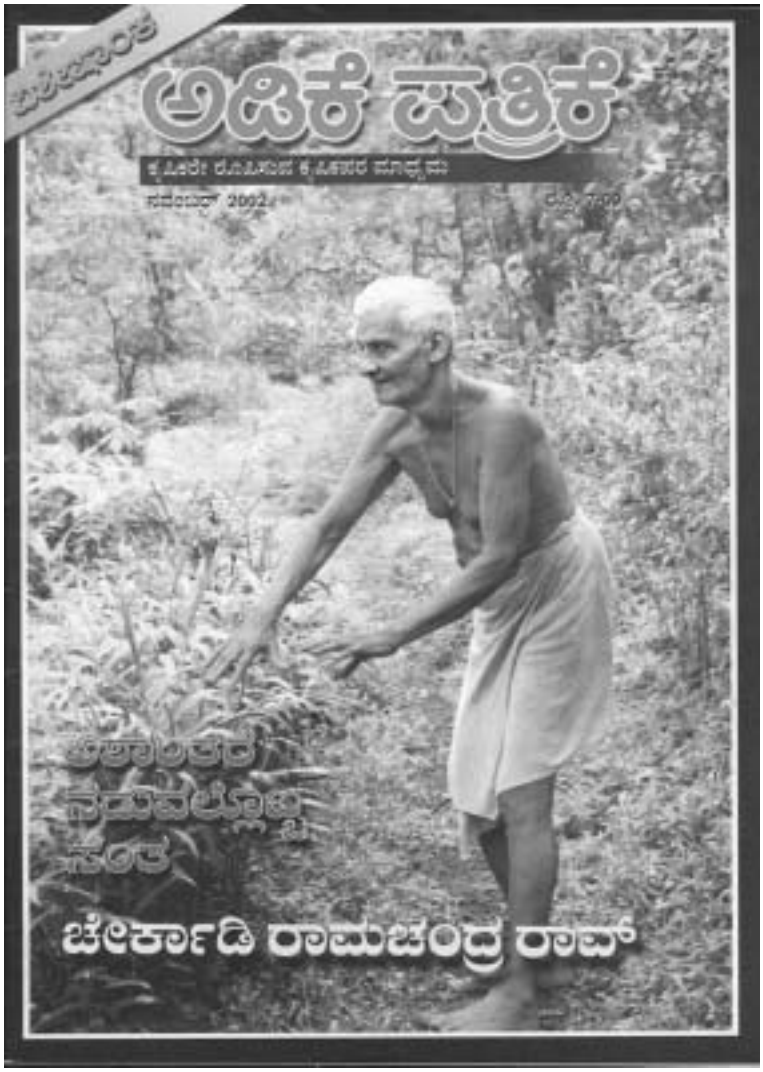
Adike Pathrike finds the majority of its readership in the medium- to heavy-rainfall districts of southern, coastal Karnataka and northern Kerala. The area is characterised by low hills and lateritic soils, making it unsuitable for the intensive rice production found in some neighbouring districts. Although farmers in the area grow small amounts of rice and other food crops, most of their efforts are devoted to cash crops, including areca, coconut, cashew, cocoa, and black pepper.

Areca is the most important of the cash crops and has been a principal feature of local cropping systems for at least a century. The areca palm can grow to a height of 20 metres. It requires well-drained soils and assured irrigation during the dry season. Once established, an areca plantation may bear fruit for 30 years or more. There are two major harvesting systems employed. In some areas, the nut is harvested at maturity (when it has turned red), dried, dehusked and sold. In other areas the unripe nuts are harvested, boiled with plant additives and dried for sale. Areca is used as a mild stimulant in a wide variety of preparations. The dried nut may simply be crushed and chewed, but by far the greater part of the production from Karnataka is sold to processors who make *paan* (a mixture of crushed areca and various spices) or *gutka* (which also includes a small amount of tobacco). A particularly popular form is known as *paan masala*, manufactured on a large scale and sold in foil packets throughout India.

Areca is grown in several other parts of India, and the market has experienced periodic fluctuations. A particularly severe drop in prices in the mid-1980s caused a crisis in Karnataka. The All-India Areca Growers' Association attempted to search for solutions. The association is based in the town of Puttur, Karnataka and, despite the name, tends to represent the interests of areca growers in this part of India rather than those from distant areca-growing areas (such as Assam), who have their own organisations. Several committees were formed through the association and Shree Padre, a local journalist (and areca grower), volunteered to produce a newsletter for growers, on an experimental basis. The first several issues of the four-page tabloid were sold for Rs.1 and, with the help of advertising revenue, managed to break even. The response to the newsletter was sufficiently positive that a decision was taken to explore a more extensive magazine.

Thus *Adike Pathrike* was born. It is a monthly magazine, typically of 28 pages (or more, depending on advertising). It is attractively produced, with a colour photograph on the cover, additional black-and-white photos and diagrams to illustrate news items, and written entirely in Kannada, the local language. *Adike*

Adike Pathrike



Pathrike sells for Rs.7 (US$0.15); in comparison, a daily newspaper costs Rs.2–3 and popular weeklies (of 50 or more pages) sell for Rs.7. The magazine is now 15 years old. It has never missed a deadline, and once a year it brings out a special, longer issue. The magazine's circulation is achieved half through subscriptions and half through sales by newsagents and booksellers. *Adike Pathrike* was the first farm magazine in Karnataka to be sold through newsagents, and even today there are only a few farm magazines in India sold in this way. The combination of the cover price and advertising revenue is sufficient to support a staff of five people (editor, manager, two office assistants and a peon). The magazine is a non-profit entity and is registered as a trust.

Although *Adike Pathrike* began as an effort of the Areca Growers' Association, the publication soon expanded to treat a wide range of crops and other rural activities. Its articles discuss management techniques for various crops, the prospects of new crop enterprises, farm machinery, farm household improvement, and even new recipes. Less than 10% of articles and discussions are related specifically to the areca crop. *Adike Pathrike* promotes discussion on a wide range of crops and crop management techniques. The editorial stance of the magazine may be described as 'pragmatically green'. It favours technologies that lower dependence on external inputs and the magazine will not accept advertising from pesticide manufacturers. However, the magazine does not impose restrictions on the types of technology discussed and is, for instance, a forum for healthy debate on topics such as the advantages and disadvantages of chemical fertiliser.

The rest of this paper concentrates on those features that distinguish *Adike Pathrike* from other agricultural magazines in India (and indeed most of the rest of the world). Perhaps the outstanding feature is an insistence that any new crop or management technique described in the magazine must be verified by farmers. The magazine is very 'science friendly' and welcomes information on new technology. However, it tries to ensure that farmers themselves write about their own experience, rather than simply passing on information from university or public research institute scientists. A second, related, feature is an iterative and adaptive approach to technology description. In many cases an initial description of an innovation or new technique by one farmer may be amended, elaborated, or challenged by other farmers' experiences in subsequent issues. A third feature, to encourage this kind of adaptation, is a promotion of farmer-to-farmer contact. *Adike Pathrike* features a question-and-answer section in which farmers share their experiences and ask for advice. In addition, each article provides the farmer-author's contact details. A fourth distinguishing feature of the magazine, related to its farmer focus, is a sceptical and investigative stance towards newly promoted crops or technologies, particularly those featured in positive terms in the conventional press.

The following section looks in detail at these four features (farmer verification, an adaptive approach to technology, farmer-to-farmer contact, and grassroots assessment of technology promotion).

3 THE STRATEGY OF FARMER-LED JOURNALISM

Farmer verification

The level of agricultural communication in print media in India is fairly high, in comparison to many other countries, but still not close to an adequate level. Agriculture is a subject of exceptionally high national importance, and many daily newspapers present stories on new agricultural technology or feature weekly sections devoted to agriculture. In addition, there are many agricultural magazines produced by state universities or government research institutes. Although government publications are dominant numerically, there is a growing number of private agricultural magazines. One of the oldest and most prominent is *Annadata*, based in Andhra Pradesh and written in Telugu, which has a very high circulation and has been functioning for more than 30 years.

Although there is a wide range of publications related to agriculture, they tend to share one feature. The articles (on new crops, varieties, or management techniques) are almost always written by scientists, professors, or industry representatives and rely on a formulaic presentation. For a new crop, for instance, there is a standard outline (botanical description, required soil type, spacing, cultivation, pests and diseases, etc.). The articles almost never discuss farmers' actual experiences. Although they usually represent scientists' sincere and honest attempts to communicate what they have learned on the experiment station (and often contain valuable information), they lack any kind of 'ground-truthing' that would make them more relevant to the farmers' own circumstances. The recommendations for input use often include quite high doses, without reference to economic returns or environmental effects; some of the articles walk a thin ethical line by recommending particular proprietary chemicals.[1]

Newspapers and magazines thus become a straightforward vehicle for delivering a scientist's recommendations, devoid of farmer experience. Scientists find a ready outlet for their articles (some of which may be recycled material from previous years) and are not challenged to think about farm-level reality or to answer questions if their recommendations fail. Scientists often send articles to publications, expecting them to be accepted without modification. Agricultural publications, for their part, are pleased to have a ready supply of material that can go out directly under the scientist's name or be quickly modified by a staff journalist. There is little opportunity for feedback to these articles and hence no possibility of establishing self-correcting mechanisms.[2]

When *Adike Pathrike* announced its editorial policy at the time of launching the full-blown magazine, it expected to receive many communications from farmers. But it was disappointed to find that the same

formulaic articles from established scientists kept arriving, and that farmers were reluctant to write about their experiences. The editor decided that a more proactive stance was required. Initially, farmers were requested to send accounts of any experiences they thought relevant to their counterparts and the magazine would help develop them further, in consultation with the writer, for publication. This attracted some additional material, but the experience was that in most cases significant follow-up was required. In the first five to six years of the magazine's operation, more than 80% of farmers' contributions required significant rewriting, editing or salvaging.

The effort required to elicit farmer writing led to the idea of organising workshops to teach basic farm journalism skills (Padre, 2001). To date, six four-day workshops (*Krishikara Kaige Lekhani*, 'handing over the pen to farmers') have been held. Most of these were given in rural communities and one was held at an agricultural university campus. The participants have included 175 farmers as well as some agricultural officers, professors and other agricultural graduates. The course syllabus is now available as a book.

The workshops have been quite successful, and several of the graduates have gone on to write articles for *Adike Pathrike* or other agricultural publications. Nevertheless, only a minority of the workshop graduates are active writers and *Adike Pathrike* still finds it challenging to produce articles and meet its deadlines. There is a core of 30 to 40 'friends' (workshop graduates) whom the magazine relies upon. If the editor hears of a potentially interesting story, one of these people may be asked to visit the farmer who has reported the innovation, to investigate and verify it, and work with the farmer to produce an article. The author is paid a small honorarium. In other cases, farmers themselves write brief communications or at least inform *Adike Pathrike* of an interesting story. The magazine receives many letters, often accompanied by photographs, from its readers. When this happens, the editor sends a brief set of questions to the farmer and on the basis of the responses puts together an article. Any significant contribution from a farmer-author is compensated with a small honorarium. No matter how the article is produced, it is always based on first-hand farmer experience rather than the repetition of textbook recommendations. Thus the majority of the items in *Adike Pathrike* are 'exclusives' for the magazine.

The example of manure management

Areca production requires adequate plant nutrition, with nitrogen and potash requirements particularly high. Farmers have traditionally managed soil fertility with farmyard manure (most farmers keep cattle) and green manure obtained from cutting nearby forest or fallow vegetation. For the past few decades the use of chemical fertiliser has become more common, and the majority of farmers purchase some fertiliser for their areca plantations.

One of *Adike Pathrike*'s contributors, a farmer with a university degree in agriculture, became concerned with the inefficiencies in traditional manure management and sought to make improvements on his farm. Most farmers apply manure to areca by periodically clearing their cattle stalls and transporting the manure in baskets to the plantation. This requires considerable labour and does not take advantage of the cattle urine that drains from the cattle shed. In addition, partial dependence on the use of green manure unnecessarily destroys nearby forest land. This particular farmer has a large areca plantation and sufficient resources to experiment with new methods. He constructed a lined holding tank near his cattle shed where manure and urine could be washed each day. He then arranged a pumping system which delivered this slurry to his plantation; flexible pipe allowed the slurry to be directed to individual trees.

The farmer wrote an article describing his experience for the November 1996 issue of *Adike Pathrike*. The article outlined the construction of the slurry management system and described the principles contributing to its efficiency. The article also discussed areca nutrient requirements and speculated on whether reliance on slurry alone, with no chemical fertiliser, would be adequate for meeting potash requirements. The article attracted attention among readers, and in 1999 another farmer wrote a short article describing his positive experience in adapting a slurry management system. Hundreds of other farmers have adapted some form of this technique.

A full-blown system for pumping slurry is beyond the resources of most areca producers. But *Adike Pathrike* emphasises principles rather than recipes, and many farmers have been able to capitalise on the ideas featured in the magazine. Most areca farmers have their houses and cattle sheds on middle ridges, while the areca gardens are in valleys. Thus they are able to arrange for some type of gravity flow to direct slurry to at least part of their garden. One farmer constructed a tank from stones and cement, with a wire mesh filter to keep out debris, and hoped to use his sprinkler irrigation system to pump the slurry to his areca garden. However the pressure was insufficient, so he rigged an alternative delivery system with PVC pipe with a flexible hose on the end. Since the areca gardens are lower than the cattle shed, he could deliver the slurry by gravity. He found he could deliver manure to about 400 trees per month using this system, treating his two-acre garden in a phased manner. He found that his production has increased from 1.5 mt to 2.25 mt, much of which he ascribes to the improved fertilisation. An article in the December 2002 issue of *Adike Pathrike* described this experience.

Other technologies

Adike Pathrike is full of reports on farmers' experiments and adaptations over a wide range of farm management problems. Not all of these are concerned with crop production. Something as simple as introducing a swivel link on the chain used to tether cattle has warranted a brief article. Recently a farmer reported that directing water through a length of black hose on the roof of

his house served as an efficient water heater. The magazine has also contained several household tips on combating houseflies (including the trick of leaving a bowl of water with detergent foam on its surface, which attracts and traps the flies).

Adaptive technology development

Adike Pathrike does not provide final answers or standard recommendations on new techniques or technologies. Instead it reports farmers' experiences and encourages experimentation and development under varying conditions. The magazine strongly believes in the wisdom and experimental capacities of farmers. Even farmers who have little formal education are innovative and knowledgeable. The magazine sees its role as providing options and pointing out the pros and cons that grass roots experience has uncovered.

Water harvesting

For the past seven years, *Adike Pathrike* has featured a monthly column about harvesting rainwater. Rainfall in the areca-growing area is concentrated in one season and water both for crop irrigation and household use is often in short supply, despite the fact that many households have access to wells or boreholes.

The subject of rainwater harvesting is an excellent example of the primacy of principles over recipes. The column provides descriptions of farmers' experiences in saving water, and many readers have been able to adapt the principles to their own situations. One important principle is the need to look for ways to recharge wells by encouraging the diversion and capture of rainwater that normally runs off the farm. This may involve a wide range of techniques, for instance ensuring that rain runoff from the roof has a chance to collect and percolate, digging infiltration pits, or taking advantage of the rainwater reception and storage capacities of termite hills.

The development of mechanical weed control

Weed control is one of the major costs of production in areca. It is usually done twice a year, by hand. One of the magazine's readers, in collaboration with a mechanic living near him, built a weeder powered by an electric motor. The electric motor was not practical, however, and they tried out a petrol motor instead. This was sufficiently successful for the farmer to begin using it on his farm. The editor of *Adike Pathrike* heard about this, visited the farm and had a demonstration, then wrote an article describing the innovation. Several farmers subsequently contacted the mechanic involved who was stimulated to make improvements to the original model (for instance, linking the motor to the wheels as well as to the blade). A second article by the editor described subsequent progress.

The mechanic has now made and sold a number of these weeders, and his contacts with farmers have led to commissions for other types of apparatus. Few farmers can afford to own a petrol-driven weeder, but one farmer rents his out, generating income for himself and lowering weeding costs for others.

Insect control

Another example of technology adaptation encouraged by the magazine involves techniques for insect control. The editor of *Adike Pathrike* read about a method for controlling fruit fly (*Dacus dorsalis*) in mango in a publication produced by Kerala University. He experimented with the technique and wrote an article about it, describing how basil leaves should be ground, mixed with water, and placed in a coconut shell along with a grain of the insecticide Furadan. The shell is hung in the mango tree. The basil attracts the flies, and when they alight they are killed by the small amount of insecticide in the mixture.

A little more than a year later a farmer wrote an unsolicited article (for which he received an honorarium) describing his experimentation with the technique on a related pest (*Dacus cucurbitae*), this time of bitter gourd. He described previous attempts at insect control (such as trying to protect the fruits with paper or plastic bags) and explained how he had adapted the basil-based method. He gave details on the placement of the husks and the frequency with which the basil-Furadan mixture needs to be replaced.

Farmer-to-farmer dialogue

The above examples show how farmers are able to follow up on items in *Adike Pathrike*, refine or adapt them, and report back. All the articles contain contact information (village, postal address, and, if available, telephone). There are many instances of readers directly contacting farmer-authors for more information, in some cases visiting their farms. Other ways in which the magazine promotes farmer-to-farmer dialogue include seed exchange activities, a question and answer column, and a forum for debate.

Seed exchange

Many of the magazine's readers are keen experimenters, interested in new or unusual crop varieties. Their interests include new varieties produced by university research as well as traditional varieties and those discovered or developed by farmers. As *Adike Pathrike* developed, a number of letters and articles appeared about farmers' experiences with particular varieties. A common reader response was an attempt to obtain some seed to test. Initially *Adike Pathrike* served as a clearing house for these requests. It would obtain seed of a described variety from a farmer, store it in the editorial office, and send out samples to interested readers who provided enough stamps to cover postage and handling. But it became too much of a burden to turn a small editorial office into a seed storage facility, so now farmers who write to describe an interesting variety that they manage on their farms also provide contact details and instructions for acquiring small amounts of the seed. An off-shoot of this is the establishment of a seed exchange group that meets once a month to describe experiences and exchange seed. The group (*Samruddhi*) is now 10 years old and has a membership of 30 to 40 farmers. It has been instrumental in the exchange of information and

planting material of many varieties of fruit, vegetables, ornamentals and medicinal plants.

Adike Pathrike tries to visit research organisations and agricultural universities when new varieties are announced. The magazine has been instrumental in helping distribute seed of new tree and vegetable varieties from Tamil Nadu University, varieties of amaranth, cowpea and tomato from Kerala Agricultural University, and has helped the Horticultural Research Institute (Tamil Nadu) test a new crop with farmers. In most cases the research organisations themselves do little to follow up their announcements of new varieties with seed distribution mechanisms, and it is only those farmers who approach the institutes who may be able to acquire seed.

Question and answer column

A particularly popular feature of each issue is the question and answer section (entitled 'Drops Make an Ocean'). Farmers write with queries and the responses are published in subsequent issues. In many instances several different responses are received, illustrating a wide range of experience from the readership. For example, a reader's question in January 1995 concerned how to control the gundybug (*Leptocorisa acuta*), a sucking pest of crops such as beans and cowpea. The March issue published five different responses. A retired university entomologist wrote to outline the life cycle of the insect and to suggest how to find and destroy its eggs by hand. Another scientist wrote to explain that in the morning hours the gundybug is inactive and can be found and destroyed. A farmer described his positive experience with spraying a mixture of onion juice and water every three or four days. Another farmer explained how an intercrop of marigolds in the vegetable garden limited damage from the pest. Perhaps the most ingenious contribution was from a farmer who described how red ants can be encouraged to attack the gundybug. If a red ant colony can be located near the garden it is possible to provide the ants with a 'highway' (a length of rope) from their home to the garden and a potential gundybug meal.

Other examples of dialogue

The exchanges published in *Adike Pathrike* may not lead to definitive answers, but they serve to alert farmers to possibilities warranting further examination. Vanilla has become an important cash crop in the area in recent years, and farmers have much to learn about its management. For instance, there is controversy over the length of cutting that is appropriate for propagation and how to manage it. A recent article reported a farmer's experiment on the direct planting of vanilla cuttings versus a potting stage. The article found the latter method superior, but other farmers have disagreed.

A counterbalance to promotional campaigns

The areca-growing area is particularly sensitive to changes in markets for cash crops, and farmers are always on the lookout for new opportunities. There are frequent instances in which either the government and/or private industry launch campaigns to promote new crops or enterprises. The campaigns often feature some type of introductory subsidy or other incentive to encourage farmers to take up a new enterprise. Not surprisingly, some of these eventually prove to be genuine opportunities and others are dismal failures. The conventional agricultural newspapers and journals generally report only the positive side of these stories, acting as a conduit for government or industry press releases and other publicity. Exaggerated production figures may be cited and risks from insects, diseases or inadequate markets may not be explored. There are few instances in which the press looks critically at the new opportunities or reports failures (save in the case of a spectacular scandal that might be judged newsworthy).

Oil palm

Adike Pathrike takes a much more even-handed view of such campaigns, and in doing so stimulates farmers to look carefully at new opportunities and compare experiences. For instance, in the mid-1990s the government began an ambitious campaign (in conjunction with private industry) to promote the cultivation of oil palm. India's demand for cooking oil exceeded its supply and the government was anxious to develop alternatives to the traditional oilseed crops. The oil palm initiative was introduced with a great fanfare and participating farmers were provided with seedlings and subsidised inputs, at least in the initial stages. A number of very positive articles appeared in the local press describing the farmers' satisfaction with the new crop (even though in most cases it had yet to bear fruit). However, *Adike Pathrike* began to receive reports of farmer dissatisfaction with the crop; the initial supports and subsidies had evaporated and participating farmers were having a hard time making ends meet as they waited for the palms to come to maturity. None of this dissatisfaction was reported in the press, so *Adike Pathrike* decided to follow up one of the 'successful' farmers who had been featured in a newspaper report. They were surprised to find he had removed most of his oil palm and was deeply in debt. The magazine published an article on this experience (and subsequently a rejoinder letter from one of the companies promoting oil palm). The oil palm enterprise in Karnataka is not a complete failure. Many farmers gave up on it, but a number went on to produce a profitable crop. But the case illustrates the fact that farmers generally have little help from the conventional press in looking objectively at new opportunities.

Tissue culture

A second example involves the growing availability of tissue culture technology in India. Although the techniques of tissue culture have been understood for some time, it is only in the past few years that the technology has become potentially accessible to the average farmer. There are now more than a dozen

commercial laboratories in Bangalore (the capital of Karnataka), offering tissue culture plantlets of species such as mango and banana. Tissue culture is a wonderful example of 'high science' in agriculture and as such receives many glowing reports in the press. However, there are few places that farmers can turn to understand the potential and the limitations of the technology. Following its strategy of providing farmers with the opportunity to describe their own experiences, *Adike Pathrike* published its first article on tissue culture in 1998, in which a farmer described his positive experience with both tissue culture mango and banana.

Another contributor had heard of several failures in tissue culture banana, and went to visit four farmers who had negative experiences. An article appeared in 1999 (accompanied by a photo of one of the disappointed farmers beside an under-producing tissue culture banana plant) and tried to explain what had gone wrong (including the possibility that the laboratories had supplied inadequate planting material). The exact nature of the failures has not been completely resolved, although one of the farmers involved has taken the tissue culture laboratory to court.

More recently, in 2002, another contributor provided a more positive experience with a fairly large experiment with tissue culture banana. Of equal importance, this article provided tips to farmers who are considering going into banana as a cash crop (including choice of variety and time of plantation establishment) and gave guidelines on the scale of planting that would justify investment in tissue culture planting material. Once again, the *Adike Pathrike* treatment of its subject offers no final answers, but allows farmers access to some 'real-life' experiences to contrast with the uniformly rosy reports appearing in the conventional press.

A loan scandal

Although *Adike Pathrike* normally looks at only the technological and economic merits of new enterprises, there also have been a few cases of investigative reporting uncovering outright fraud. One example involved local cocoa farmers being encouraged to sign up for loans through a cocoa-buying company. The company was taking advantage of the availability of farm loans and had collected the signatures of thousands of farmers. The loans were either not delivered to the farmers or arrived late, and it emerged that the company was misappropriating these funds. *Adike Pathrike* published an article on the situation and the All-India Areca Growers' Association was able to pursue the case with the government (as many of its members are also cocoa growers). This is one of the few examples of muckraking by the magazine, and the successful pursuit of the case owed more to the willingness of the growers' association to take it on than to pressure from the magazine's readership.

4 CONCLUSIONS

Although the story of *Adike Pathrike* is confined to one small corner of India, the experience of this farmer-led magazine has a number of implications for farm journalism in developing countries. This concluding section reviews the impact of *Adike Pathrike*, examines some of the factors that condition its success, reviews some of the challenges the magazine faces in its own environment, and speculates on the future of print media for agricultural development.

Impact

There is no doubt that *Adike Pathrike* is a success. It has continued publishing for 15 years and stands on its own feet financially. It has attracted a loyal readership, and a recent reader survey indicated that many farmers save and bind past issues rather than discard them. It is one of the few examples of an agricultural publication based on farmers' experiences and encouraging farmer-to-farmer contact. A number of the innovations first described in the pages of the magazine are now widely adopted among farmers in the region.

Its unique approach has been quite widely influential. There are now other publications trying to emulate the farmer-led reporting of *Adike Pathrike*, and a number of the graduates of the writers' workshops are able to publish articles in other newspapers and magazines. A recent promotional event by the government Spices Board included not only the usual presentations but also invited farmers with experience of growing the crops a chance to present and discuss their experiences. In another case, *Adike Pathrike* (in collaboration with the All-India Areca Growers' Association) was asked to organise a meeting on the subject of micro-irrigation in which not only outside 'experts' presented their findings but experienced farmers also were invited to discuss the pros and cons of various techniques. The magazine recorded the proceedings of the meeting and produced a summary publication.

Conditions for success

The *Adike Pathrike* model provides a number of fresh ideas about the content of farm publications and the importance of involving farmers in the provision and review of information. However, it is important to recognise some of the characteristics of the environment in which *Adike Pathrike* operates that may limit the direct transfer of this model to other situations.

In the first place, India is one of the few developing countries where it is relatively easy to establish a new publication of this type. The country has a rich and varied publishing tradition, and there are many newspapers and magazines, both national and local, published in a variety of languages. Even the smallest town has a news stand and often a bookseller. The relative cost of a newspaper (e.g., as a proportion of the daily agricultural wage) is one of the lowest in the developing world.[3] *Adike Pathrike* is edited and composed in a small town (Puttur) and then printed by an experienced publisher in the city of Mangalore, about 50km away. The postal system in India is sufficiently efficient to ensure the delivery of thousands

of copies of the magazine to subscribers each month, and a network of booksellers provides an additional outlet for sales.

Another conditioning factor is the type of farmer who reads *Adike Pathrike*. Although few areca growers could be described as large farmers (farm size ranges from half a hectare to two or three hectares, with a very few holdings approaching 10 hectares), the majority of the readership comprises farmers who have sufficiently profitable and diversified holdings to support viable farm households. The readers obviously have at least a minimum level of literacy, while many have completed secondary school and a considerable number have university degrees. These are also farmers who have access to a wide and growing range of communication media; many readers own television sets, for example. This is not to say that the magazine caters to the needs of the well-to-do, and many of the ideas and innovations discussed in the magazine are taken up and applied by farmers who are not regular readers but have seen or heard about the innovations from neighbours. Nevertheless, the success of a publication like *Adike Pathrike* almost certainly depends on the existence of a core of fairly well educated and economically viable farmers.

Despite the loyal support of its readership, it is doubtful if *Adike Pathrike* could survive in the absence of advertising revenue, without which the price of the magazine would have to be doubled. Although areca (and some of the other cash crops grown in the area) require relatively small amounts of external inputs (and in any case the magazine refuses to accept advertising from pesticide firms), there are many other products used by farm households that can be advertised. Areca farmers are purchasers of pumps, sprayers and motors; they are interested in a wide range of small-scale machinery and equipment, such as that used for micro-irrigation; and they have an interest in products such as organic fertiliser, seed and areca seedlings. The farming system is thus sufficiently well developed that a wide range of enterprises find it worthwhile to advertise in the magazine.

Finally, the farming system itself is supportive of a publication that provides information about new opportunities. The area is largely one of cash crop production and farmers' livelihoods are linked to markets. Farmers are interested in hearing about ways of improving their efficiency, learning about trends in markets, and obtaining insights into new enterprises. Beyond these strictly economic conditions, the farmers in the magazine's catchment area grow a wide range of fruits and vegetables for home consumption and in some cases for market, and many take an interest in experimenting with new varieties or reviving old ones. A significant proportion of the readers enjoy tinkering with equipment or machinery and are on the lookout for new ideas. Thus *Adike Pathrike* exists in an environment of fairly remunerative cash cropping, on-farm crop diversity, and a tradition of experimentation.

Limitations

Although *Adike Pathrike* is certainly a success, there are several factors limiting its further expansion. These include the status of the areca market itself, social organisation in the countryside, the stuggle to attract capable authors and emerging competition.

Adike Pathrike was born during a time of crisis in the industry in the mid-1980s. By the early 1990s the trend was reversed, areca prices were good, and areca area was expanding. The initial crisis triggered a search for solutions and encouraged people to read the early version of the newsletter. As the market recovered, an increase in farm incomes encouraged more farmers to take an interest in the new magazine. The magazine itself contributed little to the upturn in the areca market, and continues to be a valuable source of information on alternatives to areca, but its fate is in some sense linked to the incomes of local farmers. In the past few years areca prices have dipped sharply again,[4] and the consequent drop in farm incomes is certainly related to the magazine's relatively flat sales performance in the past few years.

The settlement pattern of farming communities in the areca-growing area may also impose some limitations on the success of the magazine, or other agricultural media. The nature of the farming system (carefully managed plantations combined with animal rearing) means that farm households are dispersed and there are fewer opportunities for communication among farmers than in nucleated communities. Dispersed settlement is of course typical of many farming systems, and it limits the spread of information. A magazine like *Adike Pathrike* serves an important role among its readers, and there is evidence that the magazine is lent and shared with others, but with the dispersed settlement pattern there are fewer opportunities for this than elsewhere. In addition, the dispersed settlement may contribute to a relative lack of political organisation among areca farmers. The producers' association is a modest operation and tends to mobilise only in times of exceptional need. There are currently few other modalities through which farmers might defend their interests or lobby for improvement.

Recognition of the significant innovation of supporting farmer-journalists must be tempered by an acknowledgement of the constant struggle of *Adike Pathrike* to develop material. The magazine has come a long way in establishing a reputation and stimulating correspondence from farmers. But it is rare to receive a complete, unsolicited article in the post. Most of the magazine's articles are generated through the editor and then developed by the group of farmer-journalists (who receive an honorarium for each article). The editor must be constantly on the alert for new material and contacts.

Developing this small cadre of collaborators is a significant achievement, and one which others might well attempt to emulate, but it does not overturn the observation that it is very difficult to get farmers to write about their own experiences.

Finally, there is emerging competition for *Adike Pathrike*. Two other agricultural magazines have recently started up in Karnataka. One is sponsored by an NGO and aims at farmers and farming systems in the northern part of the state; it attempts to follow some of the farmer-driven philosophy of *Adike Pathrike*. A second magazine, run by a family of agriculturalists from Mangalore and following *Adike Pathrike*'s pro-farmer approach, has started publishing. Another farm magazine in Kannada, from the publishers of *Annadata*, is also in the pipeline. A radio station in Mangalore has begun to broadcast a half-hour farm programme, using some of the philosophy (and farmer-reporters) of *Adike Pathrike*. For farmers with more resources, additional options are available. The farm magazine *Annadata* (published in Telugu in Andhra Pradesh) has branched into television and now produces a half-hour weekly agricultural programme broadcast on the local Kannada-language channel. For those with access to the internet, a new website representing the Centre for Alternative Agricultural Media (CAAM) (www.farmedia.org) has recently been established. The website is in English and attempts to be relevant to all Indian farming; it adopts a number of the principles of *Adike Pathrike* (promotion of eco-friendly technology, emphasis on principles rather than recipes, reliance on farmer-based experience).

Developing effective print media to serve farmers' interests

The experience of *Adike Pathrike* should cause reflection about the role and purpose of the print media in furthering farmers' interests and agricultural development. It points to glaring inefficiencies in technical communication, underlines the interactive nature of farm communication, and poses questions regarding the information requirements and priorities of farm households.

Adike Pathrike provides, in its own quiet way, a stunning condemnation of most farm journalism and indeed of much communication from agricultural research. It is important to remember that this example is found in India, a country with an exceptionally high commitment to agricultural research and an extensive network of agricultural universities and research institutes staffed by well-trained and committed personnel. Nevertheless, the record of communication between the experiment station and farm leaves much to be desired. Part of the success of *Adike Pathrike* is based on addressing farmers' frustration in receiving only formulaic advice, recommendations devoid of any on-farm testing, and a non-existent seed supply for the new research varieties reported in the newspapers. The case is even more serious when one realises that the *Adike Pathrike* readership must be described as 'middle class'. The magazine's clientele is not composed of illiterate farmers struggling for subsistence on marginal land, but rather well-educated, articulate, successful cash-crop growers. If they are frustrated with the relevance and quality of communication from public research, what must it be like for the vast majority of India's farmers who are less well connected and confident?

This discussion should not be construed as challenging the need for producing standard recommendations and technical literature to report research results. But the experience of *Adike Pathrike* underlines the great gap between this type of information and farm-level decision-making. Farm journalism has, by and large, seen its role as simply transmitting, or at best translating, these formal publications to farmers. The effectiveness of such information transmission is much in doubt. Farming is an adaptive, experimental, idiosyncratic endeavour, and *Adike Pathrike* has demonstrated the need for farmers to test innovations and compare experiences. Of course, farmers around the world do this, through discussions in the village or observations of neighbours' fields. Farm journalism has the opportunity to promote this type of farmer-to-farmer discussion across a much broader area, but has so far not met the challenge.

Part of the failure to meet this challenge can be blamed on unimaginative or poorly motivated journalism, but there are other factors as well. Farmers, it must be acknowledged, are often not the most communicative people. *Adike Pathrike* struggles to elicit materials and depends heavily on a small group of farmer-journalists. The system works in this case because of a spirit of communication and shared interest in the areca-growing area. Such a spirit is often lacking in farming areas and limits the possibilities for developing innovative farm journalism. In addition, it is important to ask what role agricultural research should adopt. The top-down provision of recommendations is clearly inadequate, but there should be opportunities for research to learn from the discussions that take place in the pages of a magazine such as *Adike Pathrike* and help move towards syntheses (based on principles rather than recipes) that farm journalism by itself would have difficulty managing.

Finally, the experience of *Adike Pathrike* causes reflection on the priorities of farm journalism and the type of media needed to strengthen farming communities. The emphasis is usually on technical recommendations, packages of practices and new technology. While not challenging the role of such prescriptions, *Adike Pathrike* has demonstrated a significant demand for the opportunity to share experience, to stimulate experimentation, and to take a broader view of the farm household. The magazine has featured important contributions on new crop opportunities and the latest technology. But surely an important part of its success is that these innovations are discussed alongside more mundane issues (such as controlling houseflies or providing hot water) that contribute in an important way to the quality of rural life and to the incentives for pursuing technological change.

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ENDNOTES

1 It would be incorrect to give the impression that articles in conventional farm journals do not occasionally stimulate farmer experimentation and adaptation. See Tripp and Ali (2001:10) for a description of how a farmer in Andhra Pradesh read a report in *Annadata* regarding a local experiment station's work with a virus to control pod borer. He visited the station, learned the principles, and developed his own techniques for collecting and maintaining the virus. His success was further refined by several other villagers, one of whom established a small commercial operation for virus production.

2 The press tends to play an uncritical role reporting science throughout the world. Compare the following observations about the behaviour of the US media in science reporting: 'News of progress in science, even if incomprehensible to laypeople, serves the politics of science, and, accordingly, good news of science gushes forth, and is uncritically amplified by a compliant press, with contrite correctives when the gap between hope and reality can no longer be ignored' (Greenberg, 2001: 219).

3 Whilst a daily newspaper costs approximately 5% of the average agricultural daily wage in India (and Sri Lanka, Honduras and Mexico), the ratio is 15% in Bangladesh and Ghana, 33% in Zambia, and 50% or more in Kenya, Malawi and Uganda.

4 The reasons for the recent drop in areca prices are complex, but among the explanations are political and economic problems in the principal domestic (Gujarat) and export (Pakistan) markets; bans imposed by several Indian states on the sale of *paan*; and imports (or rumours of imports) of areca from Indonesia and the Philippines.

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