Three seasons ago it was tried by about a dozen farmers; two seasons ago by more than 150, and this season by more than 500. This rapid progress has been due almost entirely to the recommendation made by one farmer to another, or by seedsmen to farmers. The process has not been advertised.

Properly conducted, the electrification of seed never fails to produce an increase in a crop of corn. In every one of the few cases in which this result has not been produced, it has been found that some mistake has been made in the process.

The increase in yield varies from four bushels to twenty or more bushels per acre; the average of a considerable number of trials is about ten bushels, or about 30 per cent.

Every kind of seed requires its own peculiar treatment, and this treatment has been completely ascertained only for cereal crops. Large quantities of electrified root seeds have, however, been sown this season.

The cost of electrification is small; the process is simple, and adds nothing to the labour of the farmer, to the implements for operation on the farm, or to his capital outlay, unless he chooses to electrify the seed for himself. Numerous pairs of specimens grown from electrified and unelectrified seed of the same kind in the same field were shown.

THE VALUE OF LUPINS IN THE CULTIVATION OF POOR, LIGHT LAND.*

Lupins grow with remarkable luxuriance on very light land, poor in lime. At the present time, owing to economic conditions, there is grave danger that considerable areas of this type of land will go out of cultivation. It would appear that an extended growth of lupins offers one of the simplest methods of rendering economically possible the cultivation of this land, and possibly of reclaiming what is already derelict.

Owing to their deep-rooting habit, and their powers of assimilating the free nitrogen of the air, lupins greatly enrich the soil, and whether ploughed in green, folded with sheep, or harvested for seed, leave a considerable quantity of residue upon the ground, which is of great value to the succeeding crop. Very heavy crops of rye are being grown this year after lupins, on land actually adjoining the heath.

When folding, care must be taken not to allow the sheep to eat too much or they will suffer from paralysis owing to lupin poisoning. Suffolk flock-masters fold their sheep on lupins with confidence, and do not regard the risk as serious. Sheep take some time to get accustomed to the bitter flavour of lupins, but thrive remarkably well once they have become used to them. They cannot live satisfactorily on lupins alone, but must have access to other food.

There is often some difficulty in disposing of lupin seed, owing to the fact that it contains some poisonous substance, and is very bitter. In Suffolk lupin grain is fed to sheep at a rate not exceeding half-a-bushel per day per 100 sheep, and the feeding must commence gradually. If too much is fed the sheep become paralysed. It is claimed in Holland that a method has been discovered whereby the poisonous principle can be extracted, and the grain rendered fit for stock-feeding purposes. If this could be done it would give a great stimulus to lupin-growing, and would be a considerable advantage to light-land farmers, as lupins might then occupy the same place on light land as is occupied by beans on heavy land.

* Abstract of a paper read before the Agricultural Section of the British Association by A. W. Oldershaw, M.B.E., B.Sc.

ADVERTISING METHODS IN CHINA.

The population in China is variously computed at from 325,000,000 to 400,000,000, and competent observers have estimated the literacy of the Chinese people to be about 10 per cent. At first glance one is inclined to conclude that there is a large percentage of the whole who cannot be reached through the printed advertisement, but experience has shown that eventually the appeals made in this form of advertising have reached the masses in cases where there was a potential demand and the appeal was strongly put.

According to an interesting report on advertising methods in China sent to the United States Department of Commerce by its Trade Commissioner in China, that country has been, and still is, an unexploited field in many lines of business; and trade has followed the lines of least resistance. The most spectacular advertising campaigns have been made to the masses, and the success of the campaigns for introducing kerosene, cigarettes, and the patent medicine "Jin Tan," are striking illustrations of the efficacy of advertising of this class. In the first case the selling campaign was connected with a real need; in the second it was an appeal to a habit; and in the third to the longing of the physically unfit for health.

On the other hand, these successes must not lead to the conclusion that there is no sale in China for the higher-priced articles. The popular opinion seems to be that China is a country of slow, patient, and industrious, but always poor people. There is, however, a large class of buyers in China who can afford to buy anything they consider necessary to their comfort, as well as many of the luxuries of life.

In China advertising is not organised as it is in Western countries, nor as it is in Japan. The difficulties that the advertiser will meet in starting an advertising campaign are many and annoying to the business man who demands results; nevertheless, a start has been made towards organising on broad and sound lines. The advertising value of the newspaper, poster, calendar, or any other medium, depends entirely upon the class of commodity advertised and the class of buyers it is desired to reach, so the rotation in which the

following list of mediums appear must not be taken as an indication of their relative values in an advertising campaign.

Chinese Press.—There are thousands of newspapers in China, born of temporary needs, political and otherwise, and the early mortality among these papers is large. There are a few that survive the first maladies and have reached a position of comparative financial independence. Their managers have established connections with advertisers, both local and national, which reflect credit on their publications. An agency in Shanghai has a list of about two hundred newspapers published throughout China with which it has established satisfactory business connections. It is reasonably safe to do business with these publications, according to the factors of safety recognised in China; but the widely-known advertiser in Great Britain or the United States will have difficulty in establishing credit with the managers (when he finds out who they are), as the only means the Chinese manager has of learning who is reliable among the foreign firms is by experience, and some of his experiences with foreigners have been most unsatisfactory. The only means of reaching these newspapers, outside of a slow process of building up a reputation with them, is to employ a reputable agency as go-between.

The Chinese newspaper has essentially a class circulation as compared with the popular newspaper in this country. The average circulation of all the more reliable newspapers in China will not exceed three thousand, but this circulation will be in the first instance to a class with a particularly high purchasing capacity. After the first reader finishes with his paper it is passed on to his friends, who often read it aloud to relatives who cannot read. In China there is an almost superstitious reverence for the printed or written word, and a newspaper is often read to shreds. When it is finished as a newspaper it enters on its career as wrapping paper, and the more familiar characters are read by the partly literate.

Hoardings.—In the principal cities, and especially in the Treaty Ports, individuals and companies of English, French, Chinese and Japanese nationality have erected hoardings which are let to advertisers in much the same way as in this country; but there is no way of arranging for an extensive hoarding campaign, as the various companies have not come together in an organisation. There are also concessions for advertising at the railway stations. The concessions on the railway lines running from Mukden in Manchuria to Peking, and from Peking north to Kalgan, are leased to an English advertising agency in Tientsin, and those on all the other Government railways are let to a French company in Shanghai. Boards are erected at each important station, and comprise a valuable addition to the advertising plant in China. A British-American company has erected hundreds of boards throughout China at cross-roads, along canals, and at other points where traffic is heavy, but these are for their own use and are not available to the general advertising public. The Japanese company selling "Jin Tan" has made the most effective use of privately-owned hoardings, and through this medium, and by hanging its advertisements in front of stores where the medicine is sold, and the use of show cards inside, it has made General Jin Tan the best known advertised character in China.

The practice of sniping, or putting posters on dead walls and unauthorised places, is general throughout China, and some of the most successful advertisers have made this practice the hub of their campaigns. Practically every national advertiser uses it to some extent, as it is cheap and effective, especially in conjunction with folder distribution and house-to-house canvassing. The principal drawback is the liability of having the posters destroyed by the village rowdies, but this can often be obviated by an arrangement with the local police or the leader of the rowdies. A cheap paper, partly glazed on one side, was obtainable from Europe before the war, but the higher prices now ruling do not seem to have lessened the use of this form of advertising to any apparent extent.

Chinese Weekly and Monthly Publications.—There are many weekly and monthly Chinese publications, some of which are most effective in reaching certain classes. A woman's magazine published in Shanghai has a considerable circulation among Chinese women, and corresponds to such magazines in America. The same company has five other weekly and monthly publications which go to a class of subscribers of a high purchasing capacity. A study of these periodicals and of the many publications that circulate among other classes of Chinese, will well reward the advertiser who is planning a campaign in China. The missionaries also must not be omitted in considering advertising possibilities, as they have a more than ordinary knowledge of the use and value of Western manufactures.

Use of Postal Facilities.—Department stores and drug companies have made good use of the postal facilities available in presenting their wares to the Chinese. An arrangement can be made with the Chinese Post Office Department for the delivery of a circular or other light advertising matter with each letter. This is generally done by covering small districts, but it has been done in a large way at a surprisingly small cost to the advertiser, and with good results. There are several very large and well-classified mailing lists owned by foreign firms, but only one of these is available to the general advertiser. This has approximately 200,000 names classified by districts or by occupation, and there is one particularly good list that covers a considerable part of the dealers in drugs in China. One feature of the Post Office regulations that is probably peculiar to China, is the custom of delivering postal matter to the house whether the addressee has moved or not. This is not so serious as it would seem, as the

Chinese seldom abandon the place of their birth, and if they do, some one of similar social standing moves in.

Calendars.—The use of calendars is one of the most favoured forms of advertising in China, as the calendar is a most important thing in the life of every Chinese. He regulates his life by the sun, moon, and stars, and never enters upon an important negotiation or journey without a careful consideration of omens and signs. Most advertisers issue a calendar, and some who never advertise in any other way put out the most elaborate designs. They are highly treasured by the recipients, and a regular trade in them is maintained. When the calendars are issued there is a general rush for them by merchants, clerks, and coolies, who turn them over to the dealers for a consideration; but, as a rule, there is only a half-hearted attempt on the part of business houses to get these calendars into proper hands, as the best an advertiser can wish for is that his advertisement will be bought and paid for. There can be seen in the Chinese cities displays of dealers in calendars on walls and in alleys where the dealers do a good business at profitable prices. One calendar issued by an insurance company in Shanghai, and costing a little over one dollar Mexican (2*s.*), sold for 2·50 dollars Mexican (5*s.*) in the shops, and was in good demand at that. As in all advertising to the Chinese, the greatest care should be taken in design and wording.

House-to-House Distribution.—Folders, booklets, samples, and other advertising matter are often distributed not only in the cities but in the country towns. Rather than house-to-house, this is more appropriately called shop-to-shop distribution. It is expensive, unless done in a large way, and in close connection with a sales campaign. An advertising agency has worked out a plan for such distribution in Tientsin, whereby the shop receipt for the advertising matter is placed in a book with his company stamp or chop. While this system is slower than the usual one, it is more impressive with the Chinese and provides absolute proof of distribution.

Window Display and Stock Arrangement.—The British-American Tobacco Company has pioneered many of the problems of advertising in China, and one of the most remarkable of its means of reaching the public is the way it has trained the dealers to arrange their stock neatly and to make attractive window displays. Before the war the German manufacturers of a dentifrice did some good work in the direction of window display. Naturally this development has been under the direct supervision of foreigners, and if it is to assume any proportions, involves a large staff, which only concerns like the tobacco, drug, and oil companies have available.

Foreign Press.—The subject of the foreign press has been reserved for the last in order to leave a vivid impression of its importance. The value of the foreign press as an advertising medium for the rank-and-file of the Chinese public depends largely upon the enormous influence the missionaries exercise in the land. Each one is the centre from which Western civilisation radiates. If the Chinaman does not respect the missionary's religion he does respect his clean and self-sacrificing life, and the missionary, generally, is among the most highly placed men in his district. He is usually the personal friend of the Taotai (the high district official), and his position as an educator or physician places him high in the social scale. Outside of Treaty Ports the missionaries constitute the most considerable number of subscribers to the foreign press. The local English-reading Chinese call and ask to see the papers giving news that never reaches them through the native press. Practically all the higher officials in Peking, and in the Province, have translations made from the foreign press, and the rapidly growing number of English-speaking Chinese throughout the land occasionally look over these papers and are often more interested in the advertisements of Western manufactures than in the news columns.

CORRESPONDENCE.

"AVIATION AS AFFECTING INDIA."

I read with considerable interest the paper by Brigadier-General Lord Montagu of Beaulieu on the above subject published in the *Journal* of July 11th of this year, mainly because I am at present engaged on Major-General Sir W. Salmond's enterprise of establishing the aerial route between Cairo and India.

Last month (acting in command of a Handley-Page squadron) I had the honour of flying with the first organised unit from France to Cairo—ten machines in all. The total flying time of each machine roughly averaged forty-five hours. The course which had previously been decided for us was no doubt rather "round about," but suited the performance of the machines, and an aerial route of the future should prove to be of great commercial value owing to the fact that it links up most of the capital and important towns of Southern Europe. I will state in sequence the places at which one or more of the machines landed. The stages were roughly worked out so that we did approximately 300 miles per day:—

1. Lille	—	Provin	Aerodrome.
2. Paris	—	Buc	,,
3. Lyons	—	Bron	,,
4. Marseilles	—	Istres	,,
5. Nice		Nice	,,
6. Pisa	—	San Giust	,,
7. Rome	—	Centocelli	,,
8. Capua	—	Capua	,,
9. Foggia	—	Foggia	,,
10. Taranto	—	Pizione	,,
11. Valona	—	Piedmont	,,
12. Athens	—	Dekelia	,,