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REPORT ON MEETING OF THE AMERICAN FORESTRY ASSOCIATION
AT NEW ORLEANS, LOUISIANA; OCTOBER 1972.

Northern Forest Research Centre
Environment Canada
Edmonton

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by F. Endean

INTRODUCTION

The writer was asked to attend the 97th Annual Meeting of A.F.A. in New Orleans as a representative of the Canadian Forestry Service.

The object of the conference was to draw together all organisations in the U.S.A. concerned with reforestation and tree planting to:- "co-ordinate and facilitate the actions of people, industry and government in mobilising for a tree planting drive". (See attachment 1) The conference programme (attachment 2) illustrates the cross section of interests represented. Attachment 3 can be regarded as the platform of the American Forestry Association which in essence is a pressure group.

THE CONFERENCE

Opening day October 23rd

The morning was devoted entirely to ceremony ending with the keynote address by the Honorable Russell E. Train, Chairman, President's Council of Environmental Quality entitled "Trees for a better environment" (attachment 4). This was a fairly standard but optimistic statement based on the premise of limited industrial growth as described by 'The Club of Rome' and the need for changed objectives for this limited growth.

The afternoon was used for very generalised presentations introduced by a very practical speech from Charles A. Connaughton, President of the Association.

J.L. Fisher spoke on the subject of future forest requirements in the U.S.A. relating these to reforestation efforts and using the standard type of statistics.

Mrs. Kermit V. Haugan, President General Federation of Women's Clubs spoke at length on the efforts of women's clubs in conservation and tree planting in the last fifty years.

Mr. Thomas L. Kimball, Executive Vice President, The National Wildlife Federation, gave one of the most forceful speeches of the conference with some positive suggestions for what could be done (attachment 5 'Recreation and Wildlife in Tree Planting'). He said that there was no lack of will on the part of the planting agencies, merely a lack of funds for non fibre production planting. Mr. Kimball drew attention to the large area of forest land (300 million out of 750 million acres +) in the hands of "small, non industrial" private woodland owners and the need for government aid to such owners for rehabilitation work. He also suggested that assistance with public funds might be linked to public access; an idea which is becoming increasingly popular in Europe.

Mr. Kimball deplored the large areas of fibre productive monoculture which he described as ecological deserts of little value as wildlife habitat. He contrasted these to the small areas planted to non fibre producing species and stressed the need for a greater variety of species planted as edgings for wildlife forage.

The rest of the paper was concerned with the domestic politics in handling the funds devoted to reforestation and environmental improvement, and how these should be changed. Mr Kimball's paper among other things emphasised the multitude of agencies with a finger in the reforestation "pie". One could not escape the impression that most of these were talking and agitating rather than "doing".

Mr. Kimball was followed by Mr. John R. McQuire, Chief of Forest Service, U.S. Department of Agriculture. "Tree Planting Gains and Goals in the U.S." (attachment 6) Mr. McQuire's emphasis was largely on wood production and consumption, the backlog of reforestation which remained to be done, the increasing removal from production of recreational land and again the lethargy of the small woodlot owner. The latter category (not represented at the conference) seemed to be singled out as one of the 'villains' in the reforestation field, as the conference developed.

Tuesday October 24th

The session was opened by Mr. Voit Gilmore, Vice President, American Forestry Association, who introduced speakers.

He was followed by Dr. Bruce J. Zobel, Professor of Forest Genetics, North Carolina State University ('The Search for Supertrees', attachment 7) Dr. Zobel gave a popularised account of the role of tree breeding in current reforestation programmes. He quoted improvements in growth of 10 to 20% with accompanying improvement in quality in Southern pines as a result of breeding research and development. One point of interest was development of breeding programmes to produce trees capable of surviving in areas of a high level of air pollution. Dr. Zobel indicated that there was considerable genetic variability in resistance to fumes, and therefore a natural resistance which could be enhanced. He also added that it was most difficult to obtain funds for this work.

Mr. John A. Beale, Deputy Secretary, Wisconsin Department of Natural Resources talked about "Growing the Seedlings" (attachment 8). This speech dealt mainly with the ability of U.S. private and governmental production facilities to meet the tree planting target of 75 million acres in the 70's set by the A.F.A. (See attachment 9) (How this goal was set and on what authority or basis of fact was never quite clear throughout the conference.) Mr. Beale came to the conclusion that the target would not be achieved unless extra funds were made available for expansion. It was interesting to note that Mr. Beale placed great faith in increased production of container seedlings - two years ago no one in the U.S. regarded container seedlings with much favour.

The next speaker Mr. Harry E. Murphy, President Resource Operations Inc., Birmingham Alabama, gave a slide presentation on "Getting them in the ground". (attachment 10) This was a contribution from the Association of Consulting Foresters, it was generalised but interesting. Mr. Murphy emphasised that tree planting in the last 30 - 40 years had been a "healing" process to repair the damage of industrial exploitation and the thoughts of the 30's. He emphasised however, that these plantings have had enormous side benefits in terms of recreation and improvement in environmental quality. Mr. Murphy illustrated methods of site preparation on the bulk of reforestable land which he classified as 'scrub brush land'. He emphasised the use of drum choppers, pulled by crawler tractors with shearing blades and the value of offset harrows as a final preparation. He contrasted these methods, possible in the flat terrain of the south to the more difficult coastal conditions with steep slopes.

The most interesting speech of the day was that of Mr. W.F. Mann (Jr.) Principal Silviculturist, Southern Forest Experimental Station, "New Visions in Reforestation". (attachment 11) Again in a highly popularised form Mr. Mann suggested the means by which reforestation will be done in the 70's. His paper was heavily biased to Southern experience eg: natural regeneration for poorer sites and special use areas only and most of his emphasis was on the automation of planting and improvements in direct seeding. He spent a good deal of time discussing container planting and it is obvious from discussions with Mr. Mann and others that this system is now a "goer" in the southern states. Mr. Mann was not enthusiastic about the "plug" type of seeding now coming into general use in Canada since he feels they are not cohesive enough to withstand mechanisation. He seems to place most of his "bets" on the Japanese paper pot seedling with possibilities for the BR8 fibre block.

Mr. Mann's remarks on seeding suggest that no further progress has been made with a better repellent coating than the endrin, thiram mixture. (Radvanyi suggests that this depresses germination in our species.) Unfortunately Mr. Mann would not elaborate on the subject of row seeding from the air.

At this point, thanks to the generosity of Mr. F.A. Prince, Private Forester, and arrangements made by Mr. Mann, an opportunity arose to visit the Southern Forest Experimental Station at Pineville, Louisiana. Since the proceedings of the afternoon of the 24th and the morning of the 25th were of a popular nature it was decided to spend the rest of Tuesday and Wednesday visiting Pineville, returning to New Orleans on the night of the 25th.

Papers from sessions of the 24th and 25th are attached. (12-15)
The presentation by Mr. R.M. Monnemacher is interesting since it actually draws attention to the multitude of agencies in the reforestation field.

Visit to Southern Forest Experimental Station
Pineville, Louisiana 24th - 25th October

The research station is one of several outliers of the Southern Forest Research Establishment which has its headquarters in New Orleans. The facilities are state owned and shared with the state forest service and the "public and private" section of the U.S. Forest Service. There are about 10 federal research offices based at Pineville.

It was obvious from conversations at the conference that industry in the southern forest region sees great benefit in the container planting system as a means to the total mechanisation of planting. Container planting is not attractive on a straight cost comparison with bare root stock since the latter can be produced for \$8.00 per thousand. The U.S. Forest Service in the southern region has embarked on container planting trials as an urgent research project headed by Mr. Mann, but at present only 0.5 man years of professional research trial has been committed officially. Dr. J. Barnett is responsible for this. (The U.S. Forest Service is also restricted by frozen budgets for operations and staff). Dr. Barnett very kindly devoted the 25th to discussing container planting and taking us around the experimental areas.

BACKGROUND INFORMATION

Pulpwood rotation in Louisiana is 25-30 years with a yield of 25 - 30 cords/acre, no thinning is done in pulp wood stands and clear felling has been the rule up to now. Loblolly pine (P. taeda Linn) is the species most planted now in preference to slash pine (P. echinata Mill) and long leaf pine (P. palustris Mill). The latter two species have a "grass stage" which is a period of shoot growth stagnation of 2-3 years after planting. This lengthens the rotation and predisposes the seedlings to a 'leaf blight'.

A considerable amount of direct seeding has been done in the south in the past but the random distribution of stems is a disadvantage to mechanised logging. Machine planting is now generally used where terrain allows it. (Hand planting is now too expensive.) Site preparation is intensive, using drum choppers drawn by crawler tractors with a shearing bulldozer blade. The ground is then often disced with offset harrows. Costs of \$100.00 per acre are normal. Many workers feel that this degree of site preparation is unnecessary and intensive research is now being done on adequate levels of site preparation.

Despite the warm, humid climate, grass/herb competition is not a problem in plantations, overtopping by woody regrowth is more serious and methods of control are being investigated.

JOHNSON TRACT EXPERIMENTAL FOREST

Container planting research in Louisiana is at the stage of field trials of a narrow range of possible container types. In choosing the types most suitable for their purpose the Forest Service has leaned heavily on Canadian experience (especially that in B.C.). By doing this they have avoided the major pitfall of rigid, non-destructable containers of inadequate rooting volume which delayed progress in Canada for so long.

The container types on trial are:-

R.C.A. "Sausage"

B.C./ CFS styroblock plug

BR8 pressed fibre block

Japanese paper pot (1" x 6")

Conwed (1" x 5-6")

Spencer - Lemaire container

Bio-degradable plastic container produced by Union Carbide Co.

Growth in these containers is all being compared with that of bare root stock and is equally as good in terms of relative growth rate. For example 8 week old stock planted out as B.C./CFS plugs in August 1971 was 18 inches tall when seen in October 1972. Rearing is done in greenhouses and is an adaptation of Canadian methods, hardening before planting is seen as a possible problem but no work has been done on this so far.

As far as could be seen there are few problems involved in container planting in the south, the growing season is long and moisture generally adequate. Termites and climate are significant aids to the degradation of paper and biodegradable containers. The Forest Service does not see a trial period of more than 2-3 years before they decide upon a container suitable for mechanisation and then start to concentrate on methods of full mechanisation of the planting operation.

U.S. Forest Service Nursery Shreveport Highway

This nursery has two large plastic greenhouses with fully automated environmental control and irrigation systems as described in attachment 16. This automated equipment is well worth close examination for use in Canada.

October 26th

Field Trip to Bogalusa area and U.S.D.A. Forest Service Experimental Station
at Gulfport

The details and route of this field trip are described in attachment 17.

Because of the wide range of interest and depth among the participants in the field trip, little of technical interest was seen.

Stop 1 - Crown Zellerbach Forest - Bogalusa

A prepared demonstration of site preparation with drum choppers and broadcast burned area. The hardwood scrub brush being cleared is a good deal less difficult than the debris encountered in the Boreal forests of Canada.

A demonstration of machine planting was also seen using a single furrow planter pulled by a tractor of D4 size. The transplants were long and slender with remarkably little root development. Such seedlings would be inadequate for Boreal conditions and are a good indication of the ease of establishment in this climate.

A demonstration of mechanical logging using mechanical shears and knuckle - boom loaders was also seen.

Stop 2 - Crown Zellerbach tree improvement centre

This was a popularised demonstration of the benefits of tree breeding and people were allowed to walk around the tree orchard areas.

Stop 3 - U.S.D.A. Harrison Experimental Forest - Gulfport

The exhibits are described in attachment 17, the field trip was ended very early because of heavy rain.

The end of the field trip marked the end of the conference.

EXHIBITS OF INTEREST AT THE CONFERENCE

1. Tri state mill supply company (Attachments 18 and 19)

As stated earlier, container planting has now "caught on" in the southern states and several companies are actively selling systems and equipment for this type of rearing and planting.

The Tri State system is based upon the B.C./JFS styroblock and they have developed a variant of the "upright" planting dibble.

2. Master Grower Sales and Systems Inc. Atlanta (Attachments 20-24)

This firm originally specialised in horticultural equipment but have now moved into the container rearing field. This automated rearing equipment, especially the ratio feeder (attachment 24) is well worth examination for use in Canada.

3. Keyes Fibre Company (Attachment 25)

The pots and rooting blocks illustrated in attachment 25 are well known and although satisfactory are too expensive for bulk seedling rearing. What is more interesting is that Keyes have used the same material to make what they call a "peat stick" which is a cylinder of compressed peat. This when wetted seems well aerated and has a more open texture than the R.C.A. extruded peat. This material is worth testing as a premoulded filler for styroblocks and Spencer-Lemaire containers.

4. Agritec Co. - Houston Texas (Attachment 26)

The Agritec No. 46 Tree Seedling Container is a foam sponge formed into blocks with a recess at the top to hold seed. The sponge is allegedly designed to retain nitrogen. Polyurethane sponges were tested as rooting media in western Canada in 1968 and although survival was poor due to rapid drying, the survivors showed better growth than any other container tested. The Agritec No. 46 would be worth testing as a filler for Spencer-Lemaire containers.

5. Marden Manufacturing Co. (Attachments 27 and 28)

This company manufactures a range of drum choppers of a type already in use in Alberta and Manitoba. The costs given in attachment 28 might be of interest.

6. Taylor Reforestation Equipment (Attachments 28-30)

Attachments 28-30 give a good idea of the mechanical equipment in use in reforestation in the southern States. The planting machines do not appear to be robust enough for Boreal conditions where site preparation is considerably less intensive. The Taylor fire line plough Model 60 might be worth consideration for Boreal sites where heavy weed growth is a problem and where this type of preparation has been shown to be beneficial.

7. Popular literature on Conservation

Samples of literature on conservation are enclosed. They illustrate very clearly the emphasis which is being placed on the environmental quality aspects of land management. It is also clear that whilst there is a good deal of pressure being generated there are very few agencies outside the government which are actually doing something.

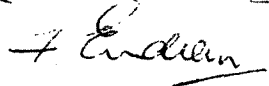
The brochure entitled 'New Forests for Wildlife' - "How even aged forest management benefits the sportsman" is worth consideration. A similar production from the CFS would be very timely.

CONCLUSIONS FROM THE CONFERENCE

1. The object of the conference was "to co-ordinate and facilitate the actions of people, industry and the government in mobilising for a tree planting drive".

It is doubtful if this objective was achieved since all the time was devoted to public relations and information and none to sub-committee work. Attendance was relatively poor.

2. The target for tree planting prescribed by the A.F.A. is idealistic and bears no relationship to the facilities or funds available.
3. The conference "fell between two stools". It was popularised to a degree where it was not informative to people in the forestry business whilst leaving a layman mesmerised by the complexity of the problem.
4. There is no doubt that a new attitude towards land management is strongly held at both professional and public levels. This attitude is a willingness to sacrifice efficiency and productivity in the wood using industry for more altruistic benefits. It is obvious from the speeches that these attitudes have affected political thinking but not that of industry.
5. The large number of organisations which are exerting pressure in the reforestation field is unmanageable. The lesson for Canada is to avoid this at all costs, by publicising national reforestation attitudes, by educating the public in forest management and by ensuring that reforestation is seen to be done.


F. Endean
November 1972