

WILDLIFE SESSION

THE SOUTHEASTERN FARM GAME MANAGEMENT IMPROVEMENT PROGRAM

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This paper is a compilation of information received from all of the states in the Southeastern Region. A questionnaire (Appendix 1) was prepared and sent to each state with a request that it be filled out by the farm game habitat improvement project leader and returned. It should be pointed out that this paper deals particularly with Federal Aid projects.

The writer is indebted to all persons who have cooperated by filling out and returning the questionnaires.

Each state in the Southeastern Region has an active Federal Aid program dealing with farm game habitat improvement. Current Federal Aid projects were initiated in Alabama, Arkansas, and Louisiana in 1942, in Georgia in 1944, in North Carolina in 1946, in Florida and South Carolina in 1947, in Kentucky, Mississippi and Virginia in 1948, and in Tennessee in 1949. Five states reported having had earlier habitat improvement programs, but generally considered them unsuccessful from the standpoint of economically accomplishing the desired results.

The projects in all of the states are similar in many respects since each state distributes planting materials free of charge to cooperators, and works with agricultural agencies to some degree. The major differences in projects are the plant species being used, methods of obtaining planting materials, and the procedures followed in creating and fulfilling the demand for planting materials.

Appendices 2 - 7 show the amount of money spent on habitat improvement projects by state, planting materials being used by each state, and the distribution figures for all planting materials being used by three or more states. No figures are given concerning the number of farms on which habitat improvement is being done because of insufficient data.

There has been some question in the Southeastern Region concerning the use of multiflora rose. Seven states are recommending its use even though only four are making distribution of plants. This species is being studied by several states for wildlife value and spreading tendencies.

All projects include some habitat development work on areas controlled by Game and Fish personnel, but none limit activities to such areas. If we are to improve habitat for farm game, the logical approach would be to work on farms with farmers, and that is precisely what every project is doing. An individual must own a farm or live on a farm before he can obtain planting materials in three of the eleven states. Project personnel in six states make a practice of assisting the farmer in planting materials, but this activity seems to be somewhat limited as a result of conflicting duties and insufficient time and money. No fertilizer has been distributed by any of the projects since 1946.

Eight of the eleven states require applications from individuals desiring planting materials before distribution of these materials can be made. Of these eight states, four will accept requests for materials only through agricultural agencies

while the other four will accept applications through agricultural agencies, sportsmen's clubs, or directly from individuals. Every state in the Southeastern Region is cooperating with the Soil Conservation Service and making distribution of materials through Districts to cooperators. Nine states work with the Agricultural Extension Service and eight states cooperate with the Department of Vocational Agriculture. With one exception, all states are emphasizing the use of planting materials by youth groups.

There appears to be a reluctance on the part of the projects to cooperate with the sportsmen's organizations in the distribution of materials. Seven states will not make distribution to clubs unless some other agency is involved, and eight will not distribute a quantity of materials to a club and allow it to make final distribution to farmers.

One of the major problems confronted by the states has been that of obtaining the desired planting materials in sufficient quantities to fulfill the demand. As a result of past difficulties, all states except Georgia have developed nurseries, operated by Game and Fish personnel, that can produce materials needed by the project. Bicolor, partridge pea, multiflora rose, thunbergii, mulberry, false indigo and Siberian peatree are the plants being raised by these nurseries.

Even with project-operated nurseries, all states with the exception of South Carolina obtain planting materials from other sources. Six states procure materials from Soil Conservation District nurseries or from other farmer-operated nurseries; three from other state Game and Fish departments; four from the Soil Conservation Service (Federal); four from commercial nurseries, and three from other sources. Bicolor, sericea, and multiflora are the species generally obtained from these sources. Farmer-operated nurseries have played an important role in many of the state's activities; however, there are some disadvantages. Production of plants is often limited as result of insufficient soil moisture during critical periods (which could be corrected by irrigation) or by lack of cultivation resulting from labor shortages. These shortages of labor on farmer-operated nurseries also are reflected in the inability of these nurseries to get plants lifted and ready for early delivery.

Since most of the project-operated nurseries are raising bicolor seedlings, it might be helpful to review some of the cultural methods being used. A majority of the states use the field method of planting with rows spaced from 28 to 38 inches apart; but Alabama, Kentucky, and Tennessee employ the bed method with 3 to 10 rows per 36 to 48 inch bed. The seeding rate varies from 75 to 200 seed per row foot. Planet Jr. planters are used by at least seven of the projects, but Mississippi is successfully using a John Deere planter with a sericea plate. Difficulty is encountered in getting equal distribution of seed in some cases. Kentucky uses canvas to cover the beds as soon as they are seeded in order to promote bicolor seed germination and growth while checking weed competition. The canvas is removed as soon as the plants are up.

Another of the major problems encountered in nursery operations is that of weed control. There are times when mechanical methods of cultivation are not satisfactory and hand weeding is required, but sufficient labor is expensive and not always available. The critical period of cultivation seems to occur at the time the bicolor plants are so small as to be subject to damage as a result of mechanical methods of cultivation. Weed competition should be eliminated at that time, especially where the plants are close together in beds. Chemical weed

control has not proven too successful. Alabama reports that "Weedone" and "Scutl" both kill bicolor. Kentucky has tried "Dowfume MC-2" and "Cynamid" and reports that both are good, but require too much time for large scale operations. South Carolina has been unsuccessful in all attempts at chemical weed control. North Carolina lists Planet Jr. wheel hoes as being great labor savers. Two of the states raising plants in beds, South Carolina and Tennessee, have small Allis-Chalmers "G" tractors for use in seeding and cultivating operations.

The success of nursery operations is often dependent upon the ability of nurserymen to provide adequate water, especially where bed-type plantings are used. With bicolor, this is particularly true during the period of emergence. A crust on the soil at that time can result in failure of the seeding. Seven of the states have acquired irrigation systems that can be used to supplement natural precipitation. Various systems are being used, but some of them were inadequate during drouth periods this past year. A portable "Volume Gun" system is being used quite successfully in Tennessee, and is probably one of the larger units. It will irrigate approximately 3 acres at one setting and has a capacity of up to 600 gallons per minute. Other states use systems with risers and sprinkler heads. Several states complain of having an inadequate water supply for irrigation.

Another problem experienced by nursery personnel is that of digging or lifting plants that have been produced. In each state different tools and systems have been devised for accomplishing this job. Some have modified peanut plows, potato diggers, conventional turning plows and persimmon sprouters; but others, particularly those planting in beds, are using special implements which will lift the entire bed in one operation. Whatever the tool might be, it should cut the lateral roots, sever the tap roots, and loosen the plants. A "U" type blade, with raised fingers along the back side, seems to be the most desirable from the standpoint of lifting entire beds. Regardless of what is used to cut and loosen the plants, hand labor is required to gather them.

Where nurseries have bicolor seed production plots there is always the problem of getting the seed harvested at the proper time. Plants with large tough stems complicate the harvesting process, and in some of the states these plants are cut by hand before being run through the combine. In several cases a high lift attachment is used on the combine to raise the cutting blade so that the plants are cut where the stalks are small. South Carolina is using both John Deere and Allis-Chalmers combines and report that the Allis-Chalmers is easiest to maintain and adjust. This State also reports that the use of solid rubber drapers has overcome most combining problems. Due to a shortage of space, South Carolina has to dry bicolor seed artificially. This process causes the seed to shrivel and to be less viable than seed left to air dry slowly.

Preparation of materials for distribution is similar in all states. Bicolor plants are counted and tied in bundles of 50, 100, 500, etc., depending upon the size of the plants. Bundles usually are trimmed to uniform size and "heeled in" in moist sawdust until they can be distributed. Some difficulty is encountered in getting the bundles tied tightly enough to prevent breaking during delivery. Virginia uses copper wire and wire puller in tying bundles. At any rate, quite a lot of hand labor is involved in bundling operations. Felin's tying machines are being used in some states, but only relatively small plants can be tied with these machines. The project in Tennessee is distributing bicolor plants in large bundles of 1,000 in an attempt to reduce the number of small plantings being made. The larger bundles

are made up of 20 small packets of 50 each. A tag with printed planting instructions is tied to each bundle of 1,000 plants.

Every state delivers planting materials via trucks because it is the most efficient and expedient method and also because it affords close contact with cooperators. Some materials are delivered by mail or express but this practice is limited to rush periods and exceptional cases.

Every state in the Southeastern Region recommends bicolor for use as field borders, but only eight recommended the use of bicolor alone and even then prefer it be used along with sericea or some other satisfactory plant. The general recommendations for a border planting of bicolor are as follows: fifteen feet wide; one thousand plants; optimum size of $\frac{1}{8}$ acre; and seeding rate of 1 to 2 pounds per $\frac{1}{8}$ acre when a direct seeding is made.

Nine states recommend sericea for field borders, but only one suggests that it ever be used alone and even then prefers that it be used next to bicolor. The general recommendations for a sericea strip are as follows: ten to twenty feet wide; size of planting $\frac{1}{8}$ acre to no limit; and seeding rate of 20 to 30 pounds per acre.

Major planting site requirements for bicolor are: 1) that it be adjacent to suitable cover and 2) located on moderately well-drained land. Almost any land area meeting these requirements can be used. Special emphasis is placed on using bicolor on unproductive areas since a planting in such a place will coincide with a program of sound land management. Wildlife food-and-cover plantings must fit into a farmer's program if they are to be made on a large scale. Plantings recommended by the various projects are designed to create a condition where both food and cover for farm game will be present in adequate quantities.

Thorough land preparation at least six weeks prior to planting is highly recommended by most states. It is desirable to work in the fertilizer as the ground is prepared. There is a conflict on fertilizer recommendations since the states are about evenly divided concerning the use of nitrogen where bicolor is planted. The amount of fertilizer varies with soil fertility and formula used, but is generally from 400 - 800 pounds per acre. The general fertilizer recommendation for multiflora rose is 10 pounds of a complete fertilizer per 100 feet of fence.

General recommendations are that bicolor should be cultivated enough to control competing vegetation the first year and cut back after the first growing season. A top dressing of 0-12-12 or similar formula fertilizer should be applied every 3 or 4 years or when seed production begins to decrease. Cutting the plants back every few years, or when a considerable number of dead stalks appear, will stimulate new growth. Partridge pea should be disced lightly during the winter to insure a stand and reduce weed competition. Rose should be cultivated or mulched the first year and receive a side dressing of nitrogen the second year.

A requirement in establishing most wildlife food and cover plantings is that the planting be protected from grazing; to provide this protection, all states recommend fencing. Florida sometimes uses "Zip" for repelling deer and rabbits, but Georgia has not found an effective repellent for use where deer damage is extensive. Alabama and Louisiana use poison to control gophers.

Planting evaluation is being carried on in nine states with successful planting percentages ranging from small to 92. The majority of the states have found that between 75 and 90 per cent of the plantings have been successful. The major criticism of plantings has been that planting instructions were not followed.

Specific deficiencies observed and listed by the states were as follows with the most-mentioned complaint listed first: lack of cultivation; plants plowed out by mistake; wrong planting pattern; not fertilized; not protected; not planted soon enough or not planted. Ten states reported that bicolor plantings where seedlings were used have been more successful than plantings made with seed. The other state has had equal success with seed and seedlings. Three states, Georgia, Louisiana and Virginia, have data indicating that border plantings have increased the population of quail or rabbits. Several other states mentioned the fact that they had many examples of plant utilization by these species.

All eleven projects were asked what limited their activities most, and were given three answers from which to select the most appropriate. Eight checked inability to produce or obtain more materials for distribution; two selected inability to carry on distribution of additional materials; while the remaining state marked inadequate demand for more materials. These answers would indicate that the habitat improvement program has not yet reached maximum proportions.

Farmer opinion generally is favorable toward the program, particularly after farmers have become familiar with the objectives and methods of attaining them. It should be mentioned, however, that a great many farmers are rather bitter toward hunters and, as a result, are reluctant to expend any money or effort to increase game. There are still other farmers who assume an attitude of indifference toward the entire program. In most of the states, persons desiring planting materials must promise to plant, protect, and maintain these materials according to recommendations. This requirement might tend to restrict project cooperators to only those intensely interested in the program.

The attitude of sportsmen, like that of the farmers, generally is favorable, but there are some who will still maintain that restocking and predator control are the only answers. Eight states report sportsmen are taking an active part in the program by helping set out plants, offering prizes for the best plantings, giving fertilizer to the farmers, or distributing planting materials they produced or purchased. It was pointed out that the attitude of the sportsman varies from one locality to another, but is more favorable where sportsmen have seen the results of the program.

Game departments in five states are releasing hatchery reared quail. None of these states require a wildlife planting where birds are released, but an effort is being made by at least two states to release birds where habitat improvement has been practiced. The release of birds only in carefully selected areas might serve as an incentive for persons to establish food and cover plantings even though they believe restocking is the only way to increase the quail population.

Forty-three men are working on farm-game project activities in the Southeastern Region. Most of these men devote full time to this work. The above figures does not include persons classified as temporary labor. The duties of these men include supervision, production, distribution, evaluation, education, writing reports, etc. Most project personnel attempt to assist farmers whenever possible.

Each state was requested to supply some information regarding educational methods being used to promote interest in the program. Six states use radio, ten use the newspaper, nine use a conservation bulletin, six listed other methods such as displays, movies, mimeographed instruction, etc. Conservation bulletins ranked first as being most effective with the newspaper being a close second. The majority of the states rated newspapers as the medium by which the most persons

are reached. In no case, however, was information distributed through any of the above channels considered as effective as the personal contacts made by field men. Eight projects have bulletins describing the plants being used and giving recommendations concerning these plants. Such bulletins are generally distributed to the people by any available method. Every state was of the opinion that there was not enough educational work being done.

SUMMARY

The farm game habitat improvement program in the Southeastern Region has been expanded greatly within recent years. In 1945 - 46 approximately \$16,000 was spent by Federal Aid projects doing habitat improvement work while the total expenditure in 1950 - 51 was in excess of \$400,000. Four states were participating in 1944 and by 1950 all states in the Region had initiated such projects. Most of the projects have developed nurseries where desired planting materials are being produced. The available information indicates that the program has not yet reached maximum proportions since most of the project's activities have been limited by the inability to produce or obtain more materials for distribution. Techniques used in production and distribution of planting materials are being revised and improved. The attitude of farmers and sportsmen vary with locality but should improve as program results become apparent. Education appears to be a weak point in the program and should be improved.

APPENDICES

Appendix 1. Farm game habitat improvement program questionnaire.

QUESTIONNAIRE

Farm Game Habitat Improvement Program

1. Do you have a farm game habitat improvement program? Yes___ No___
If yes, what year did it start? _____
Is it financed by P.R. funds? Yes___ No___
Has it always been P.R. financed? Yes___ No___
If no, when were P.R. funds first used? _____
If there was an earlier program was it successful? Yes___ No___
If no, why not? _____
2. Do you distribute planting materials? Yes___ No___
If yes, how? Mail___ Express___ Deliver___ Other _____
Why do you distribute in this manner? Explain. _____
3. Do you distribute fertilizer? Yes___ No___
4. Do you charge for materials distributed? Yes___ No___
If yes, how much? _____
5. Do you assist in planting distributed materials? Yes___ No___
6. Do you distribute materials through agricultural agencies? Yes___ No___
If yes, which? (Check)
Agricultural Extension Service (4-H, adult groups, etc.) ___
Soil Conservation Service (Districts) ___
Department of Vocational Agricultural (FFA, Veteran training
classes, etc.) ___
Other (List) _____

Appendix 1. Continued

7. Do you distribute materials directly through Sporting or Conservation Clubs without some other agency being involved? Yes___ No___
8. Do you distribute a quantity to a Sporting Club and let them make final distribution to farmers? Yes___ No___
9. Do you specify that final recipient of materials must either live on a farm or own a farm? Yes___ No___
10. Do you distribute materials to individuals without going through some other agency? Yes___ No___
11. Do you distribute materials to areas controlled or supervised by Game & Fish personnel? Yes___ No___
Only such areas? Yes___ No___
12. Are individuals required to make application to you for materials?
Yes___ No___
If yes, how do they submit applications? (Check)
Direct to Game & Fish Personnel___
Through some Agricultural Agency___
Through some Sporting or Conservation Club___
Other_____ If other, please explain.
13. Where do you obtain planting materials? (Check)
Raised by Game & Fish Personnel___ Number of nurseries _____
Which species _____
Soil Conservation District nurseries___ Number of nurseries _____
Which species _____
Farmer cooperators nurseries other than above District nurseries___
Number _____ Which species _____
Other States Game & Fish Department nurseries___
Which species _____
Soil Conservation Service (Federal)___
Which species _____
Commercial nurseries___
Which species _____
Other sources___ Which species _____
Explain.
14. If you have cooperating farmer operated nurseries what is the major problem if any?
15. ONLY FOR THOSE THAT HAVE A STATE NURSERY OR HELP OPERATE A PRIVATE NURSERY
(If you have your own nursery please give the following information)
a. Method of planting bicolor and problems:
b. Method of cultivating or weeding bicolor seedlings; also problems:
(Chemical weed control, use of geese, etc.)
c. Method of harvesting bicolor seedlings and problems:
d. Method of harvesting bicolor seed and problems:
e. Method of irrigation and problems, also system used:
f. Method of preparing material for distribution and problems:
16. If you obtain your plants from some other source do you have any bundle size requirements or other preparation specifications? Yes___ No___
If yes, explain:

Appendix 1. Continued

PLANTING RECOMMENDATIONS:

17. Do you recommend bicolor for field borders? Yes___ No___
How wide?_____ Number of plants_____ Minimum size of planting_____ Maximum size of planting_____ Seeding rate when seed is used_____ Do you recommend the use of bicolor alone as a border planting? Yes___ No___
18. Do you recommend sericea for field borders? Yes___ No___
How wide?_____ Minimum size of planting_____ Maximum size of planting_____ What seeding rate do you recommend _____
Do you recommend the use of sericea alone as a border planting? Yes___ No___
19. Please give site recommendations for planting of various species used:
20. Please give soil preparation recommendations for various species used:
21. Please list fertilizer recommendations for various species used:
22. Please give maintenance recommendations for various species used:
23. Please list protective recommendations: (for cattle, deer, gophers, etc.)
24. Do you have a planting evaluation program? Yes___ No___
Approximately what % of your plantings are successful_____%
25. What is the major fault of the plantings? (Check one)
Planting instructions not followed_____
Location of planting is poor_____
Not properly cared for after planting_____
Please list major specific faults:
26. Do you have any data indicating that border plantings have increased the population of quail or rabbits? Yes___ No___
If yes, please explain:
27. Which of the following has been more successful? (Check one)
Bicolor planting using seedlings_____
Bicolor planting using seed_____
Equal_____
28. Which of the following has limited your program activities most? (Check one)
Inadequate demand for more materials_____
Inability to produce or obtain more materials for distribution_____
Inability to carry on distribution of additional materials_____
29. What is the general opinion of farmers concerning the program activities?
30. Does your Game Department release hatchery reared birds?
Yes___ No___
If yes, is a wildlife planting required of the persons receiving birds?
Yes___ No___
Is there any connection between the release program and the habitat improvement program? Yes___ No___ If yes, explain:
31. Must a person desiring planting materials meet certain requirements or promise to do specific things? Yes___ No___ If yes, explain:
32. Are the sportsmen of your state taking an active part in the program?
Yes___ No___
If yes, explain:
33. What is the attitude of the sportsmen concerning the program?

Appendix 1. Continued

34. Are you emphasizing the use of planting materials by youth groups?
 Yes___ No___
35. How many men do you have on the project (Not temporary labor)_____
 Do they devote full time (or nearly so) to the project?
 Yes___ No___
 Explain duties:
36. Please list farm game habitat improvement educational methods being used by your Game & Fish organization other than personal contacts by field men. (Check)
 Radio___
 Newspaper___
 Conservation Bulletin___
 Other publications___ (List)
 Which of the above methods is most effective? _____
 Which of the above methods reaches the most people? _____
 Is the information distributed by the above methods as effective as the personal contacts made by field men? Yes___ No___
 Do you think there is enough educational work being done? _____
37. Do you have a bulletin describing the plants used and giving recommendations? Yes___ No___ If no, why not?
39. Please list plant species used in your program now or in the past and the amounts of each used yearly since the beginning of the program.
 Example:
- | | | | | | |
|-----------------------------|---------|---------|---------|---------|------|
| | 1950-51 | 1949-50 | 1948-49 | 1947-48 | etc. |
| Lespedeza bicolor seedlings | 500,000 | 250,000 | 175,000 | | |
| Lespedeza bicolor seed | 500# | 200# | | | |
40. Please list the number of farms on which plantings were made each year.
41. Please list amount of money spent yearly on this type of program since the beginning of the program.
 Example:
- | | | | |
|----------|----------|----------|------|
| 1950-51 | 1949-50 | 1948-49 | etc. |
| \$50,000 | \$30,000 | \$25,000 | |

I would appreciate any additional comments you think might be of value or interest to the other states. Thank you very much. I would also appreciate receiving a copy of any bulletin or pamphlet giving a description of planting materials being used and recommended planting instructions.

Please give the following: (By person filling out this questionnaire)

Name _____
 Title _____
 State _____

Appendix 2. Dollar expenditures on projects by state.

State	1950-51	1949-50	1948-49	1947-48	1946-47	1945-46	1944-45	1943-44	1942-43	1941-42
Alabama	35,820.40	34,570.28	10,012.74	7,761.84	6,523.86	2,469.00 ^a			3,224.49	5,331.00
Arkansas	20,000.00	18,000.00	12,000.00	9,000.00	12,000.00	8,000.00	9,000.00	5,000.00	7,000.00	5,000.00
Florida	15,000.00	13,000.00	12,000.00	10,000.00						
Georgia	24,000.00	10,158.00	4,575.00	2,625.00	2,985.00	2,917.50	1,186.00			
Kentucky	37,000.00	19,000.00	11,000.00							
Louisiana	37,386.00	32,174.00	8,242.00	7,998.00	909.00	2,265.00	4,527.00	242.00	17,738.00	7,631.00
Mississippi	22,710.93	18,844.71	13,721.12							
N. Carolina	95,358.00 ^b	54,570.00 ^b	30,711.00	9,416.00	8,078.00					
S. Carolina	32,669.75	25,941.00	21,896.00							
Tennessee	44,500.00	38,654.00								
Virginia	47,000.00	45,000.00	47,000.00	19,000.00						
Totals	412,445.08	309,911.99	171,157.86	65,800.84	30,495.86	15,651.50	14,713.00	5,242.00	27,962.49	17,962.00

^aIncludes expenditures for period 1944-46.

^bIncludes turkey management which was previously carried on as a separate project.

Appendix 3. Planting materials being used.

Materials	Ala.	Ark.	Fla.	Ga.	Ky.	La.	Miss.	N.C.	S.C.	Tenn.	Va.
Lespedeza bicolor											
Seedlings	X	X	X	X	X	X	X	X	X	X	X
Lespedeza bicolor											
Seed	X	X				X	X	X	X	X	X
Sericea Seed		X			X	X	X	X		X	X
Multiflora rose											
Seedlings			X		X			X		X	
Partridge pea											
Seed	X		X							X	
Common Lespedeza											
Seed			X				X				
Lespedeza intermedia											
japonica Seedlings					X			X			
Lespedeza cyrtobotrya											
Seed						X					
Lespedeza thunbergii											
Seedlings			X								
Florida beggarweed											
Seed			X								
Annual Seed											
Mixture											X
Mulberry					X						
Russian Olive					X						
Siberian peatree					X						
Ninebark					X						
False indigo					X						
Pines					X						
Locust					X						

Appendix 4. Numbers of bicolor seedlings distributed by state.

State	1950-51	1949-50	1948-49	1947-48	1946-47	1945-46	1944-45	1943-44
Alabama	2,831,750	1,250,000	364,550	780,000				
Arkansas	3,000,000	442,600	182,300	500,000	18,750		24,020	50,000
Florida	328,000	693,000	255,000	100,000				
Georgia	8,000,000	3,385,000	3,610,000	1,050,000	1,194,000	1,207,000	593,000	
Kentucky	1,155,050	437,000	200,000					
Louisiana	580,500	1,000,000	207,000	227,000	30,000			
Mississippi	4,120,750	1,221,300	271,500					
N. Carolina	3,840,200	4,271,550	1,034,550					
S. Carolina	8,162,000	4,756,000	925,000	800,000				
Tennessee	5,051,500	754,500						
Virginia	1,872,000	1,122,000						
Total	38,941,750	19,332,950	7,049,900	3,457,000	1,242,750	1,207,000	617,020	50,000

Appendix 5. Pounds of bicolor seeds distributed by state.

State	1950-51	1949-50	1948-49	1947-48	1946-47	1945-46	1944-45	1943-44	1942-43
Alabama	11,090	5,000	2,590	988	4,003			4,000	
Arkansas		673	152	215	160	400	822	535	
Florida									
Georgia									
Kentucky									
Louisiana	86				4,000	531	594	507	
Mississippi	523	749	800						
N. Carolina		207							
S. Carolina	4,450	2,250	800	900					
Tennessee	316	150							
Virginia	2,497	2,157							
Total	18,962	11,186	4,342	2,103	8,163	931	1,416	5,042	

Appendix 6. Pounds of serica seeds distributed by state.

State	1950-51	1949-50	1948-49	1947-48	1946-47	1945-46	1944-45	1943-44	1942-43	1941-42
Alabama										
Arkansas	30,000	10,600	3,000	1,750	2,650	3,300	5,000	2,630	3,150	200
Florida										
Georgia										
Kentucky	895									
Louisiana	3,025	5,000	4,350	3,800	1,064	1,780	1,673	1,461	41,800	21,615
Mississippi		1,943	1,910							
N. Carolina	4,669	4,247								
S. Carolina										
Tennessee	6,076	4,000								
Virginia	8,731	2,969								
Total	53,396	28,759	9,260	5,550	3,714	5,080	6,673	4,091	44,950	21,815

Appendix 7. Numbers of multiflora rose seedlings and pounds of partridge pea seeds distributed by state.

State	Multiflora Rose Seedling Distribution (plants)			Partridge Pea Seed Distribution (pounds)			
	1950-51	1949-50	1948-49	1950-51	1949-50	1948-49	1947-48
Alabama				6,800	5,000	1,325	700
Arkansas							
Florida	57,000	30,000	1,000	900	123		
Georgia							
Kentucky	744,000	530,000	27,000				
Louisiana							
Mississippi							
N. Carolina	431,000	287,270	54,145				
S. Carolina							
Tennessee	39,000			561			
Virginia							
Total	1,271,600	847,270	82,145	8,261	5,123	1,325	700