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Progress Report - 1985.

Grant No. RG/AID/2

Title: Improving Nitrogen fixation in grain legumes using selected strains of Rhizobia.

Collection of the strains of Rhizobia.

The samples of the root nodules of cowpea and mung bean were collected from different regions of Sri Lanka. (Table 1 and 2). Respective Rhizobium strains were isolated by crushed nodule method and was grown on yeast Extract Mannitol Agar (YMA) medium, added with congo red. The strains were purified on the basis of the absorption of congo red. Purified cultures are now maintained on YMA medium and are being evaluated. Following observations were also recorded.

1. The variety of the host.
2. The age of the host.
3. History of the crop.
4. The distribution of nodules on the root system.
5. Relative size and the shape of the nodules.
6. Time period taken to appear visible colonies of Rhizobium on YMA medium.
7. The characters of the colonies.
  - (1) Colour and nature
  - (2) Degree of transference

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Table 1. Cowpea

Name of the sample/strain	Date of collection	Location
CP <sub>1</sub>	19.08.85	Dodangolla
CP <sub>2</sub>	"	"
CP <sub>3</sub>	"	"
CP <sub>4</sub>	"	Kundasale
CP <sub>5</sub>	24.08.85	Watapadura, Kolabissa
CP <sub>6</sub>	"	"
CP <sub>7</sub>	"	"
CP <sub>8</sub>	"	"
CP <sub>9</sub>	"	"
CP <sub>10</sub>	"	"
CP <sub>11</sub>	"	"
CP <sub>12</sub>	"	"
CP <sub>13</sub>	"	"
CP <sub>14</sub>	03.09.85	Thotagamuwa, Mathale
CP <sub>15</sub>	"	"
CP <sub>16</sub>	"	Thenna, Mathale
CP <sub>17</sub>	"	"
CP <sub>18</sub>	"	Koobiyangoda, Mathale
CP <sub>19</sub>	"	"
CP <sub>20</sub>	06.09.85	Pelwehera
CP <sub>21</sub>	"	Nalanda
CP <sub>22</sub>	"	"

Table 2. Mung bean

Name of the sample/strain	Date of collection	Location
GG <sub>1</sub>	19.08.85	Kundasale
GG <sub>2</sub>	24.08.85	Matapandura, Kolabissa
GG <sub>3</sub>	24.08.85	" "
GG <sub>4</sub>	03.09.85	Thotagamuwa, Mathale
GG <sub>5</sub>	"	"
GG <sub>6</sub>	"	"
GG <sub>7</sub>	06.09.85	Dambulla

At present Siratro host tests are being done. Project still functions on borrowed chemicals and supplies. Procurement of supplies are in progress.

Two technical assistants and two research students are now working in the project.