## पशु स्वास्थ्य एवं जैविक उत्पाद संस्थान, महू (मध्य प्रदेश) का आधुनिकीकरण

1628 श्री शिव प्रसाद च नपुरिया: क्या प्रधान मंत्री यह बताने की कृपा करेंगे कि:

- (क) क्या यह सच है कि मध्य प्रदेश सरकार ने पशु स्वास्थ्य एवं जैविक उत्पाद संस्थान, मह के आधुनिकीकरण तथा उसकी उत्पादन कमना को सुदृढ़ करने के लिए विज्ञान और श्रीद्योगिकी विभाग को 145.59 लाख रूपए का एक प्रस्ताव भेजा है ; और
- (ख) यदि हो, तो सरकार उस पर कब तक आवश्यक स्वीकृति तथा अपेक्षित धनराणि मध्य प्रदेश सरकार को देगी?

धिक्वान स्रोर प्रौद्योगिको मंद्रास्य, इलेक्ट्रानिकी विभाग स्रौर महासागर विकास विभाग में राज्य मंत्री स्रौर संसदीय कार्य मंत्रीति स्रोति हो। (क्षी रंगराजन कुमारमंगलम) : (क) जी हो।

(ख) संस्थान से यह प्रनुरोध किया गया है कि वे अपने परियोजना प्रस्ताव को परियोधित करें। उनका परियोधित प्रस्ताव अभी प्राप्त नहीं हुमा है।

## Cultivation of Algal

1629. SHRI S. MADHAVAN: Will the PRIME MINISTER be pleased to state.

- (a) whether Government would take steps for mass scale cultivation of blue green algal like spirulina which have been identified as potential source of protein, and if so, what are the details thereof;
- (b) what steps are being taken to produce non-conventional foods to

bridge the protein gap in diet in our country; and

(c) whether Government are aware of the technology for mass culture and production of spirulina developed in Murugappa Chettlar Research Centre, Madras and if so, what are the details thereof?

THE MINISTER OF STATE IN THE MINISTRY OF SCIENCE TECHNOLOGY DEPARTMENT OF ELECTRONICS AND DEPART-MENT OF OCEAN DEVELOPMENT AND MINISTER OF STATE IN THE MINISTRY OF PARLIAMEN-TARY AFFAIRS (SHRI P. R. KUMARAMANGALAM); (a) At present there is no plan for mass scale cultivation of blue green algal like spirulina by the Government since the technology has already been developed and transferred to the indust. ries through indigenous efforts.

- (b) No major efforts are being taken at the present time to produce non-conventional foods to bridge the protein gap in diet in the country based on algal material. The Murugappa Chettiar Research Centre, Madras, has, however, taken up the large scale nutritional supplementation using spirulina in a rural population of 5000 school children. The aim of the project is to provide supplementary Vitamin Α precursors for overcoming blindness in children that is primarily caused by Vitamin A deficiency The project is supported by the Department of Bio technology.
- (c) Yes, Government is fully aware of mass culture technology for production of spirulina developed by Shri A.M.M. Murugappa Chettiar Research Centre, Madras. National Research Development Corporation was involved in up-scaling this technology. The technology has already been transferred to M/s New Ambadi Estates, Madras, for large scale production.