

*Nitrogenous Fertilizers and Green-manuring.*

A very striking result has been secured with an application of  $1\frac{1}{2}$  cwt. per acre of nitrate of soda on a new pasture of Wimmera ryegrass (*Lolium subulatum*) and red clover laid down last autumn. Early in September the grass was looking fairly vigorous, but was a pale yellowish-green colour. It was evident that it lacked available nitrogen. A month after the application of nitrate of soda was made the writer inspected the area. The plot which had received the manure stood out clearly from the rest. The colour was a dark green and the grass was more vigorous, while it was 2 in. or 3 in. taller than on the areas adjoining. Experiments at Albany with sulphate of ammonia as a top-dressing on pasture in spring gave similar results. These gum-land soils lack nitrogen, and are usually cold and wet in the winter; they therefore respond to dressings of nitrogen in spring.



CROP OF BLUE LUPINS IN FIELD 2, PUWERA.

Collateral with this evidence may be cited the good results which are seen after a legume has been grown previously to cropping, or where organic matter is added by feeding off a crop or ploughing in a green crop. Orchardists on clay gum lands will be well advised to consider green manuring, especially as blue lupins, white mustard, and suchlike can be so successfully grown. The blue lupin crop at Puwera this season reached 4 ft. high, and was in every way a success. White lupins have not done well at Puwera. Grass-pea, serradella, and other legumes do well on these gum lands.

## SUPPLEMENTARY FORAGE CROPS.

The area in grass at Puwera which was grazed or cut for hay during the season totalled 42 acres. On this were run sixteen head of cattle, four horses, and four sheep. The stock were wintered on the area and came through in good condition. Two acres were cut for