

System production and Education support using Renewable energy and SBC



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Keywords	Electrical engineering , Educational support , Teaching material making		
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Technical Support Skills	<ul style="list-style-type: none"> • Making of teaching materials about renewable energy • Basic experiment about an electrical engineering • System production using Raspberry Pi etc. 		
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Research Contents

Educational support on renewable energy and system production using Raspberry pi

1. Production of educational materials for Electric light cultivation using renewable energy at agricultural high school and educational support

Yamagata prefectural agricultural high school is introducing education using "renewable energy". As part of community collaborative educational activities, the author is engaged in experimental teaching material production and educational support shown in Figure 1 in line with the requirements of agricultural high school.

2. Simple production status management system making use of Wireless LAN and Raspberry Pi in factory production line

We are receiving technical consultation from companies in Yamagata prefecture that we want to visualize and quantify the production situation of products flowing through the production line. We are making a system using the on-site network environment and SBC (single board computer) as shown in Figure 2. It is scheduled to be field-tested in the first half of the current fiscal year, we will confirm the usefulness and further needs and make improvements.

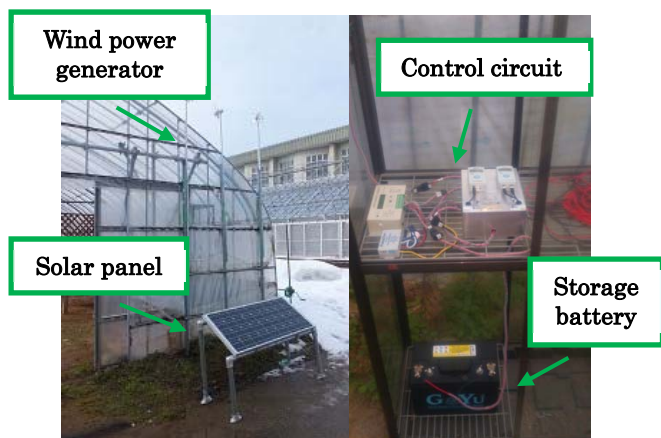


Fig1. Experimental teaching materials introduced to agriculture high school

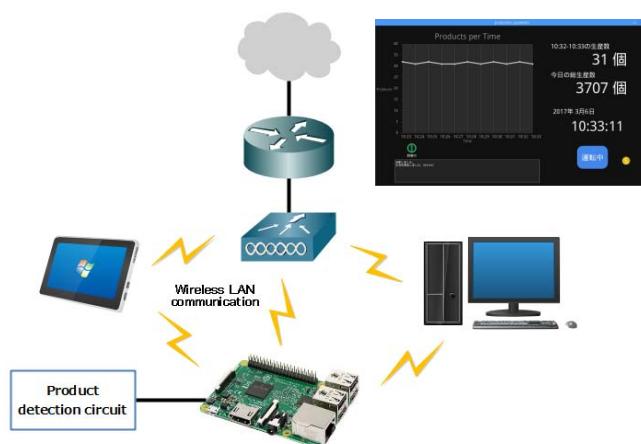


Fig2. Production status management system with Wireless LAN

Available Facilities and Equipment

Electrical and electronic measuring instrument	
Solar panel 40 , 50 , 80 , 120 [W]	
Wind power generator 50 [W]	