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Crown gall disease of black pepper (*Piper nigrum* Linn.) caused by an *Agrobacterium* sp.

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A new disease similar to crown gall disease is found in some pepper fields at Aranayaka area in the Sabaragamuva province of Sri Lanka. When consider the disease symptoms, brown colour deformation of the stem can be seen mostly on crown area of the vine. Because of splitting of the stem and decaying the splitting area, the vine can be broken, reducing the yield and ultimately death of the vine. This condition increases at wet weather conditions. The soil around the infected vine, roots and infected vine parts were checked for parasitic nematodes and all samples were free from parasitic nematodes. A bacterium culture showing similar colony characteristics was isolated from all infected parts placed on NA and PDA media. The suspected bacterium as the causal agent was produced slimy substance due to presence of polysaccharides in the medium when grown on PDA. Colony was pale yellow, entire margins; surface is smooth and glistening and has a convex elevation. Bacterium colony was developed purple color within 10 seconds as it is an oxidase – positive strain for the oxidative test. It is a Gram negative bacterium according to the Gram test and 3 % KOH test. Although high concentrations of suspected bacterium suspensions were poured into the soil, it could not infect vines. Healthy vines showed symptoms when infected the bacterium through wounds. Symptoms showing inoculated vine parts were cultured on PDA and NA medium and the bacterium which mostly isolated was sub cultured to obtain pure culture. The colony characters were same as the inoculated bacterium colonies and it is Gram negative, oxidase – positive bacterium. Results proved that the pepper crown gall disease is caused by *Agrobacterium* sp.. according to the Koch's rules.

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