

heroin in the class of drugs considered to be the most dangerous.

Claims that LSD can help people to solve their personal and intellectual problems, the committee finds, are generally not confirmed by psychological measurements. There is also no conclusive evidence that LSD is better than any other kind of treatment in treating patients such as chronic alcoholics or those with psychosexual difficulties, although there is nothing to suppose that LSD therapy is exceptionally dangerous, at least in responsible hands. Suggestions that the drug may cause chromosomal damage to the sex cells have not been confirmed.

The committee is particularly concerned about overprescribing by doctors, and quotes the case of two doctors who were responsible for almost all the injectable methylamphetamine misused during the 1967/68 "epidemic". The bill empowers the Home Secretary to ban a doctor from prescribing a particular drug until he can be dealt with by a medical tribunal. Mr Callaghan emphasized the point about overprescribing last week when the bill received its second reading; up to twelve doctors in London, he said, could help to lessen the drug cult if they would reduce their prescribing.

Irresponsible prescribing can help to spread new fashions in drug taking, and the speed with which these changes arise is particularly alarming. One of the difficulties in preventing the spread of new drugs is that their components may not be dangerous or subject to control. This seems to be a particular problem in the case of LSD substitutes. The committee recommends that the possibilities of controlling the known precursors of LSD should be explored.

CONSERVATION

Pines and Paper in Byelorussia

from our Soviet Correspondent

New applications of grafting techniques in the forestry industry have been reported from the Kosau District Forestry Authority of the Byelorussian SSR. The forests of Byelorussia (mainly pine and other softwoods) are among the most important natural resources of the republic, and the constant need for high-quality seeds for reforestation to replace the enormous demands of industry has long been a pressing topic.

The latest experiments reported from Kosau were initiated by Kim F. Isajenkau, who, in spite of considerable initial opposition from theorists, carried out a study of the possibilities of grafting scions of superior strains of tree on to hardier but otherwise unexceptional stocks so as to produce a source of seeds for new plantations. Experiments on these lines had been attempted previously, but the practical techniques proved complicated and tedious and the results were generally unsatisfactory.

While still a research student at the Byelorussian Technological Institute, Isajenkau became interested in this problem, which had been shelved by the institute as "unpromising". By 1963 his initial experiments had shown that production of a seed-bank by grafting in this manner was theoretically possible.

Now, after seven years' work at Kosau, he has produced three large seed-bank plantations, comprising 860 grafted pines. This method of seed production, he explained in a recent interview (*Zviazda*, March 3, 1970),

not only conserves the topgrade quality of the seed-bearing trees but actually improves their practicability for use since, by the grafting technique, dwarfed seed-bank trees can be produced, which allows the cones to be collected more easily.

Besides the routine replacement of felled pines, Isajenkau is also working on a project for restocking the Byelorussian forests with formerly common but now vanishing species such as the pyramid-oak and the larch (the latter, in particular, has fallen a victim to the paper industry). To expedite this project, it is hoped that these trees can be propagated by cuttings.

EXAMINATIONS

Abolishing O-Levels

by our Education Correspondent

A NEW examination to replace both GCE O-levels and CSE examinations has been proposed by the National Union of Teachers (NUT). Called the Certificate of General Secondary Education, the proposed examination would be taken at the age of sixteen plus—the school-leaving age after 1971—and, like the CSE, it would be teacher controlled. One incentive for introducing such an examination is that it would fit in with the proposals for "Q" and "F" level examinations (see *Nature*, 224, 1046; 1969), but the NUT believes that it should be introduced even if "Q" and "F" levels are unacceptable to the teaching associations.

The NUT's proposals borrow more from the CSE system than they do from the GCE. The proposed examination, for example, would have no pass/fail point, but it would have two grades above the present GCE pass level and four grades below it. A wide range of syllabuses should also be offered for each examination, the NUT suggests, and the whole range of examining methods at present used for CSE should also be used for the CGSE. The main arguments put forward by the NUT for the new examination are that the present dual examination system causes a dilemma for schools having to choose whether pupils should be entered for CSE or GCE and, because of the different approach of the two examinations, pupils who opt for CSE but who later show more academic ability would find it difficult to transfer.

Although that dilemma would be removed, another would arise if the "Q" and "F" level proposals were adopted. Schools would then have to choose which students would study for the CGSE, and which would by-pass the 16-plus examination and go straight on to "Q" level. Another alternative, taking three examinations in three years, is likely to be frowned on by the NUT. In a commentary on the "Q" and "F" level proposals, Mr Arnold Jennings, vice-chairman of the union's Advisory Committee for Secondary Schools, states that this is a major weakness in the proposals. He argues, however, that if O-levels are scrapped at the same time as the new examinations are instituted, this will help to get round the weakness. Combining physics and chemistry in one "physical sciences" examination would also enable students to take physical sciences and biological sciences at "Q" level without hampering their choice of any of the three separate sciences for later specialization. Mr Jennings's commentary is otherwise highly favourable towards the proposals. But that is perhaps not surprising, because he served on one of the working parties that produced them.