

somehow looks like a gaol, he explained to us the profession of a brewer. He is apprenticed for five years, and then, if he is lucky, works his way up to the position of head brewer. Then it's his job, under the brewery manager, to run not only the technical side, but also the general control of staff. "Not so easy these days either," he said with a wry grin. "We're not an essential industry, and sometimes a chap we get has the idea that he's here to drink as much as he can as fast as he can (before he is found out). But the majority are first class—a lot of them returned men—and hard workers as you'll see in the malthouse."

On the long concrete floor the barley, which is the potential malt, had been spread to a depth of about 3 in. It had been steeped in water upstairs for about three days and then "couched," or heaped, for a day before being spread out to germinate on this floor and the one above. During germination the grain behaves as a seed in the ground would. It shoots out roots and begins to sprout while chemical changes are taking place within its cells. It is turned by wooden hand shovels several times to bring the warm grain up and bury the cooler grain on top. Warmth, moisture, and air are, of course, essential to germination.

Then, before the sprout has broken away from the grain—a period varying from seven to nine days according to the weather—the barley is again "couched" and the germination retarded or "withered," in the brewery terminology. Next it is elevated to the kiln, where it is spread on a fine grid floor through which hot air rises to cook the grain and turn it into "malt." The cooking goes on for three days, during which time the temperature is gradually raised to 200° F. and the carpet of barley ploughed once and turned by hand about four times. For a final roasting the thermometer soars to 220° F. And if you have any delusions about the easiness of work in a brewery watch the men in singlets and shorts forking over the shallow layer of grain in this huge oven.

The "malt" is next screened and carted off to the grist case to await

crushing and its turn to put the body into beer. The screenings, because of their high nitrogen content, are a valuable manure and are being used in quantity on the new bowling-green for the Disabled Servicemens' Centre in Wellington.

Crushing is not exactly the word to describe the next process. The cooked grain is cracked rather than ground to the consistency of flour. This is done the day before it is to be used in a brew. Then the real business of brewing beer begins.

"Be down at 7 o'clock," said the assistant brewer. "We've a small brew on to-morrow. Three days a week we start at six." We wondered then how we were going to manage it, and next morning barely arrived in time to see the brewer mix the mash which is the start of all the trouble. The crushed malt is fed with hot water into the mash-tun, a huge enclosed cylinder which has a perforated bottom. This perforated bottom allows the extract from the tun to seep through and run away to the copper. The mash, and there's a pound or two of it, plops into the tun with the consistency of a thick porridge. Here it stands for an hour and a half, and then hot water sprinklers are turned on, and the liquor, now known as "wort," run off to the copper by way of another tank, where refined and invert sugar (rather like treacle) are added. By 10 o'clock the copper's full and on the boil. Now the hops, which give the beer its bitter flavour and aroma, are added and the mixture boiled for an hour and a half.



*Turning the grain is hot, hard work.*