Missbildungen aus der Reihe der Arhinencephalie-Cyclopie nicht mehr erhalten kann. Es sollte dennoch (siehe auch BADTKE et al.[10]) in Erwägung gezogen werden, ob nicht auch für die isolierte Gaumenspalte eine Schädigung in einem entsprechenden Aktions-Reaktionssystem im Bereich des Vorderkopfinduktors, vielleicht sogar eine Schädigung dieses Induktors selbst anzunehmen ist.

Summary. In the chondrocranium of mice with induced cleft palates, the ethmoid region is not affected by this malformation. The paramedian cartilagenous structures of the orbito-temporal region of 17-day-old and new-born mice, however, show a distinct reduction in dorso-ventral height. These deformities prove that the cleft palate malformation is not topographically restricted to the palate. It is assumed that both the cleft palate and accompanying alterations are due to to defective induction in the prechordal area of the embryonic head.

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The Branching Property of Morphactin on *Prunus avium* Seedlings

Since 1966 MANN et al.[1] demonstrated the branching properties of morphactin on Citrus seedlings which break lateral bud dormancy. Working on pea seedlings, TOGNONI and ALPI[2] showed an increase in the number of lateral buds which broke dormancy when treated with higher concentration of IT 3456, mainly in the presence of GA_3 and in absence of IAA which induces a reduction in the number of side shoots. Recently, CRABBE[3] reports promising results with regard to the possibility of obtaining dwarf and bushy young apple trees by morphactin applications.

We hereby discuss the effects of morphactin sprays on 40-day-old sweet-cherry seedlings. The Table shows treatments applied to 8 lots, each of 20 seedlings grown in pots under greenhouse. Morphactin IT 3456 (CFl)[4] was sprayed in hydro-alcoholic solution (25% ethylic alcohol) at 50, 250 and 500 ppm while GA_3, at 200 ppm, was dissolved in distilled water and sprayed a week after the previous morphactin treatment.

The results show a strong growth depression in response to the IT 3456 concentration increase. This depression is partially counteracted by a spray of GA_3, but these twice-treated seedlings never reach the normal growth of morphactin-untreated seedlings (test).

A second effect of morphactin, when sprayed alone, is a break of apical dominance; in fact the treated seedlings showed an increased number of sprouting lateral buds. The average shoot number per seedling increases too, with higher concentration of morphactin. No such response was observed in test seedlings or when GA_3 was applied alone. GA_3 application on the morphactin-induced seedlings causes a very perceptible rise in the percentage of seedlings which sprouted lateral buds, without changes in the average number of shoots per seedling. Furthermore, five weeks after morphactin sprays followed by GA_3 sprays have been applied, it was noted that the break of apical dominance was so accentuated as to cause the apex death of several seedlings, especially when the morphactin had been used at higher concentration. Nevertheless, these seedlings did not die.

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[4] Kindly supplied by E. Merk AG., Darmstadt (Germany).

Effects of various morphactin and gibberellin treatments on sweet-cherry seedlings

Treatments		Height increase in 80 days (%)		Seedlings which sprouted lateral buds (%)		Average shoots/seedling		Seedlings which showed apex death (%)	
		Morphactin Alone	+ GA_3	Morphactin Alone	+ GA_3	Morphactin Alone	+ GA_3	Morphactin Alone	+ GA_3
IT 3456	50 ppm	36.8	46.2	5.0	25.0	0.5	2.2	0	15.0
IT 3456	250 ppm	26.3	45.7	10.0	30.0	3.5	2.5	0	30.0
IT 3456	500 ppm	20.5	40.0	15.0	50.0	4.0	2.2	0	40.0
GA_3	200 ppm	–	170.7	–	0	–	0	–	0
Test		66.9		0		–		0	

Fig. 1. Two twigs sprouted after morphactin has been sprayed; note the curve below the tip.

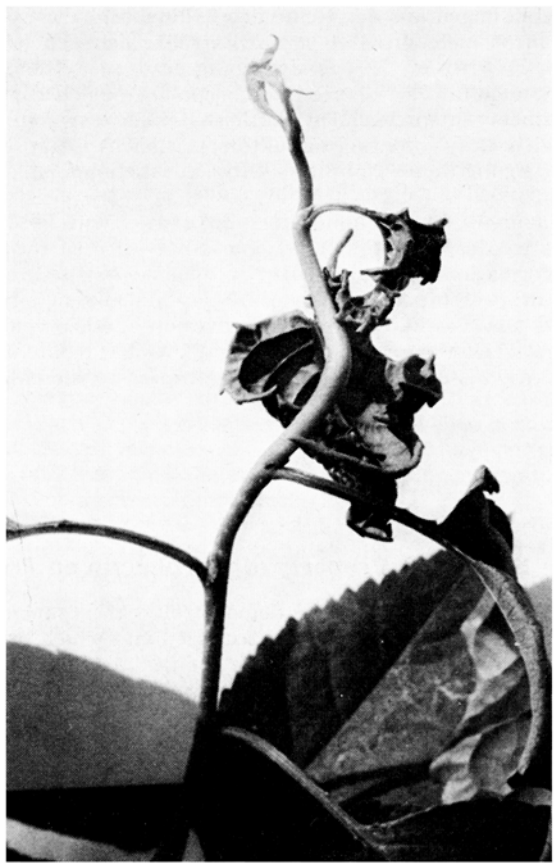

Fig. 2. Some anomale leaves and bending of the main shoot in a morphactin-treated seedling.

These facts point to the possible synergic action of GA_3 with morphactin on the shooting of dormant lateral buds subsequent to apical dominance break. However, it should be noted that the morphactin plus GA_3 treatments seem to be interacting positively; their effect is therefore more than additive, in contrast with what was reported by MANN et al.[1].

The growth depression and morphactin branching properties may suggest some new practical applications of IT 3456 in the field of fruit trees cultivation, as proposed by MANN et al. and CRABBE[1,3].

Riassunto. Il trattamento di giovani piantine di ciliegio dolce con la morfattina IT 3456 provoca l'interruzione della dominanza apicale e, quindi, la emissione di germogli laterali. Un successivo trattamento con gibberellina amplifica il fenomeno, ma conduce alla morte dell'apice del germoglio principale.

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Phytochrome Involvement in the Control of Leaf Shape of *Taraxacum officinale* L.*

During the early stages of its development, *Taraxacum officinale* L. displays a wide range of leaf shapes, from a smooth rounded to a deeply incised runcinate form. There are also changes in the length/breadth ratio (L/B), which decreases as the leaf number increases. As in other cases[1-3], light has a remarkable effect upon the heteroblastic development, influencing both the L/B ratio and the depht of the incisions in the runcinate shape[4,5].

In a previous work it was shown that far red light (FR) can strongly delay the change to the runcinate shape and also increase the L/b ratio[5]. This activity of FR suggested that phytochrome system could be involved in the process.

To test this possibility 3 groups of plants were submitted to the following daily programms: 1. 10 h of white fluorescent light at an intensity of ca. 4500 $\mu w\,cm^{-2}$

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